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ZBORNİK RECENZIRANIH POVZETKOV: EKOLOGIJA ZA BOLJŠI JUTRI

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VSEBINA

Ina Abram	8
IZDELAVA DIDAKTIČNIH IGER S PONOVRNO UPORABO EMBALAŽE V 3. RAZREDU OSNOVNE ŠOLE, TER KROŽENJE ŽE UPORABLJENIH PREDMETOV ..	8
CREATION OF DIDACTIC GAMES BY REUSING PACKAGING IN THE 3RD GRADE OF PRIMARY SCHOOL, AND CIRCULATION OF ALREADY USED OBJECTS	8
Irena Balazic	9
RAZREDNI PROJEKT »EKO MINUTE«	9
CLASS PROJECT »ECO MINUTES«	9
Bernarda Barbo	10
A BI Z MANO IZ ODPADNEGA JEDILNEGA OLJA IZDELAL EKOLOŠKO SVEČKO?	10
WOULD YOU MAKE AN ECO-FRIENDLY CANDLE FROM WASTE COOKING OIL WITH ME?	10
Mojca Božnik	11
EKOLOŠKE VSEBINE V UČBENIKU NEW SUCCESS INTERMEDIATE	11
ECOLOGICAL TOPICS IN THE COURSEBOOK NEW SUCCESS INTERMEDIATE..	11
Jasmina Cvek	12
DAN DEJAVNOSTI OB SVETOVNEM DNEVU ZEMLJE ZA UČENCE OD 1. DO 9. RAZREDA	12
ACTIVITY DAY FOR WORLD EARTH DAY FOR PUPILS FROM GRADES 1 TO 9... 12	12
Andreja Čelan	14
KAKO SO TRETJEŠOLCI POSTALI OKOLJU PRIJAZNI?.....	14
HOW DID THIRD GRADERS BECOME ENVIRONMENTALLY FRIENDLY?	14
Mika Čemažar Tratar	16
EKOLOŠKE VSEBINE V OKVIRU VRTNARKEGA KROŽKA ZA UČENCE 3. IN 4. RAZREDA OSNOVNE ŠOLE.....	16
ECOLOGICAL CONTENT IN THE FRAMEWORK OF THE GARDENING CLUB FOR PRIMARY SCHOOL STUDENTS IN THE 3RD AND 4TH GRADES	16
Lidija Domanjko	17
NAŠI KORAKI IN RAZISKOVANJE GOZDA SO PRISPEVEK K EKOLOGIJI	17
OUR STEPS AND EXPLORATION OF THE FOREST HAVE CONTRIBUTED TO ECOLOGY	17
Irena Dresler	18
OKOLJSKE VSEBINE SKOZI USTVARJALNO PISANJE PRI POUKU ANGLEŠČINE V SREDNJI ŠOLI	18
ENVIRONMENTAL CONTENT THROUGH CREATIVE WRITING IN SECONDARY SCHOOL ENGLISH CLASSES	18
Žiga Duh	19
GLASBENA UMETNOST V FUNKCIJI SPODBUJANJA TRAJNOSTNEGA RAZVOJA PRI UČENCIH NA RAZREDNI STOPNJI OSNOVNE ŠOLE.....	19

MUSIC LESSONS' ROLE IN PROMOTING SUSTAINABLE DEVELOPMENT IN PUPILS AT THE ELEMENTARY SCHOOL LEVEL.....	19
Sabina Eršte	20
VKLJUČEVANJE EKOLOŠKIH VSEBIN PRI PREDMETU KEMIJA NA GIMNAZIJI	20
INCLUSION OF ECOLOGICAL CONTENT IN THE HIGH SCHOOL CHEMISTRY ...	20
Miša Gjerkeš	21
PRIKAZ ŠTEVILNIH MOŽNOSTI, KAKO ODPADKOM DATI NOVO ŽIVLJENJE....	21
A PROOF OF DIFFERENT POSSIBILITIES HOW TO GIVE WASTE A NEW LIFE	21
Simona Gljuk	22
OD EKOKRITIŠKO OSVEŠČENEGA BRALCA DO EKO UDEJANJANJA	22
FROM AN ECO CRITICALLY CONSCIOUS READER TO THE ECO PRACTICE.....	22
Melita Gnezda Petrič	23
UPORABA ODPADNE EMBALAŽE PRI POUKU ŠPORTA V DRUGEM RAZREDU	23
OSNOVNE ŠOLE	23
THE USE OF PACKAGING WASTE IN SPORTS LESSONS IN THE SECOND GRADE	23
OF PRIMARY SCHOOL	23
Boštjan Golob	24
EKOLOŠKI VIDIK UPORABE SONČNIH ELEKTRARN V MEHANSKI OBDELAVI	24
ECOLOGICAL ASPECT OF THE USE OF SOLAR POWER PLANTS IN MECHANICAL	24
PROCESSING	24
Branko Gregorc	25
STRATEGIJA RAVNANJA Z ODPADKI NA TEHNIŠKEM ŠOLSLEM CENTRU	25
MARIBOR	25
WASTE MANAGEMENT STRATEGY ON TECHNICAL SCHOOL CENTRE	25
MARIBOR	25
Zdenka Holsedl Pertoci	26
EKOLOŠKO RAZMIŠLJANJE DIJAKOV NA SREDNJI POKLICNI IN TEHNIŠKI ŠOLI	26
MURSKA SOBOTA	26
ECOLOGICAL THINKING OF THE STUDENTS OF SREDNJA POKLICNA IN	26
TEHNIŠKA ŠOLA MURSKA SOBOTA	26
Janja Hudej	27
RAZVIJANJE KOMPETENC PREDŠOLSKIH OTROK ZA BOLJ ODGOVOREN ODNOS	27
DO OKOLJA IN SOLJUDI.....	27
DEVELOPING THE COMPETENCES OF PRESCHOOL CHILDREN FOR A MORE	27
RESPONSIBLE ATTITUDE TOWARDS THE ENVIRONMENT AND HUMAN	27
BEINGS	27
Darija Hudobivnik	29
KOMUNALNI SNOVNI KROG – UPORABA RECIKLIRANEGA HIGIENSKEGA	29
PAPIRJA IZ ODPADNE EMBALAŽE TETRAPAK V OSNOVNI ŠOLI OREHEK KRANJ	29
IN V VRTCU OREHEK.....	29
COMMUNAL MATERIAL CYCLE - USE OF RECYCLED HYGIENE PAPER FROM	29
WASTE TETRAPAK PACKAGING IN OREHEK KRANJ PRIMARY SCHOOL AND	29
OREHEK KINDERGARTEN.....	29
Gregor Ivanšek	30

POVEZUJEMO ZNANJE RAČUNALNIŠTVA IN EKOLOGIJE	30
CONNECTING KNOWLEDGE OF COMPUTER SCIENCE AND ECOLOGY	30
Marko Juršič	31
REDUKCIJA PITNE VODE Z UPORABO DEŽEVNICE	31
REDUCING DRINKING WATER BY USING RAINWATER	31
Mateja Justinek	32
TRENDI EKOLOŠKO TRAJNOSTNEGA TURIZMA IN PRIMERI DOBRIH TURISTIČNIH PRAKS NA GORENJSKEM	32
TRENDS IN ECOLOGICALLY SUSTAINABLE TOURISM WITH EXAMPLES OF GOOD TOURISM PRACTICES IN GORENJSKA REGION	32
Marjeta Kačič	34
OD MAJICE DO VEČNAMENSKE VREČKE.....	34
FROM T-SHIRT TO MULTIPURPOSE	34
Nejc Kastelic	35
ZELENE STREHE IN NJHOVA ENERGIJSKA UČINKOVITOST	35
GREEN ROOFS AND THEIR ENERGY EFFICIENCY	35
Ana Kladnik Leban	36
EKOLOŠKO OZAVEŠČANJE UČENCEV PREKO ŠPORTA.....	36
ENVIRONMENTAL AWARENESS OF STUDENTS THROUGH SPORTS	36
Peter Klaus	37
STORIMO DANES ZA BOLJŠI JUTRI	37
DO IT TODAY FOR BETTER TOMORROW	37
Alenka Košir	38
OZAVEŠČANJE O OKOLJSKI PROBLEMATIKI IN PONOTRANJANJE IDEJ TRAJNOSTNEGA RAZVOJA V 5. RAZREDU.....	38
RAISING AWARENESS ABOUT ENVIRONMENTAL ISSUES AND ADOPTING IDEAS ON SUSTAINABLE DEVELOPMENT WITHIN THE 5TH GRADE CLASSROOM	38
Sonja Kranjc Kelemina	40
OKOLJSKO OZAVEŠČANJE PRI POUKU NEMŠKEGA JEZIKA	40
ENVIRONMENTAL AWARENESS IN GERMAN LANGUAGE LESSONS.....	40
Robert Kuzmijak	41
EKOLOŠKI POSTOPKI PRI PREDELAVI VOZILA CLIO V DIRKALNO VOZILO	41
ECOLOGICAL PROCEDURES WHEN CONVERTING THE CLIO VEHICLE INTO A RACING VEHICLE.....	41
Alenka Lapoši	42
O TRAJNOSTNI MODI PRI POUKU NEMŠČINE.....	42
ON SUSTAINABLE FASHION IN GERMAN LESSONS.....	42
Polonca Maček	43
KREPITEV LOKALNE PRIPADNOSTI IN EKOLOŠKE OZAVEŠČENOSTI – TELOVADNICE V NARAVI.....	43
STRENGTHENING LOCAL AFFILIATION AND ECOLOGICAL AWARENESS - GYMS IN NATURE	43
Tanja Majerič	44

SPOZNAVANJE GOZDNIH ŽIVALI IN PTIC PO ZIMI V NAŠI OKOLICI S POMOČJO EKOLOŠKIH DEJAVNOSTI.....	44
GETTING TO KNOW FOREST ANIMALS AND BIRDS AFTER WINTER IN OUR LOCAL ENVIRONMENT WITH A HELP OF ECOLOGICAL ACTIVITIES.....	44
Anita Malić Cumbo	45
VKLJUČEVANJE EKOLOŠKIH TEM V ŠOLSKI SPLETNI ČASOPIS	45
ECOLOGICAL TOPICS IN SCHOOL ONLINE NEWSPAPER.....	45
Vesna Markelj	46
PALMOVO OLJE – SESTAVINA, KI ŠKODI OKOLJU.....	46
PALM OIL – AN INGREDIENT THAT HARMS THE ENVIRONMENT	46
Valentina Maver	47
EKOTURIZEM V PROGRAMU MYP S Poudarkom NA PRIDOBIVANJU UČNIH KOMPETENC IN VEŠČIN	47
ECOTOURISM IN THE MYP, WITH A FOCUS ON THE ACQUISITION OF LEARNING COMPETENCES AND SKILLS	47
Dušan Merklin	48
OKOLJSKA OZAVEŠČENOST DIJAKOV V AVTOLIČARSKI DELAVNICI	48
ENVIRONMENTAL AWARENESS OF STUDENTS IN THE AUTOMOTIVE WORKSHOP	48
Manja Mesar Bogovič	49
RAZVIJANJE EKOLOŠKE ZAVESTI PRI UČENCIH Z MOTNJAMI V DUŠEVNEM RAZVOJU.....	49
DEVELOPMENT OF ECOLOGICAL AWARENESS IN STUDENTS WITH INTELLECTUAL DISABILITIES	49
Tina Mlakar	50
ŠOLSKA IZMENJEVALNICA OBLAČIL ZA TRAJNOSTNI NAČIN ŽIVLJENJA.....	50
CLOTHING EXCHANGE IN OUR SCHOOL FOR A SUSTAINABLE LIFESTYLE.....	50
Petra Mušič	51
S POMOČJO EKOLOGIJE DO BOLJŠE BRALNE PISMENOSTI.....	51
IMPROVING READING LITERACY WITH THE HELP OF ECOLOGY.....	51
Žana Nježić	52
OKOLJSKA VZGOJA IN LIKOVNO RECIKLIRANJE V PODALJŠANEM BIVANJU. 52	
ENVIRONMENTAL EDUCATION AND ART RECYCLING IN AFTER-SCHOOL CLASSES.....	52
Rajko Palatin	53
Z MERJENJEM PORABE ELEKTRIČNE ENERGIJE DO VEČJE OZAVEŠČENOSTI O UČINKOVITI RABI.....	53
BY MEASURING ELECTRICITY CONSUMPTION TO GREATER AWARENESS OF EFFICIENT USE.....	53
Nina Pirc	54
KAKO DOSEČI VPLIV NA EKOLOŠKE VREDNOTE V ŠOLI?.....	54
HOW TO ACHIEVE INFLUENCE ON ECOLOGICAL VALUES IN SCHOOL?.....	54
Žan Podbregar	55

ČEBELARSKI KROŽEK NA SREDNJI ŠOLI ZA STROJNIŠTVO, MEHATRONIKO IN MEDIJE, ŠOLSKI CENTER CELJE	55
BEEKEEPING CLUB AT THE SECONDARY SCHOOL OF MECHANICAL ENGINEERING, MECHATRONICS AND MEDIA, CELJE SCHOOL CENTRE.....	55
Barbara Pogačar	56
EKOLOŠKO OZAVEŠČEN UČITELJ JE DOBER ZGLED	56
AN ECOLOGICALLY AWARE TEACHER IS A GOOD EXAMPLE.....	56
Nataša Pogorevc Tarkuš	57
HITRA MODA V NAŠEM RAZREDU.....	57
FAST FASHION IN OUR CLASS.....	57
Darja Pojbič Kovačič	59
DIJAKI KOT AKTIVNI DRŽAVLJANI O ZELENI PRIHODNOSTI IN BOJU PROTI PODNEBNIM SPREMENAM	59
STUDENTS AS ACTIVE CITIZENS ABOUT A GREEN FUTURE AND THE FIGHT AGAINST CLIMATE CHANGE	59
Mateja Rajh	61
OKOLJSKA VZGOJA V PROGRAMU OSNOVNA ŠOLA ZA ODRASLE.....	61
ENVIRONMENTAL EDUCATION IN THE PROGRAM OF PRIMERY SCHOOL FOR ADULTS	61
Manuela Rigler	62
KAKO PREDSTAVITI ODNOS MED EKOLOŠKIMI IN TRENUTNIMI DRUŽBENIMI PROBLEMI.....	62
HOW TO PRESENT THE RELATIONSHIP BETWEEN ECOLOGICAL AND CURRENT SOCIAL ISSUES	62
Jak Rogel	63
EKOLOGIJA PRI PREDMETU ŠPORT – Z GIBANJEM OČISTIMO LOKALNO OKOLJE IN OZAVESTIMO OKOLJSKO VZGOJO	63
ECOLOGY IN THE SUBJECT OF SPORT - USING MOVEMENT TO CLEAN UP THE LOCAL ENVIRONMENT AND RAISE AWARENESS OF ENVIRONMENTAL EDUCATION.....	63
Barbara Rozman	65
VPLIV POUKA GEOGRAFIJE NA VSAKODNEVNO IZBIRO PREHRANE.....	65
INFLUENCE OF GEOGRAPHY LESSONS ON CHOOSING DAILY DIETE.....	65
Mateja Rožman Lubšina	66
SLIŠATI IN POSLUŠATI PTICE V DOMAČEM OKOLJU	66
HEAR AND LISTEN THE BIRDS IN LOCAL ENVIRONMENT.....	66
Matija Sajko	67
STALIŠČA DIJAKOV 2. IN 4. LETNIKA SREDNJEGA STROKOVNEGA IZOBRAŽEVANJA O KROŽNEM GOSPODARSTVU	67
VIEWS OF STUDENTS IN THE 2ND AND 4TH YEAR OF TECHNICAL SECONDARY EDUCATION ON THE CIRCULAR ECONOMY	67
Gordana Slak	68
ZMANJŠANJE HRUPA S POMOČJO OBLIKOVANJA PROSTOROV V ŠOLAH	68
REDUCING NOISE THROUGH THE DESIGN OF SPACES IN SCHOOLS.....	68

<i>Katja Sodnik</i>	69
NOVI PRISTOPI K UČENJU ZA LEPŠI JUTRI.....	69
NEW LEARNING APPROACHES FOR A BETTER TOMORROW	69
<i>Petra Soklič</i>	70
TEMATSKA UČNA POT – SPOZNAJMO OPRAŠEVALCE	70
THEMATIC LEARNING TRAIL – LET'S GET TO KNOW POLLINATORS.....	70
<i>Lucija Strmčnik</i>	71
SPREMINJANJE VSAKODNEVNIH NAVAD UČENCEV Z NAMENOM ZMANJŠEVANJA KOLIČINE ODPADKOV	71
CHANGING THE DAILY HABITS OF STUDENTS TO REDUCE THE AMOUNT OF WASTE	71
<i>Alenka Stvarnik</i>	72
EKOLOŠKE VSEBINE IN PRAKTIČNI PRIMERI OSVEŠČANJA DIJAKOV PRI POUKU NEMŠČINE	72
ECOLOGICAL TOPIC AND PRACTICAL EXAMPLES OF AWARENESS-RAISING IN GERMAN LESSONS	72
<i>Primož Šajna</i>	73
PRAKTIČNA UPORABA POSAMEZNIH NAPRAV IZ PRENOSNEGA SOLARNEGA KOVČKA.....	73
PRACTICAL USE OF INDIVIDUAL DEVICES FROM A PORTABLE SOLAR UNIT..	73
<i>Elizabeta Šajnovič</i>	74
S PROJEKTI ETWINNING IN ERASMUS PLUS DO EKOLOŠKEGA OZAVEŠČANJA IN IZOBRAŽEVANJA UČENCEV NA OŠ APAČE	74
PROMOTING ECOLOGICAL AWARENESS AND EDUCATING STUDENTS THROUGH ETWINNING AND ERASMUS+ PROJECTS AT PRIMARY SCHOOL APAČE.....	74
<i>Petra Šegula</i>	75
ČESAR VI NE POTREBUJETE, MI UPORABIMO – RECIKLIRANJE V VRTCU.....	75
WHAT YOU DON'T USE, WE REUSE - RECYCLING IN THE KINDERGARTEN	75
<i>Valerija Šijanec</i>	76
RECIKLIRAJMO DANES ZA BOLJŠI JUTRI.....	76
LET'S RECYCLE TODAY FOR A BETTER TOMORROW	76
<i>Petra Štrancar</i>	77
MEDPREDMETNA OKOLJSKA VZGOJA ŠESTOŠOLCEV	77
CROSS-CURRICULAR ENVIRONMENTAL EDUCATION OF SIXTH GRADERS.....	77
<i>Andreja Štrucl</i>	78
UPORABA NARAVNIH MATERIALOV Z NAMENOM RAZVIJANJA OTROKOVIH SPRETNOSTI	78
THE USE OF NATURAL METERIALS FOR DEVELOPING CHILDREN'S SKILLS	78
<i>Roman Tamše</i>	79
OKOLJSKA OZAVEŠČENOST DIJAKOV V POVEZAVI S ŠOLSKIMI DEJAVNOSTMI.....	79
ENVIRONMENTAL AWARENESS OF STUDENTS IN CONNECTION WITH SCHOOL ACTIVITIES	79

<i>Beno Tertinek</i>	80
PRIHODNOST ELEKTRIČNIH AVTOMOBILOV IN ZMANJŠEVANJE ONESNAŽEVANJA OKOLJA IZ VIDIKA UDELEŽENCEV IZOBRAŽEVALNEGA PROCESA ZA POKLIC AVTOSERVISNEGA TEHNIKA	80
THE FUTURE OF ELECTRIC CARS AND THE REDUCTION OF ENVIRONMENTAL POLLUTION FROM THE POINT OF VIEW OF THE PARTICIPANTS IN THE EDUCATION PROCESS FOR THE PROFESSION OF A CAR MECHANIC TECHNICIAN	80
<i>Alenka Toplak</i>	81
VKLJUČEVANJE EKOLOŠKIH TEM NA FESTIVALU OBLIKOVANJA	81
INCLUSION OF ECOLOGICAL THEMES IN THE DESIGN FESTIVAL.....	81
<i>Marjetka Usar</i>	82
KAJ LAHKO STORIMO S STARIMI KOSI TEKSTILA?	82
WHAT CAN WE DO WITH OLD PIECES OF TEXTILES?.....	82
<i>Helena Virant</i>	83
RAZVIJANJE ODNOSA DO HRANE PRI PREDŠOLSKIH OTROCIH, V POVEZAVI S KULTURNO DEDIŠČINO.....	83
RAISING A POSITIVE ATTITUDE TOWARDS FOOD WITH PRESCHOOL CHILDREN IN CONNECTION TO CULTURAL HERITAGE.....	83
<i>Srđan Vuković</i>	84
SPODBUJANJE POUČEVANJA STROKOVNIH VSEBIN S PODROČJA EKOLOGIJE IN KROŽNEGA GOSPODARSTVA NA PRIMERIH V SREDNJI ŠOLI	84
TEACHING SUSTAINABLE DEVELOPMENT THROUGH ENTREPRENEURIAL PROJECTS AND PROFESSIONAL MODULES IN THE HIGH SCHOOL PROGRAM ECONOMIC TECHNICIAN	84
<i>Jasmina Zalar</i>	86
EKO DAN V ČETRTEM RAZREDU – SPOZNAVAJ IN VARUJ SVOJE DOMAČE OKOLJE TER UŽIVAJ V GIBANJU PO NJEM.....	86
ECO DAY IN THE FOURTH GRADE - GET TO KNOW AND PROTECT YOUR HOME ENVIRONMENT AND ENJOY MOVING AROUND IT	86
<i>Anja Zatezalo</i>	87
POUK DRŽAVLJANSKE IN DOMOVINSKE VZGOJE TER ETIKE KOT POMEMBEN DEL OKOLJSKE VZGOJE	87
CIVIC AND PATRIOTIC EDUCATION AND ETHICS LESSONS AS IMPORTANT PART OF ENVIRONMENTAL EDUCATION	87
<i>Katarina Žebavec</i>	88
TEMATSKI SKLOP EKOLOGIJA PRI POUKU ANGLEŠČINE V VIŠJIH RAZREDIH OSNOVNE ŠOLE	88
TEACHING ENVIRONMENTAL TOPICS IN ENGLISH LESSONS IN HIGHER GRADES OF THE PRIMARY SCHOOL.....	88
<i>Simona Žvikart Repnik</i>	89
BIO HRANA NA ŠOLSKEM JEDILNIKU.....	89
BIO PROCESSED FOOD ON THE SCHOOL MENU	89

IZDELAVA DIDAKTIČNIH IGER S PONOVRNO UPORABO EMBALAŽE V 3. RAZREDU OSNOVNE ŠOLE, TER KROŽENJE ŽE UPORABLJENIH PREDMETOV

POVZETEK

Naš planet se zaradi dejanj človeka hitro spreminja, se segreva in se sam ne more dovolj hitro obnavljati. Da bi ozavestili čim več ljudi, je potrebno začeti pri najmlajših. Verjamem, da imamo zaposleni v vzgoji in izobraževanju pomembno vlogo že takoj pri vstopu otrok v vrtec in šolo. Ob dolgotrajnem delovanju in vztrajnem vzpodbujanju k spremembam, se lahko skozi generacije, navade ljudi izboljšajo.

Vsakodnevno se srečujemo s kupi različnih odpadkov. Tudi naši otroci so izpostavljeni prekomerni uporabi različne embalaže, vendar se tega verjetno ne zavedajo dovolj. Kljub zavestnemu recikliranju, ki je pri nas že lepo razvito, pa je potrebno razmišljati tudi v smeri trajnosti in ponovne uporabe.

V svojem prispevku bom predstavila, kako sem otrokom pomagala odpreti oči in jih ozavestiti o prekomerni uporabi različnih vrst embalaže, ter kako jo je mogoče embalažo ponovno uporabiti in izdelati didaktične igre. V veliki meri smo se dotaknili tudi ponovni uporabi oblačil, igrač, različnih predmetov, ki se jih naveličamo.

Skozi različne aktivnosti smo ugotavljali kje se embalaža kopiči in kako jo lahko ponovno uporabimo.

Menim, da je v učni proces potrebno vnašati veliko konkretnih in zanimivih dejavnosti, da se otroke in mlade ozavešča že zelo zgodaj. Nekaj praktičnih primerov sem predstavila v svojem prispevku.

KLJUČNE BESEDE: ponovna uporaba, didaktične igre, menjava, kroženje

CREATION OF DIDACTIC GAMES BY REUSING PACKAGING IN THE 3RD GRADE OF PRIMARY SCHOOL, AND CIRCULATION OF ALREADY USED OBJECTS

ABSTRACT

Our planet is rapidly changing due to human actions, global warming and not being able to regenerate quickly enough. To raise awareness among as many people as possible, we need to start with the youngest. I truly believe that elementary and school teachers are holding one of the most important roles here. Through long-term action and persistent encouragement towards change, people's habits can improve over generations.

We encounter piles of different types of waste every day. Our children are also exposed to excessive use of various types of packaging, but they are not even aware of it. Despite conscious recycling, which is well developed here, it is also necessary to think in terms of sustainability and reuse.

In my contribution, I will present how I helped children open their eyes and become aware of the excessive use of various types of packaging and how the packaging can be reused and made into didactic games. We also largely addressed the reuse of clothes, toys, and various objects that we no longer use.

Through various activities, we determined where packaging accumulates and how we can reuse packaging.

I believe that it is necessary to introduce a lot of concrete and interesting activities into the learning process to raise awareness among children and young people at a very early age. I presented some of those practical examples in my contribution.

KEYWORDS: reuse, didactic games, trade, circulation

RAZREDNI PROJEKT »EKO MINUTE«

POVZETEK

Po lanskoletnem pozitivnem odzivu učencev na ekološko tematiko globalnega segrevanja je nastal letošnji razredni projekt z nazivom Eko minute, kjer smo si tedensko širili obzorja in spoznanja o lokalno pridelani hrani. Za začetek našega razrednega projekta so bili moji učenci 2. razreda seznanjeni z najpomembnejšimi vidiki in prednostmi lokalne hrane. Hrana lokalnega izvora je bolj zrela, sveža, polnejšega okusa in vsebuje manj pesticidov in je celo brez konzervansov. Zaradi krajše poti do našega krožnika ima lokalna hrana tudi manj ogljičnega odtisa v ozračju, s tem posledično ima tudi manjši negativni učinek na okolje in naše zdravje. Ko so učenci spoznali bistvo izbora hrane iz lokalnega okolja in ponotranjili širše posledice na okolje in lastno zdravje, sem jim z različnimi načini in metodami želela predstaviti in približati pomen izbiranja hrane, ki je bližja domu. Ob zaključku našega razrednega projekta smo predstavili rešitve in predloge, ki jih lahko dosežemo, obdržimo in uresničujemo kot posamezniki in tako prispevamo tudi svoj delež k ohranjanju in varovanju našega planeta za nas in prihodnje generacije.

KLJUČNE BESEDE: lokalno pridelana hrana, tržnica, ekološko kmetijstvo, zdravje

CLASS PROJECT »ECO MINUTES«

ABSTRACT

After last year's positive response of the students to the ecological theme of global warming, this year's class project is called Eco-minutes, where together with the students I spent a week expanding their horizons and knowledge about the local food. To kick off our class project, the children were introduced to the most important aspects and benefits of local food. Locally sourced food is riper, fresher, fuller tasting and contains less pesticides and is even preservative-free. Local food also has a shorter journey to our plates and less of a carbon footprint in the atmosphere, and consequently has a lower negative impact on the environment and our health. When students have learnt the essence of choosing locally sourced food and have understood the wider implications for the environment and their own health, I wanted to introduce and make them aware of the importance of choosing food that is closer to home through different ways and methods. At the end of our class project, we presented solutions and proposals that can be achieved, retained and implement as individuals and thus do our part in preserving and protecting our planet for ourselves and future generations.

KEYWORDS: locally produced food, market, organic farming, health

A BI Z MANO IZ ODPADNEGA JEDILNEGA OLJA IZDELAL EKOLOŠKO SVEČKO?

POVZETEK

Idejni vodja in nosilec celotnega projekta z naslovom Zbirajmo odpadno jedilno olje – na bolje je Komunala Novo mesto. V ta projekt je bila povabljen tudi OŠ Center. Da bi preprečili, da odpadno jedilno olje konča kot odpadek in onesnažuje podtalnico, smo se odločili za sodelovanje. Osnovni cilj je bil vzpostaviti sistematično zbiranje odpadnega jedilnega olja v posebnih zbiralnikih. Že zelo kmalu smo na ekoloških otokih zaznali rumene zbiralnike. Hkrati je potekalo intenzivno osveščanje občanov osmih dolenjskih občin. Vsem osnovnošolcem smo razdelili posebno oblikovane posodice za zbiranje odpadnega jedilnega olja v gospodinjstvih, o problematiki pa so bili poučeni na delavnicah, kjer so dobili nalogo o tem spregovoriti v svojih družinah ter informirati ostale sorodnike in sosede. Projekt je bil pozitivno sprejet, kar pokaže tudi statistika količine zbranega olja. Ker že nekaj časa na naših šolah zagovarjamo krožno gospodarstvo, smo tudi pri tem odpadku naredili naslednji korak. Zbrano odpadno olje smo uporabili za izdelavo ekoloških produktov. To so svečke, ki so jih izdelovali vrtničarji in osnovnošolci. Izvedla sem deset delavnic na petih osnovnih šolah. Povezali smo se s podjetjem Bolje, ki nas je naučilo izdelovati svečke. Pri tem smo posneli promocijski video, ki bo uporabljen za nadaljnja izobraževanja. Učenci so spoznali, kako se lahko odpadno olje z neprijetnim vonjem predela v nekaj novega in uporabnega. Da je bila izdelava še bolj zanimiva in končni produkt bolj privlačen, smo dodajali barvila ter vse skupaj vliвали v modelčke. Svečke so učenci odnesli domov in jih predstavili svojim najbližjim kot konkreten primer varovanja okolja in krožnega gospodarstva.

KLJUČNE BESEDE: osnovnošolci, Komunala Novo mesto, odpadno jedilno olje, ekološke svečke

WOULD YOU MAKE AN ECO-FRIENDLY CANDLE FROM WASTE COOKING OIL WITH ME?

ABSTRACT

The idea leader and holder of the entire project entitled Let's collect waste cooking oil - for the better future is Komunala Novo mesto. Center Primary School was also invited to this project. We decided to cooperate in order to prevent waste cooking oil from ending up as waste and polluting the groundwater. The basic goal was to establish a systematic collection of waste cooking oil in special collectors. Very soon we noticed yellow collectors on the ecological islands. At the same time, the citizens of eight municipalities in Dolenjsko region were intensively educated. We distributed specially designed containers for collecting waste cooking oil in households to all primary school students, and they were taught about the issue at workshops, where they were given the task of talking about it in their families and informing other relatives and neighbours. The project was received positively, which is also shown by the statistics of the amount of oil collected. Since we have been advocating a circular economy at our schools for quite some time, we have also taken the next step with this waste. The collected waste oil was used to produce new products. These are candles made by kindergartners and elementary school pupils. I conducted ten workshops at five elementary schools. We connected with the company Bolje, which taught us how to make candles. In doing so, we recorded a promotional video that will be used for further educational purpose. The students learned how waste oil with an unpleasant smell can be processed into something new and useful. To make the production process even more interesting and the final product more attractive, we added dyes and poured everything into models. The students took the candles home and presented them to their loved ones as a concrete example of protecting the environment and the circular economy.

KEYWORDS: elementary school students, Komunala Novo mesto, waste cooking oil, ecological candles

EKOLOŠKE VSEBINE V UČBENIKU NEW SUCCESS INTERMEDIATE

POVZETEK

V prispevku so predstavljene ekološke vsebine v učbeniku New Success Intermediate, ki ga na Srednji šoli za oblikovanje v Mariboru uporabljamo pri pouku programov medijski tehnik in tehnik oblikovanja. Pri pouku angleškega jezika obravnavamo vse bolj pogoste naravne katastrofe kot rezultat podnebnih sprememb, onesnaževanje narave s plastiko, obnovljive vire energije ter druge načine, kako ohraniti okolje čisto in obvarovati živali pred izumrtjem. Poleg besedil v učbeniku za dijake pripravim delovne liste z dodatnimi temami, kot je na primer globalno segrevanje. Pouk popestrim tudi z ogledom dokumentarnih filmov in posnetkov na spletu, k njihovi ozaveščenosti o ekologiji in ekoloških problemih pa veliko doprinesejo še obiski naravoslovnih muzejev. Ekoloških vsebin je v angleških učbenikih še zmeraj zelo malo, zato je treba dijake na različne načine pritegniti k zavedanju pomembnosti čistega okolja, recikliranju in skrbi za naravo in živali. Doprinos tega prispevka k stroki je predstavitev različnih pristopov poučevanja o ekologiji, predvsem s filmi in videoposnetki, saj dijake to pritegne veliko bolj kot samo branje člankov.

KLJUČNE BESEDE: ekologija, ekološke vsebine, dijaki, učbenik, angleščina

ECOLOGICAL TOPICS IN THE COURSEBOOK NEW SUCCESS INTERMEDIATE

ABSTRACT

The aim of this paper is to present the ecological topics in the coursebook New Success Intermediate, which is used at Srednja šola za oblikovanje Maribor in the programmes Media technician and Design technician. In English classes, we discuss the more and more frequent natural disasters caused by climate change, plastic pollution, renewable energy sources and other ways of maintaining a clean environment and preventing the extinction of various animal species. Apart from coursebook material, I prepare handouts with additional topics for my students, such as global warming. I try to make my classes more appealing by including documentaries and online videos, and visiting natural history museums also increases the students' ecological awareness. There are still very few ecological topics in English coursebooks, which is why we must stimulate the students' interest to make them aware of the importance of a clean environment, recycling and caring for nature and animals. The value of this paper lies in presenting different approaches to teaching ecology, especially through movies and videos, because students find these much more appealing than reading articles.

KEYWORDS: ecology, ecological topics, students, coursebook, English

DAN DEJAVNOSTI OB SVETOVNEM DNEVU ZEMLJE ZA UČENCE OD 1. DO 9. RAZREDA

POVZETEK

Z namenom osveščanja o pomembnosti ohranitve našega planeta, smo na šoli obeležili Svetovni dan Zemlje. Dan smo posvetili vsebinam in aktivnostim, ki so jih predlagali učitelji in učenci. Dan smo poimenovali eko dan.

V dan dejavnosti je bilo vključenih 558 učencev od prvega do devetega razreda in 46 učiteljev. Učenci od prvega do petega razreda so sodelovali na delavnicah, namenjenim posameznim razredom. Izdelovali so zabojnike za zbiranje odpadnega papirja, igre iz odpadne embalaže, risali varčevalne piktograme, sadili rastline, obiskali čistilno napravo in izdelali peščeni filter za čiščenje vode. Učenci predmetne stopnje so izbirali delavnice glede na interese. Izdelovali so valilnice, hotel za žuželke, čutno pot, reliefe iz gline in raziskovali e-učno veвериčkovo pot. Presajali so rože, urejali vitrine, igrala in šolske trate. Kvačkali so oblačilo za šolsko drevo, šivali, zbirali odpadni papir, izmenjavali rabljena oblačila in sodelovali v medijski delavnici. Na stojnicah pred šolo so se predstavili lokalni dobavitelji. Podjetje Komunala Kranj je predstavilo njihova vozila. Eko dan se je zaključil s posaditvijo oreha, ki je simbol šole in s kulturnim programom.

Rezultati eko dneva so bili izdelki delavnic, urejena okolica šole in večja osveščenost učencev. Z intervjuji in opazovanji smo ugotovili, da je bil dan dobro organiziran in da so bile učencem aktivnosti zanimive. Pri izvedbi so aktivno sodelovali, bi bilo pa ponekod potrebnega več časa.

Osveščenost se je širila tudi med starše in ostale krajanje, ki so lahko celotno dopoldne spremljali in sodelovali v aktivnostih. Krepila se je pripadnost, odgovornost, medsebojna pomoč in sodelovanje učencev, učiteljev in krajanov.

KLJUČNE BESEDE: eko dan, urejanje šole in okolice, delavnice, povezovanje z okoljem

ACTIVITY DAY FOR WORLD EARTH DAY FOR PUPILS FROM GRADES 1 TO 9

ABSTRACT

We celebrated World Earth Day at our school to raise awareness of the importance of preserving our planet. We devoted the whole day to the workshops and activities the teachers and pupils proposed. We called the day eco day.

558 pupils from the first to the ninth grade and 46 teachers were involved in the activity day. From first to fifth grade, pupils participated in activities intended for individual classes. They made containers for collecting waste paper, made games from waste packaging, drew saving picograms, planted plants, visited a cleaning plant, and made a sand filter for water purification. From sixth to ninth grade, pupils participated in activities based on their interests. They made hatcheries, an insect hotel, a sensory path, clay reliefs, and researched an E-learning squirrel path. They transplanted flowers and tidied display cases, playgrounds and school lawns. They crocheted clothing for the school tree, sewed, collected waste paper, exchanged used clothes and participated in a media workshop. Local suppliers presented themselves at the stands in front of the school. The public utility company Komunala Kranj presented its vehicles. The eco day ended with planting a walnut, which is the symbol of the school, and with a cultural program.

The results of the eco day were workshop products, tidy school surroundings and greater awareness among pupils. Through interviews and observations we found that the day was well organized and that the pupils found the activities interesting. They actively participated in the implementation; however, in some workshops and activities more time would be needed.

Awareness also spread among parents and other locals, who could follow the entire event and participate in the activities. Sense of belonging, responsibility, mutual help and cooperation of pupils, teachers and local people were strengthened.

KEYWORDS: eco day, tidying up school and its surroundings, activities, connecting with the environment

KAKO SO TRETJEŠOLCI POSTALI OKOLJU PRIJAZNI?

POVZETEK

O zaščiti narave in okolja se veliko piše in premalo naredi. Učitelji, ki veliko časa preživimo z učenci, igramo tudi pri oblikovanju učenčeve ekološke zavesti pomembno vlogo. Učenci vsakodnevno potrebujejo zgled in vzgojo, ki jih usmerja v pozitivna ravnanja, v zavedanje zdravega načina življenja, lastne odgovornosti za čisto naravo in okolje, v katerem živimo. Učitelji podaljšanega bivanja v 3. razredih smo se zato odločili, da v naše ure vnesemo sveženj novih zamisli in pobud, ki so učence motivirale, da so začeli razmišljati o tem, kako lahko sami in drugi ljudje vplivajo na naravo ter kako lahko različne dejavnosti prispevajo k varovanju okolja. Po šoli smo nalepili znake za varčno porabo vode in elektrike, opremili in priskrbeli smo koše za ločevanje odpadkov v razredih, v knjižnici so učenci iskali literaturo na temo onesnaževanja ter recikliranja, v razredu smo uredili Eko kotiček. Problematiko pitne vode smo povezali z odpadki. Učenci so si v šolo prinesli steklene lončke, da bi zmanjšali uporabo plastike in papirnatih kozarčkov. Z likovnimi izdelki iz odpadnega materiala smo naredili razstavo na šolskih hodnikih in tako osveščali tudi druge učence o uporabnosti odpadkov. Učitelji smo se tudi potrudili, da smo učence spodbujali za aktivnosti na šoli, ki pripomorejo k ozaveščanju in ponotranjanju ekoloških vsebin. Učenci so se tako bolj aktivno vključevali v zbiralne akcije (tekmovanje razredov pri zbiranju papirja, zbiranje starih oblek, sejem Izmenjave oblačil, zbiranje zamaškov in zobnih ščetk). S prispevkom želimo predstaviti primer dobre prakse na OŠ Lenart, ki dokazuje, da je mogoče tudi v popoldanskem času pripraviti dejavnosti za učence, s katerimi si učenci oblikujejo svoje vrednote, ki bodo prispevale k varovanju in ohranjanju narave. Ekološko osveščeni učenci in njihova pozitivna ravnanja v naravi in okolju so neprecenljiva naložba v našo prihodnost.

KLJUČNE BESEDE: učenec, učitelj, ekološka zavest, odgovornost posameznika, varovanje okolja

HOW DID THIRD GRADERS BECOME ENVIRONMENTALLY FRIENDLY?

ABSTRACT

Much is written about the protection of nature and the environment, but not enough is done. As teachers, who spend a lot of time with students, we also play an important role in shaping students' ecological awareness. Students need an example and education on a daily basis that directs them to positive behavior, to awareness of a healthy way of life, their own responsibility for clean nature and the environment in which we live. As teachers of the extended stay in the 3rd grade, we therefore decided to introduce new ideas and initiatives into our lessons, which motivated the students to start thinking about how they and other people can influence nature and how can different activities contribute to protect the environment. We put signs around the school for the economical use of water and electricity, we equipped and provided bins for separating waste in the classrooms, in the library the students looked for literature on the topic of pollution and recycling, and we set up an Eco corner in the classroom. We linked the problem of drinking water with waste. The students brought glasses to school to reduce the use of plastic and paper cups. We made an exhibition in the school hallways with art products made from waste material, and thus made other students aware of the usefulness of waste. It was important to us that the students were reminded of ecological values with small tasks every day. Through conversation, reading Eco books, self-observation - waste management, water and energy care, learning and research, the students realized that we, humans, are responsible for nature. The teachers also tried to encourage students to participate in activities at school that help them evaluate and internalize ecological contents. The students were thus more actively involved in collecting actions (class competition in collecting paper, collecting old clothes, the Clothes Exchange fair, collecting corks and toothbrushes). Through the activities, we wanted to achieve the goal of students forming their own values that will contribute to the protection and preservation of nature. Ecologically aware students and their positive behavior in

nature and the environment are an invaluable investment in our future. With this article, we want to present an example of good practice at Lenart Elementary School, which proves that it is possible to prepare activities for students in the afternoon, with which students form their own values, which will contribute to the protection and preservation of nature. Ecologically aware students and their positive behaviour in nature and the environment are an invaluable investment in our future.

KEYWORDS: student, teacher, ecological awareness, individual responsibility, environmental protection

EKOLOŠKE VSEBINE V OKVIRU VRTNARSKEGA KROŽKA ZA UČENCE 3. IN 4. RAZREDA OSNOVNE ŠOLE

POVZETEK

Interesne dejavnosti v osnovni šoli so del razširjenega programa, v katerega se učenci vključujejo prostovoljno. Vsebinsko načrtovanje interesne dejavnosti v splošnem ni vezano na določen oz. predpisan vsebinski tematski okvir (npr. na učne cilje), zato pušča mentorju pri načrtovanju vsakoletnih vsebin široke možnosti vsebinskega načrtovanja v okviru osnovnega tematskega področja. Letna priprava vrtnarskega krožka (Zeleni prstki), ki ga vodim na šoli, je vsebinsko širše naravna in zajema poleg spoznavanja osnovnih bioloških potreb rastlin in zagotavljanja pogojev za njihovo vzgojo, rast in nego, tudi širše okoljske teme, ki zadevajo področje trajnostnega razvoja in problematike ravnanja z odpadki (npr. koristna izraba kuhinjskih odpadkov, ponovna uporaba odpadne embalaže oz. predelava le-te v izdelek z drugim namenom uporabe). Pri načrtovanju v največji možni meri sledim načelom ponovne uporabe, zato se izogibamo nakupovanju materiala, potrebnega za delo. Vsebinska priprava sledi načelu medpredmetnega povezovanja. Prevladujoča metoda dela je praktično delo, kjer prevladuje izkustveno učenje. Ob tem ne zanemarjamo niti estetskega vidika dela, saj povezujemo lepo s koristnim. V okviru vrtnarskega krožka želim učence seznaniti tudi s petimi (5) zero-waste načeli in z udejanjanjem le-teh v življenju ter ozaveščati in poučiti o možnostih trajnostnega ravnanja z bioodpadki v domačem okolju.

Prispevek vsebinsko predstavlja nekaj izbranih tem - posameznih učnih ur vrtnarskega krožka, ki se nanašajo na zgoraj opisano področje ekologije. Posamezne so bile že realizirane, druge še bodo do zaključka šolskega leta.

KLJUČNE BESEDE: interesna dejavnost, vrtnarski krožek, trajnostni razvoj, ponovna uporaba

ECOLOGICAL CONTENT IN THE FRAMEWORK OF THE GARDENING CLUB FOR PRIMARY SCHOOL STUDENTS IN THE 3RD AND 4TH GRADES

ABSTRACT

Interest activities in elementary school are part of an extended program in which students participate voluntarily. The content planning of the activity of interest is generally not tied to a specific or a prescribed content thematic framework (e.g. on learning objectives), therefore leaves the mentor wide possibilities for content planning within the basic thematic area when planning the annual content. The annual preparation of the gardening club (Green fingers), which I lead at school, is broadly natural in content and covers, in addition to learning about the basic biological needs of plants and ensuring the conditions for their upbringing, growth and care, also broader environmental topics that concern the field of sustainable development and issues waste management (e.g. useful use of kitchen waste, reuse of waste packaging or processing of it into a product with a different purpose of use). When designing, we follow the principles of reuse as much as possible, so we avoid buying materials necessary for work. Content preparation follows the principle of cross-curricular integration. The predominant method of work is practical work, where experiential learning prevails. At the same time, we do not neglect the aesthetic aspect of the work either, as we connect the beautiful with the useful. As part of the gardening club, I also want to familiarize the students with the five (5) zero-waste principles and their implementation in life, as well as raise awareness and teach about the possibilities of sustainable handling of bio-waste in the home environment. The content of the contribution presents some selected topics - individual lessons of the gardening club, which relate to the above-described field of ecology. Individual ones have already been realized, others will be until the end of the school year.

KEYWORDS: interest activity, gardening club, sustainable development, reuse

NAŠI KORAKI IN RAZISKOVANJE GOZDA SO PRISPEVEK K EKOLOGIJI

POVZETEK

V svoje delo velikokrat vključujem ekološke vsebine, saj menim, da lahko z dobrim vzgledom otroke veliko naučimo. V lanskem šolskem letu sem vodila 24 otrok, starih od 4 do 5 let, in bili so pravi raziskovalci. Ekologija se je prepletala skozi naše zastavljene dejavnosti in obravnavane vsebine. Z otroki smo se lotili raziskovanja bližnjega gozda. Zaznavali smo ga z vsemi čutili, se v njem igrali in spoznavali njegov pomen, namen in doprinos k okolju. Gozd smo obiskovali skozi vse letne čase in se v njem veliko novega naučili.

Poudarek smo dajali trajni mobilnosti. Naredili smo kar nekaj korakov in kilometrov ter spoznali, da se lahko do zelenega cilja pride tudi brez avtomobila. Obiskali smo domove otrok iz naše skupine in si ogledali veliko zanimivosti.

Otroci so ob zastavljenih dejavnostih uživali in pokazali veliko zanimanja. Z raziskovanjem so odkrili, kako pomemben je gozd za naše okolje in obstoj. Ob vnašanju ekoloških vsebin v vrteške dejavnosti so postali še bolj pozorni na osnovne vedenjske navade, kot so zapiranje vode na umivalniku, ugašanje luči, poraba papirnatih brisač za roke, ločevanje odpadkov ... Skupaj smo spoznali, da ekološka ozaveščenost vpliva na zdravje našega telesa. Ko pešočimo, ne onesnažujemo okolja in še gibamo se, kar je dobro za naše telo. Otroke je skozi ekološke teme dobro peljati skozi igro, a ob tem nenehno poudarjati, kako velikega pomena je ekologija za nas in za naše bivanje.

KLJUČNE BESEDE: predšolski otroci, naravoslovje, ekologija, gozd, koraki

OUR STEPS AND EXPLORATION OF THE FOREST HAVE CONTRIBUTED TO ECOLOGY

ABSTRACT

I often include ecological content in my work, because I think that we can teach children a lot by example. Last school year, I led a group of 24 children aged 4 to 5, and they were real explorers. Ecology was intertwined through our planned activities and discussed topics. We went out to explore our nearby forest. We perceived it with all our senses, played in it and got to know its meaning, purpose and contribution to the environment. We visited the forest in all seasons and learned a lot in it.

We focused on permanent mobility. We took quite a few steps and kilometers and realized that we can get to our desired destination even without a car. We visited the homes of children from our group and saw many interesting places.

The children enjoyed the activities and showed great interest. Through research, they discovered how important forest is for our environment and existence. When introducing ecological content into kindergarten activities, they became even more attentive to basic behavioral habits, such as turning off the water at the sink, turning off the lights, usage of paper towels for hands, recycling... Together we realized that ecological awareness affects the health of our body. When we walk, we do not pollute the environment and we exercise, which is good for our body. It is good to take children through ecological topics through play, but at the same time constantly empathizing how important ecology is for us and for our living.

KEYWORDS: preschool children, natural science, ecology, forest, steps

OKOLJSKE VSEBINE SKOZI USTVARJALNO PISANJE PRI POUKU ANGLEŠČINE V SREDNJI ŠOLI

POVZETEK

Pri pouku angleščine dijaki razvijajo sporazumevalno zmožnost s pomočjo različnih ključnih kompetenc, med katerimi je tudi odgovoren odnos do okolja. Okoljska vzgoja in ekološka ozaveščenost dijake spodbujata k razmišljanju o lastnem okolju, kar je v današnjem času zelo pomembno.

Dijaki in dijakinje se pri pouku angleščine usposablajo za učinkovito govorno in pisno sporazumevanje v najrazličnejših okoliščinah. Tvorijo ustrezna, razumljiva in jezikovno pravilna ustna in pisna besedila, tudi s pomočjo slikovnih gradiv, katerih tematika je okoljska ozaveščenost. Cilj je, da so spodbujeni k razmišljanju o lastnem odnosu do okolja in so hkrati tudi ustvarjalni.

V prispevku je predstavljen primer obravnave okoljskih vsebin pri pouku angleščine skozi ustvarjalno pisanje ob slikovnem gradivu z okoljsko tematiko. Dijaki so dokazali, da skrb in osveščenost o okolju, v katerem živimo, si ga delimo, lahko razvijamo tudi skozi umetnost – fotografijo kot vizualno umetnost in poezijo in prozo kot besedno umetnost, predvsem pa s spodbujanjem dobrih odnosov, povezanostjo in ustvarjalnostjo.

KLJUČNE BESEDE: okoljska tematika, tuji jezik, ustvarjalno pisanje, slikovno gradivo

ENVIRONMENTAL CONTENT THROUGH CREATIVE WRITING IN SECONDARY SCHOOL ENGLISH CLASSES

ABSTRACT

During English lessons students develop communication skill through various key competences including environmentally responsible behaviour. Environmental education and ecological awareness encourage students to think about their own environment which is essential in today's world.

During English lessons students are trained for efficient oral and written communication skills in different circumstances. They form appropriate, comprehensible and grammatically correct oral and written texts, also through visual stimulus with environmental issues. The aim is that students are encouraged to think about their environmental attitude and be as creative as possible.

The article presents an example of addressing environmental content in English classes through creative writing workshop with visual stimulus and environmental topic. Students proved that care and awareness about environment in which we live and also share can be developed through art – photography as visual art and poetry or prose as verbal art and above all by encouraging good relationships, connections and creativity.

KEYWORDS: environmental content, foreign language, creative writing, visual stimulus

GLASBENA UMETNOST V FUNKCIJI SPODBUJANJA TRAJNOSTNEGA RAZVOJA PRI UČENCIH NA RAZREDNI STOPNJI OSNOVNE ŠOLE

POVZETEK

Medpredmetno povezovanje omogoča komplementarno razvijanje ciljev različnih predmetnih področij. V petem razredu osnovne šole smo izvedli kvalitativno raziskavo v sklopu medpredmetnega povezovanja. Izvedeno povezovanje procesnih znanj nam je omogočilo, da so učenci pridobljeno procesno znanje enega učnega predmeta uporabili za spoznavanje zakonitosti pri drugem predmetu. Tako smo pridobljene vsebine in znanja iz slovenskega jezika uporabili pri glasbeni umetnosti. Nato smo nova, iz različnih vidikov pridobljena znanja tematsko povezali še z vsebinami trajnostnega razvoja.

Učenci so preko lastnega literarno ustvarjalnega dela realizirali cilje glasbene umetnosti ter prav tako cilje slovenskega jezika. Te so vsebinsko povezali še z cilji trajnostnega razvoja. Usvojene cilje in pojme iz slovenskega jezika kot npr. poezija, rime, verzi, kitice so pri glasbeni umetnosti sestavili v konkreten zapis. Ob oblikovanju in zapisu besedila pesmi, so po predhodnem delu spoznavanja ekoloških ciljev, učenci napisali pesmi, ki so obravnavale ekološko tematiko. V pesmih najdemo zapise kot so: ugašaj luči, varčuj, ločuj, ne onesnažuj, bolni gozdovi, umetna gnojila, eko poti, pobirajmo odpadke, čuvajmo gozdove, prisluhnimo naravi in drugo. Iz zapisanih in predstavljenih pesmi smo prepoznali, da so učenci ekološke cilje tudi ponotranjili. Nekateri učenci so lastno pesem poskušali tudi glasbeno interpretirati.

KLJUČNE BESEDE: glasbena umetnost, slovenski jezik, trajnostni razvoj, osnovna šola, razredna stopnja

MUSIC LESSONS' ROLE IN PROMOTING SUSTAINABLE DEVELOPMENT IN PUPILS AT THE ELEMENTARY SCHOOL LEVEL

ABSTRACT

Cross-curricular integration enables the complementary development of the objectives of the different subject areas. In the fifth grade of primary school, we conducted a qualitative study within the framework of interdisciplinary integration. The process knowledge integration introduced allowed us to use the acquired process knowledge of one course to learn about another course. For example, the acquired content and knowledge from the Slovenian subject was used in the music subject. Then we connected the newly acquired knowledge from different aspects with the content of sustainable development.

Through their own literary and creative work, the pupils have implemented both the objectives of the music lessons and the objectives of the subject Slovene. This was linked to the Sustainable Development Goals. The adopted goals and concepts from the Slovenian subject, such as poems, rhymes, verses and stanzas, were compiled into a concrete set in the music subject. In addition to designing and writing the poetry texts, the pupils wrote poems dealing with ecological issues after the introductory part where they learned about the ecological goals. In the poems we find phrases like: Switch off lights, save energy, recycle, do not pollute, sick forests, artificial fertilisers, eco-routes, collect rubbish, preserve forests, listen to nature and more. From the poems recited, we could see that the pupils had also internalised the ecological goals. Some pupils also tried to interpret their own songs musically.

KEYWORDS: music lessons, Slovene language, sustainable development, primary school, classroom

VKLJUČEVANJE EKOLOŠKIH VSEBIN PRI PREDMETU KEMIJA NA GIMNAZIJI

POVZETEK

Glede na to, da so od človeka povzročene okoljske spremembe dosegle kritično raven, ima vzgoja in izobraževanje za trajnostni razvoj vedno večji pomen. Kemija, kot splošno izobraževalni predmet v gimnaziji razvija tudi naravoslovno pismenost, katere pomembni del je tudi odgovorno delovanje v odnosu do narave in okolja. Pri obravnavi okoljskih vprašanj je pomembno prikazati večplastnost in zavedanje o povezanosti naravnih, družbenih in ekonomskih pojavov. V prispevku so predstavljeni različni pristopi vključevanja ekoloških vsebin pri pouku kemije ob vključevanju medpredmetnih povezav. Prikazana je izvedba debate na temo uporaba pitne vode iz pipe ali iz plastenke, izdelava zgibank za predstavitev problematike mikroplastike v okolju ter zbiranje in analiza podatkov o izpustih toplogrednih plinov. S primeri praktičnih izvedb pouka so predstavljeni rezultati dobrih praks, ki dijakom omogočajo aktivno sodelovanje, razvijanje naravoslovne pismenosti in ekološke ozaveščenosti na dijakom zanimiv način. Predstavljene primere dobrih praks lahko uporabijo drugi strokovnjaki kot podlago za svoje nadaljnje delo.

KLJUČNE BESEDE: kemija, pitna voda, mikroplastika, toplogredni plini

INCLUSION OF ECOLOGICAL CONTENT IN THE HIGH SCHOOL CHEMISTRY

ABSTRACT

Considering that man-made environmental changes have reached a critical level, education for sustainable development is of increasing importance. Chemistry, as a general education subject in high school, also develops science literacy, an important part of which is responsible action in relation to nature and the environment. When dealing with environmental issues, it is important to demonstrate multifacetedness and awareness of the connection between natural, social, and economic phenomena. The paper presents different approaches and inclusion of ecological content in chemistry lessons, including cross-curricular connections. It is presented the debate regarding the use of drinking water from the tap or from a bottle, the production of leaflets presenting the problem of microplastics in the environment, along with collection and analysis of data on greenhouse gas emissions. The results of good practices are presented with examples of practical lessons, which enable students to actively participate, develop science literacy and ecological awareness in an interesting way. The presented examples of good practices can be used by other professionals as a basis for their further work.

KEYWORDS: chemistry, drinking water, microplastics, greenhouse gases

PRIKAZ ŠTEVILNIH MOŽNOSTI, KAKO ODPADKOM DATI NOVO ŽIVLJENJE

POVZETEK

Onesnaževanje okolja je eden največjih problemov sodobnega časa. Kvaliteta našega bivanja je v veliki meri odvisna od zdravja našega okolja, zato moramo v svojih ravnanjih biti njegovi odgovorni skrbniki. Kje in kako začeti? Na OŠ Turnišče se trudimo skrbeti za okolje že dvajset let, saj smo od leta 2002 vključeni v evropski projekt EKO šola. Okoljske vsebine vnašamo v posamezna predmetna področja, dneve dejavnosti, kot so kulturni, tehniški, naravoslovni in športni dnevi, aktualizacije, ure podaljšanega bivanja in razširjenega programa. Učence spodbujamo k ločenemu zbiranju odpadkov (KEMS embalaže, papirja, baterij, pokrovčkov, odpadnih sijalk, tonerjev in kartuš). Skrbimo za čisto okolje in se udeležujemo čistilnih akcij na šolski in občinski ravni. Učimo jih in navajamo na odgovorno ravnanje z rabljenimi in odsluženimi predmeti po načelu zmanjšaj, ponovno uporabi, recikliraj.

V prispevku bodo predstavljeni nagrajeni reciklirani izdelki, s katerimi smo sodelovali na različnih natečajih, ter didaktične igre in pripomočki, narejeni iz odpadnih materialov (stare majice, ki postanejo vrečke; jogurtovi lončki, ki postanejo igrača za sproščanje; zamaški, ki postanejo družabna igra ...). Vse to, in še več, smo ustvarili z učenci zadnjih sedem let v okviru eko šole kot dokaz številnih možnosti, kako odpadkom dati novo življenje.

KLJUČNE BESEDE: eko šola, ravnanje z odpadki, recikliranje, učni pripomočki

A PROOF OF DIFFERENT POSSIBILITIES HOW TO GIVE WASTE A NEW LIFE

ABSTRACT

Pollution is one of the biggest problems of the modern world. The quality of our living largely depends on the health of our environment, therefore we have to be environment's responsible care takers. Where and how to start? At Elementary School Turnišče we have been trying to take good care of the environment for twenty years – we have been a part of European project ECO school since 2002. Environmental issues are included in our curriculum, cultural, technical, science and sports days, actualizations, into day-care and expanded curriculum. We try to motivate our pupils to recycle (KEMS packaging, paper, batteries, bottle caps, light bulbs, toners and cartridges). We take care of the clean environment and we participate at cleaning days in nature, organized by the school or the municipality. We teach pupils to responsible management of used and worn out items by the principle: reduce, re-use and recycle.

In the article there will be presented awarded recycled items with which we participated on different competitions, didactic games and accessories made of waste material (old T-shirts that become bags; yoghurt cups that become a relaxation toy; bottle caps that become a board game; etc.). All of that and more has been created together with pupils in the last seven years as a part of ECO school and as a proof of different possibilities how to give waste a new life.

KEYWORDS: ECO school, waste management, recycling, teaching accessories

OD EKOKRITIŠKO OSVEŠČENEGA BRALCA DO EKO UDEJANJANJA

POVZETEK

V prispevku predstavljamo primere učno-vzgojnih dejavnosti, ki so iz pouka slovenščine prerasle v različne eko aktivnosti dijakov. Opišemo učne oblike in metode dela pri književnem pouku, s pomočjo katerih vzgajamo in oblikujemo ekokritičsko osvešččenega bralca, ki je sposoben idejno-tematske prvine umetnostnih besedil prenesti v objektivni svet in je pri tem zmožen razumeti, analizirati in aktualizirati tudi okoljske oz. ekološke teme. Tak način dela smo pri slovenščini v šolskem letu 2022/2023 preizkusili v dveh oddelkih drugega letnika v srednjem strokovnem izobraževalnem programu Gastronomija in turizem na Srednji šoli za gostinstvo in turizem Maribor in ga prepoznali kot uspešno motivacijsko orodje, s katerim smo dijake vzpodbudili k vključevanju v različne eko aktivnosti, ki so se raztezale tudi na druga predmetna področja in obšolske dejavnosti. Opišemo, kako so dijaki na podlagi interpretativne analize pesniških besedil Simona Jenka v luči ekokritike kot novejši literarnovedne smeri, ekokritičskega opazovanja in spoznavne refleksije oblikovali nabor eko vsebin in tem, ki so omogočale poglobitev in razširjanje problemskega opazovanja in aktualiziranja znotraj izvedenih aktivnosti z eko tematiko. Na teh izhodiščih smo na šoli izvedli literarno, likovno in reciklirno-ustvarjalno delavnico, dijaki pa so se vključili tudi v eko projekte na nacionalni in mednarodni ravni. Ugotavljamo, da književni in jezikovni pouk nudita veliko prostora, kjer se lahko dijaki kalijo v ekološko osvešččenega bralca, pisca in akterja, za kar si mora učitelj slovenščine kontinuirano prizadevati in okoljsko vzgojo kot stalnico vključevati v vzgojno-izobraževalni proces svojega učnega predmeta in mentorskega dela.

KLJUČNE BESEDE: ekokritika, ekokritičsko osveščen bralec, aktualizacija okoljske pesniške motivike, eko delavnice in projekti

FROM AN ECO CRITICALLY CONSCIOUS READER TO THE ECO PRACTICE

ABSTRACT

The paper presents how literature lesson activities could relate to various ecological topics. Furthermore, it describes some forms and methods of literature teaching that elicit the ecocritical approach and create an engaged eco-conscious reader who is able to understand the topic and the theme of the analysed literature and transfer them to the objective reality by relating them to current ecological and environmental issues. The demonstrated ecocritical approach in teaching Slovene literature was introduced to two classes of the second-year students of upper secondary course in Gastronomy and Tourism at The Secondary School of Catering and Tourism Maribor in the academic year 2022/2023. The approach turned out to be a successful motivational tool that encouraged students to take part in various eco activities provided by different subject areas or offered as extra curricular activities. Based on ecocritical interpretative analysis of poetic texts of Simon Jenko students learnt a technique of ecocritical observation and reflection, which broadened their powers of observation and realisation within their eco activities. This became a foundation for literary, art and recycling school workshops. In addition, many students participated in eco projects at national and international level. In conclusion, literature and language lessons allow students to develop themselves into eco critically conscious readers, writers and participants, which is something a teacher of Slovene should continuously aim to achieve while integrating environmental education in his/her educational process and mentoring work on a permanent basis.

KEYWORDS: ecocriticism, eco critically conscious reader, actualisation of environmental poetry motifs, eco workshops and projects

UPORABA ODPADNE EMBALAŽE PRI POUKU ŠPORTA V DRUGEM RAZREDU OSNOVNE ŠOLE

POVZETEK

V prispevku predstavljamo različne načine ponovne uporabe odpadne embalaže in drugih pripomočkov, ki nam na prvi pogled ne služijo več. Izhajali smo iz dejstva, da na šoli pogrešamo raznolikost športnih rekvizitov, zato smo razmišljali, kako bi si jih lahko izdelali sami. Otroke smo spodbujali k podajanju zamisli, kako bi jih lahko izdelali iz predmetov, ki so nam dostopni in jih ne potrebujemo več. Z novimi zamislimi smo razpoložljive in odslužene predmete vključili v ponovno uporabo in vse skupaj nadgradili z medpredmetnim in medpodročnim povezovanjem vsebin. Ugotovili smo, da je predmet šport zastavljen tako, da nam znotraj učnega načrta pušča mnogo maneverskega prostora za vključevanje lastnih idej za izvedbo. K dejavnostim so učenci že od začetka pristopili z zanimanjem in samoiniciativnostjo, saj so potekale skozi igro. S participacijo drugošolcev pri zbiranju zamisli in izdelavi športnih pripomočkov smo pri učencih vplivali na dodatno motiviranost pri izvajanju športnih dejavnosti. Improvizirane športne pripomočke smo z veseljem prepustili v uporabo tudi drugim učiteljem in razredom. Z različnimi zamislimi in dejavnostmi smo še druge razrede spodbudili k inovativni in domiselni uporabi pripomočkov in oblikovanju ur športa. S ponovno uporabo smo naredili korak naprej v miselnosti in naravnosti, da ni potrebe po kupovanju in kopičenju novega, ampak lahko uporabimo tisto, kar nam je na voljo. Tako pri otrocih razvijamo in spodbujamo pomembne veščine za ohranjanje in varovanje okolja.

KLJUČNE BESEDE: odpadna embalaža, šport, učenec, improvizirani športni pripomočki, medpredmetno povezovanje.

THE USE OF PACKAGING WASTE IN SPORTS LESSONS IN THE SECOND GRADE OF PRIMARY SCHOOL

ABSTRACT

The article presents how we can reuse packaging waste and other discarded accessories. The primary starting point of our project was the fact that the school lacks diverse sports equipment. Therefore, we started thinking about how we could make sports equipment ourselves. We encouraged children to propose different ideas for making sports equipment out of used objects at our disposal. Fresh ideas enabled us to reuse discarded objects and upgrade the activities through interdisciplinary and multi-domain integration of content. We realised that sports lessons were organized so that they enabled us to incorporate our ideas into the curriculum. The students showed great interest and initiative, as we presented the activities through play. As the children were involved in proposing ideas and making new sports equipment, they were highly motivated to participate in sports activities. We were happy to let other classes and teachers use the improvised sports equipment. With various ideas and activities, we encouraged them to use the equipment innovatively and to contribute to designing sports lessons. By reusing discarded objects, we took a step forward in mindset and attitude and showed the children that there is no need to buy and accumulate new things constantly but that we can use what we have at our disposal. Thus, we develop and stimulate critical competencies in children for preserving and protecting the environment.

KEYWORDS: packaging waste, sports, student, improvised sports equipment, interdisciplinary integration.

EKOLOŠKI VIDIK UPORABE SONČNIH ELEKTRARN V MEHANSKI OBDELAVI

POVZETEK

Sončna elektrarna je sistem elementov (panelov, solarnih kablov in razsmernika), s katerimi se pretvarja sončno sevanje v električno energijo. Največja prednost tega pridobivanja je njegov vir, saj je sonce najbogatejši vir obnovljive energije. Gre za popolnoma neslišno, čisto in okolju prijazno pretvorbo energije. Pri pridobivanju podatkov sem uporabil metodo analize dokumentov. Zaradi ekologije in večanja cen energentov se vse več podjetij z mehansko obdelavo odloča za izgradnjo lastnih sončnih elektrarn. Podjetja pa na poti do lastne elektrarne čaka kar nekaj ovir. Čas od načrtovanja in izvedbe izgradnje sončne elektrarne traja več kot eno leto. Več kot pol leta podjetja čakajo na pridobitev soglasja s strani elektro distributerja za izgradnjo sončne elektrarne. Prav tako pa se zatika pri izgradnji saj podjetja, ki se ukvarjajo z postavitvijo sončnih elektrarn nimajo dovolj monterjev in surovin (panelov in razsmernikov). Podjetja z preusmeritvijo na alternativne vire energije doprinesejo k izboljšanju okolja in trajnostnemu razvoju. S tem prispevkom bom ozavestil dijake, da je tudi v proizvodnji potrebno dati poudarek ekologiji.

KLJUČNE BESEDE: sončna elektrarna, električna energija, mehanska obdelava, obnovljivi viri energije

ECOLOGICAL ASPECT OF THE USE OF SOLAR POWER PLANTS IN MECHANICAL PROCESSING

ABSTRACT

A solar power plant is a system of elements (panels, solar cables and inverters) that convert solar radiation into electricity. The biggest advantage of this extraction is its source, as the sun is the most abundant source and renewable energy. It is a completely inaudible, clean and environmentally friendly energy conversion. When retrieving data I have used the method of document analysis. Due to ecology and rising energy prices, more and more companies with mechanical processing decide to build their own solar power plants. Companies on the way to their own the power plant faces quite a few obstacles. The time from planning to implementation of the construction of a solar power plant takes more than a year. For more than half a year, companies have been waiting for approval from the electricity distributor to build a solar plant power plants. Also, companies in the construction of solar power plants are stuck in the construction industry they don't have enough installers and raw materials (panels and inverters). Companies with conversion to alternatives energy sources contribute to the improvement of the environment and sustainable development. With this post I will raise awareness of students that it is also necessary to emphasize ecology in production.

KEYWORDS: solar power plant, electric energy, mechanical processing, renewable sources of energy

STRATEGIJA RAVNANJA Z ODPADKI NA TEHNIŠKEM ŠOLSLEM CENTRU MARIBOR

POVZETEK

Skrb za okolje je danes ena od pomembnejših nalog za obstoj našega planeta. Prvi koraki ozaveščanja se začnejo v družini, pa v vrtcu, osnovni šoli ter nadaljujejo in nadgrajujejo v srednji šoli. Na Tehniškem šolskem centru Maribor izobražujemo različne programe strojnih in mehatronskih vsebin. Na podlagi izvajanja različnih programov izobraževanja in velikega števila dijakov prihaja do nastanka različnih vrst odpadkov, ki jih je treba ustrezno ločiti in primerno shranjevati.

Na Tehniškem šolskem centru Maribor se v okviru izvajanja praktičnega pouka v šolskih delavnicah poleg stalno prisotnih komunalnih odpadkov srečujemo tudi s specifičnimi vrstami odpadkov, kot so: različna olja, goriva, barve, različne kovine in odpadna električna in elektronska oprema. Ti odpadki lahko z nepravilnim rokovanjem dolgoročno močno onesnažijo naše okolje in povzročijo tudi nesreče večjega obsega.

Med dijaki in dijakinjami različnih letnikov je bila napravljena kratka anketa o poznavanju razvrščanja oziroma ravnanja z različnimi vrstami odpadkov. Anketiranih je bilo 114 dijakov, starostne skupine od 15 do 18 let. Z izvedeno anketo je bilo ugotovljeno, da se dijaki pozitivno odzivajo na ravnanje z odpadki, da so z leti vedno bolj ozaveščeni in da so skrb za okolje tekom let izobraževanja že ponotranjili.

Cilj izobraževanja v pedagoškem procesu nikakor ne sme biti samo pridobivanje golega teoretičnega znanja stroke, vedno je treba uravnoteženo težiti tudi k pridobivanju vrednot, in skrb za okolje je le ena od njih.

KLJUČNE BESEDE: odpadki, onesnaževanje okolja, šola, program strojnih vsebin

WASTE MANAGEMENT STRATEGY ON TECHNICAL SCHOOL CENTRE MARIBOR

SUMMARY

One of our most important duties is to take care of our environment. For it is the leading task to keep our planet alive. First steps are to raise awareness amongst people in families, kindergartens, primary schools and last but not least in high schools. Here at the Technical School Center Maribor (Tehniški šolski center Maribor), we take pride in educating young people in different varieties of mechanical programs and in mechatronics contents. Based on implementation of different educational programs and a big number of students, comes to the existence of different types of waste. These types of waste need to be separated accordingly and stored properly.

At the Technical school center Maribor, within the frameworks of practical lessons in school workshops, we meet with the always present municipality waste and with the additionally specific types of waste, such as: various oils, fuels, paints, various metals and waste electrical and electronic equipment. All of this waste can, if not dealt with properly, cause a long term pollution of our environment, in addition it can also cause major accidents.

Between the students of different grades was done a short survey, about the knowledge of sorting or dealing with different types of waste. 114 students were a part of the survey, aged from 15 to 18 years old. Through the conducted survey, it was established that students respond positively to waste management, that they are increasingly aware over the years and that it has become one of their personal priorities.

The objective of educational programme in pedagogical process, can never be entirely in just achieving the theoretical knowledge of the profession, but rather in trying to also achieve each persons values. Caring for the environment is just one of them.

KEYWORDS: waste, pollution of the environment, school, mechanical engineering program

EKOLOŠKO RAZMIŠLJANJE DIJAKOV NA SREDNJI POKLICNI IN TEHNIŠKI ŠOLI MURSKA SOBOTA

POVZETEK

Ekologija ima zelo pomembno vlogo v vsakdanjem življenju vsakega posameznika, zato je nujno, da učitelji že v šoli od zgodnjih let spodbujamo razvijanje ekološke zavesti. Vključevanje ekoloških vsebin v šole je postalo pomemben del pouka na vseh ravneh izobraževanja. Dijaki so v srednjem strokovnem izobraževanju usmerjeni k pridobivanju funkcionalnih znanj na vseh področjih, zato je pomembno, da za obravnavo neumetnostnih besedil tudi pri slovenščini izbiramo besedila, ki so vezana na njihovo stroko. V prispevku je predstavljen primer besedila z vidika razumevanja vsebine, jezikovne analize ter kritičnega razmišljanja v povezavi z ekološko tematiko. Ugotavljam, da je pravilni izbor vsebine neumetnostnega besedila tisti, ki daje navdih za dijakovo zanimanje najprej za branje, šele nato za jezikovno analizo. Z lastnimi idejami in odgovori so dijaki pokazali, da jih zanima tudi naravno okolje, v katerem živijo in ga bodo v svojem življenju v prihodnosti soustvarjali. Naloge iz razumevanja vsebine besedila in sporazumevanja so zelo dobro nadgradili z jezikovnim znanjem iz glasoslovja, besedoslovja, oblikoslovja, frazeologije in skladnje. Te naloge so se izkazale za zelo uspešne, saj so dijaki celostno povezali usvojeno snov. Učitelji bomo v prihodnosti za kvalitetnejšo uresničevanje ciljev ekološke vzgoje uporabljali širok izbor oblik, metod in pristopov, usmerjali samostojno in skupinsko delo dijakov ter pravilno in strokovno obravnavali teme. Sodelovali bomo tudi z drugimi učitelji in ostalimi sodelavci.

KLJUČNE BESEDE: slovenščina, ekološke teme, bralno razumevanje, jezikovni pouk, kritično razmišljanje

ECOLOGICAL THINKING OF THE STUDENTS OF SREDNJA POKLICNA IN TEHNIŠKA ŠOLA MURSKA SOBOTA

ABSTRACT

Ecology plays a very important role in everyone's daily life, so it is essential that teachers raise awareness regarding ecology from the early years at school. Integrating ecological topics into schools has become an important part of the curriculum at all levels of education. In secondary vocational education, students are oriented towards acquiring functional skills in all areas, so it is important when working with non-fiction texts to choose such texts that are relevant to their field of study, even in Slovene classes. This paper presents an example of a text in terms of content understanding, linguistic analysis and critical thinking in relation to an ecological topic. I conclude that it is the right choice of a non-fiction text that inspires students' interest first in reading, and then in linguistic analysis. With their own ideas and answers, the students have shown that they are also interested in the natural environment which they live in and will co-create in their future lives. The tasks on reading comprehension and communication were very well complemented by linguistic knowledge and vocabulary, phraseology, morphology and syntax. These tasks proved to be very successful, as the students integrated the material they had learnt in a coherent way. In the future, teachers will use a wide range of forms, methods and approaches to be more successful at achieving the objectives of environmental education, to guide students' independent and group work, and to deal with the topics in the right and professional manner. We will also work with other teachers and other colleagues.

KEYWORDS: Slovene class, ecological topics, content understanding, linguistic class, critical thinking

RAZVIJANJE KOMPETENC PREDŠOLSKIH OTROK ZA BOLJ ODGOVOREN ODNOS DO OKOLJA IN SOLJUDI

POVZETEK

V Vrtcu Antona Medveda Kamnik se zavedamo, da je ena pomembnejših potreb, ki zadevajo tako zaposlene kot naše najmlajše otroke, skrb za prihodnost v luči podnebnih sprememb in v medosebnih odnosih. Prepričani smo, da se učinkovite spremembe začnejo pri najmlajših otrocih, zato lahko v skrbi za okolje in boljši integraciji tako priseljencev kot drugih ranljivih skupin, v vrtcu naredimo največ. Vzgajamo namreč bodoče generacije, ki bodo bodisi znale razumeti pomen trajnosti do okolja in sočloveka ali pa bodo podlegle navadam povprečnih potrošnikov.

Naša potreba in cilj je opremiti vzgojitelje, strokovne delavce z novimi metodami dela, inovativnimi pristopi za vzgojo otrok v smeri trajnostnega razvoja okolja in lažji integraciji vseh otrok v vrtec. Z raziskovanjem in diskusijami bomo pri otrocih razvijali kritično mišljenje, iskali inovativne rešitve kako lahko varčujemo s hrano, nakupovanjem igrač, elektriko, gorivom. Cilj je, da vsak otrok (od 3. leta starosti naprej) in njegova družina naredi nekaj dobrega za okolje in to v vrtcu tudi predstavi. Rezultati in cilji našega projekta bodo evalvirani ob zaključku šolskega leta.

Z vse pogostejšimi migracijami, je v vrtec vsako leto vključenih vedno več otrok priseljencev. Soočamo se s težavo, da so družine otrok priseljencev precej zaprte, težje sprejmejo našo kulturo, vrednote, jezik. Preko skupnega cilja – skrbi za okolje, želimo vse otroke, zlasti priseljence, opremiti, da se bodo lažje integrirali v novo okolje.

V vrtcu je ključnega pomena dobro medsebojno sodelovanje (vrtec-starši). Želimo si izboljšati dostopanje do priseljenih družin, kjer so poleg kulturnih zadržkov, jezikovnih ovir, velikokrat prisotne še druge težave (nezaupanje, neznanje, strah).

Z željo po uspešni integraciji otrok priseljencev v vrtec, bomo izboljšali medsebojno komunikacijo in še dvignili nivo predšolske vzgoje. Trajnost moramo tako začeti graditi najprej v medosebnih odnosih in s skupnim sodelovanjem bomo lahko gradili na okoljski trajnosti ter skrbi za zdrav način življenja kar je tudi vizija našega vrtca.

KLJUČNE BESEDE: okolje, medosebni odnosi, trajnost

DEVELOPING THE COMPETENCES OF PRESCHOOL CHILDREN FOR A MORE RESPONSIBLE ATTITUDE TOWARDS THE ENVIRONMENT AND HUMAN BEINGS

ABSTRACT

In kindergarten Antona Medveda Kamnik we are aware that one of the more important needs that concern both employees and our children is to care for the future in the light of climate change and in interpersonal relations. We believe that effective change starts with the youngest children, so we can do most in kindergarten in care of environment and better integration of immigrants and other vulnerable groups. We are raising future generations who will either be able to understand the importance of sustainability to the environment and their human beings, or will succumb to the habits of average consumers.

Our need and aim is to equip educators, professionals with new methods of work, innovative approaches for raising children towards sustainable environmental development and facilitating the integration of all children into kindergarten. With research and discussion, we will develop critical thinking in children, find innovative solutions for how we can save food, electricity, fuel.

The goal is that every child (age 3 years and more) and their family do something good for the environment and present it in kindergarten. The goals will be evaluated at the end of each school year. With increasing migration, more and more migrant children are enrolled in kindergarten every year. We face the problem of the families of immigrant children being much closed, finding it harder to accept our culture, our values, our language. Through a common goal – taking care of the environment, we want to equip all children, especially immigrants, to integrate more easily into the new environment.

Good cooperation with each other (kindergarten-parents) is key. We want to improve access to immigrant families, where there are often other problems, cultural reservations, language barriers (distrust, lack of knowledge, fear). By facilitating the integration of immigrant children into kindergarten, we will improve mutual communication and further raise the level of early childhood education. We must start building sustainability first in interpersonal relations, and it is only through working together that we can build on environmental sustainability and care for a healthy lifestyle, which is also the vision of our kindergarten.

KEYWORDS: environment, interpersonal relations, sustainability

KOMUNALNI SNOVNI KROG – UPORABA RECIKLIRANEGA HIGIENSKEGA PAPIRJA IZ ODPADNE EMBALAŽE TETRAPAK V OSNOVNI ŠOLI OREHEK KRANJ IN V VRTCU OREHEK

POVZETEK

Spomladi leta 2020 je Mestna občina Kranj vodstvom osnovnih šol in vrtcev, ki delujejo na njenem območju, predstavila pilotni projekt, ki se je začel izvajati v Mestni občini Kranj tern v občinah Šenčur, Naklo, Preddvor in Jezersko. Namen je bil spodbuditi tudi javne zavode k priključitvi omenjenemu okoljskemu projektu.

Projekt so poimenovali Komunalni snovni krog. Ideja projekta je, da podjetja ali javni zavodi, ki se vključijo v projekt od priključitve naprej pri svojem delovanju uporabljajo zgolj recikliran higienski papir, ki je pridobljen izključno iz ločeno zbrane odpadne embalaže tetrapak (mleko, jogurti in sokovi) z območja prej omenjenih občin. Snovni krog se začne s tem, da embalažo tetrapak uporabniki doma, v podjetjih, šolah, vrtcih, zdravstvenih domovih, itd. po uporabi odložimo v zabojnike z rumenim pokrovom. Komunala Kranj nato omenjeno embalažo prevzame, sortira, pripravi za reciklažo in jo odda naprej v proces recikliranja, Tetrapak tako iz odpadka z reciklažo postane surovina iz katere izdelajo recikliran higienski papir (toaletni papir, robčki, brisačke za roke...). Z uporabo takšnega recikliranega higienskega papirja v naši šoli in vrtcu sooblikujemo komunalni snovni krog embalaže tetrapak in higienskega papirja. Smo prvi vzgojno izobraževalni zavod v Mestni občini Kranj, ki se je priključil temu projektu.

KLJUČNE BESEDE: odpadna embalaža tetrapak, sortirano zbiranje, recikliranje, higienski papir, Komunalni snovni krog

COMMUNAL MATERIAL CYCLE - USE OF RECYCLED HYGIENE PAPER FROM WASTE TETRAPAK PACKAGING IN OREHEK KRANJ PRIMARY SCHOOL AND OREHEK KINDERGARTEN

ABSTRACT

In the spring of 2020, the Kranj municipality presented a pilot project to the elementary schools and kindergartens operating in its area, which was implemented in the Kranj municipality and in the municipalities of Šenčur, Naklo, Preddvor and Jezersko. The aim was to encourage public institutions to join the aforementioned environmental project.

The project is called the Waste Material Circle. The idea of the project is that the involved companies or public institutions start using only recycled hygiene paper (toilet paper, tissues, hand towels...) obtained exclusively from tetrapak waste packaging (milk, yogurts and juices) collected in the aforementioned municipalities. The material circle begins with tetrapak packaging being used by users at home, in companies, schools, kindergartens, medical centres, etc. After use, it is placed in recycling containers with yellow lids. Komunala Kranj then collects the packaging, sorts it, prepares it for recycling and sends it on to the recycling process, Tetrapak thus becomes the raw material out of which recycled hygiene paper is made. By using such recycled hygiene paper in our school and kindergarten, we take advantage the waste material circle of tetrapak packaging and hygiene paper. We are the first educational institution in the Kranj Municipality of Kranj join this project.

KEYWORDS: tetrapak waste packaging, sorted collection, recycling, hygiene paper, Communal material cycle

POVEZUJEMO ZNANJE RAČUNALNIŠTVA IN EKOLOGIJE

POVZETEK

V zadnjih letih se v šoli in tudi v medijih vedno bolj ozavešča o pomenu ekologije. Ekoloških vsebin, predvsem kako ravnamo z odpadki, je v učnem načrtu pri predmetu spoznavanje okolja veliko.

Pri pregledu snovi o ekologiji, ki je dostopna na spletu, smo ugotovili, da je učencem na voljo zelo malo interaktivnih vaj ali pa le-te niso primerne za učence razredne stopnje.

Zaradi tega bomo kot del projektne naloge pri izbirnih predmetih računalništva pripravili nekaj interaktivnih vaj, ki bodo omogočale ponovitev in utrditev določenih znanj o ekologiji.

Glede na učni načrt pri izbirnih predmetih iz računalništva sta za izdelavo projektne naloge najbolj primerna izbirni predmet računalniška omrežja, ki se praviloma izvaja v 9. razredu, in neobvezni izbirni predmet računalništvo (glede na predznanje učencev, bomo projektno nalogo naredili v 6. razredu).

Pri računalniških omrežjih lahko učenci nekaj interaktivnih vaj pripravijo z vtičniki H5P v okviru izdelave spletne strani s CMS sistemom WordPress, medtem ko pri neobveznem izbirnem predmetu računalništvo interaktivne vaje o ločevanju odpadkov lahko pripravimo s pomočjo programiranja v Scratchu.

S pomočjo interaktivnih vaj, učenci usvojeno znanje iz vsebin o ekologiji ponovijo preko igre, prav tako interaktivne vaje omogočajo, da učenci takoj pridobijo povratno informacijo o svojem znanju.

S prispevkom želim prikazati, da lahko s pomočjo aplikacij pri računalništvu pripravimo interaktivne vaje o ekologiji za učence razredne stopnje. Le-te bodo lahko učiteljem v pomoč pri pripravi in popestitvi učnih ur ter pri utrjevanju znanja s področja ekologije.

KLJUČNE BESEDE: ekologija, interaktivne vaje, računalništvo, Scratch, WordPress

CONNECTING KNOWLEDGE OF COMPUTER SCIENCE AND ECOLOGY

ABSTRACT

In recent years, awareness of the importance of ecology has been increasing in schools and the media. The curriculum encompasses a wide range of ecological content, especially the content on waste separation. While overviewing online learning materials on ecology, we have noticed that the scope of interactive exercises is either scarce or inappropriate for students at the primary level of elementary school. Consequently, the focus of our project work within computer science class is to prepare interactive exercises, which will enable revision and consolidation of knowledge of ecology. Considering the curriculum of individual computer science classes, the most appropriate classes for the implementation of the project work are computer networks class (usually implemented in the 9th grade) and optional computer science class (based on prior knowledge, the project will be carried out in the 6th grade). In computer networks class, students will be able to prepare interactive exercises with the help of H5P switches within the WordPress CMS interface for creating webpages. On the other hand, in optional computer science class, students will be developing interactive exercises on waste separation with the help of the Scratch program. With interactive exercises, students can revise their knowledge on ecology through games. On top of that, interactive exercises enable students to receive feedback. The following work contributes to understanding that applications in computer science enable the development of interactive exercises on ecology for students at primary levels of elementary school. Consequently, applications also help teachers to prepare and enrich the lessons and to consolidate knowledge on ecology.

KEYWORDS: ecology, interactive exercises, computer science, Scratch, WordPress

REDUKCIJA PITNE VODE Z UPORABO DEŽEVNICE

POVZETEK

Ne predstavljamo si dneva, ure brez pitne vode na doseg roke, ko pa le-te zmanjka ali pride do poškodbe vodovodnega sistema in smo za nekaj časa brez vode že začutimo primanjkljaj osnovnega življenjskega sloga. S to raziskavo vam bom predstavil uporabnost deževnice katera nam zaliva vrtove, njive in posledično tudi strehe naših domov. Preko ankete, ki sem jo izvedel pri dijakih, ki se izobražujejo za program Inštalater strojnih inštalacij in naključno izbranih ljudeh, sem prišel do podatkov o uporabnosti in vpetosti sistemov za uporabo deževnice v domovih. Zavedati se moramo, da vode ni v izobilju in da naravni proces filtriranja »umazane« vode preko zemeljskih plasti rabi veliko časa. Posledično se bo v nekem času tudi ta naravni filter, zapolnil in s tem vplival na kvaliteto našega življenja v prihodnosti. S tem strokovnim člankom, sem raziskal obstoječe sisteme ki se že uporabljajo, z našimi bodočimi inštalaterji pa smo diskutirali o možnih načinih in nadgradnji sistemov, s katerimi bi ljudi nagovorili v uporabnost le teh in s tem v večjo ekološko ozaveščenost. Z anketo pa sem prikazal tudi odnos in uporabnost vode v našem okolju in s tem koliko energije se porabi za distribucijo pitne vodi od izvora do uporabnika in pozneje do kanalizacijskega sistema.

KLJUČNE BESEDE: pitna voda, deževnica, filtriranje, sistemi, ekološka ozaveščenost

REDUCING DRINKING WATER BY USING RAINWATER

ABSTRACT

We can't imagine a day or even an hour go by without having drinking water within our reach. When the water runs out or damage to water supply occurs, leaving us without drinking water, we feel the insufficiency of a bare life style. With this research I will present the usefulness of rainwater which waters our gardens, fields and also the roofs of our homes. I gathered information on usefulness and incorporation of systems for domestic usage of rainwater based on a survey I conducted with my students in vocational plumbing programme and some random people. Based on the survey I came to data on usefulness and integration of domestic use of rainwater. We must be aware that we don't have plenty of water and that natural process of filtering "unclean" water through earth's layers demands a lot of time. In after-effect and in due time this natural filter is going to fill up and influence the quality of our life in the future. In this article I researched the existing systems already in use. I discussed with our future plumbers and installers about possible ways and system upgrades in order to convince people of their usefulness and therefore raise ecological awareness. This survey also shows the attitude and the water usage in our surroundings and by that energy consumption on distribution of drinking water from the source to the consumer and finally to the sewerage.

KEYWORDS: drinking water, rainwater, filtering, systems, ecological awareness

TRENDI EKOLOŠKO TRAJNOSTNEGA TURIZMA IN PRIMERI DOBRIH TURISTIČNIH PRAKS NA GORENJSKEM

POVZETEK

Trajnostni turizem odgovorno varuje naravo in lokalno prebivalstvo. Principi trajnostnega turizma se nanašajo na kulturno družbene, okoljske in gospodarske vidike turistične ponudbe, v zadnjih letih pa je dodan še ključen vidik podnebnih sprememb na katere turistična panoga s svojo razsežnostjo zagotovo vpliva.

Ekoturizem predstavlja potovanja v naravna območja z neokrnjeno naravo, kot obliko turizma, ki ohranja naravo in deluje v dobrobit lokalnega prebivalstva. Turisti s svojim zavedanjem ravnavo odgovorno do okolja, ki ga obiščejo, so spoštljivi do različnih kultur in varujejo naravo.

Gorenjska je kot turistična destinacija v zadnjih letih med najbolj obiskanimi regijami v Sloveniji. Tudi zaradi neprecenljive narave in turistične ponudbe, ki temelji na ekološko trajnostnem turizmu. S tem namenom sem primerjala 25 lokalnih turističnih ponudnikov, ki imajo svoje spletne strani opremljene s certifikatom Slovenia Green Label for destinations in Green Key. Analizirala sem katere vidike trajnostnega turizma so zagotovili: prilagoditev k varovanju okolja, varčevanju z energenti, prilagoditev kulturni dediščini, prilagoditev delovnih mest in prilagoditev na zmanjšanje vpliva na podnebne spremembe. S primerjalno analizo omenjenih vidikov sem ugotovila, da so turistični ponudniki dobro predstavili vidike trajnostnega turizma, saj jih ima 15 od 25 na svoji spletni strani podrobnejše predstavljenih več trajnostnih vidikov, zaradi katerih so prejeli omenjena certifikata. Analizirani ponudniki so največji poudarek dali vidiku varčevanja z energenti in varovanju okolja.

S predstavitev konkretnih primerov lahko učinkoviteje pripomoremo k izobraževanju o pomenu ekološkega trajnostnega turizma mlajše generacije, da bodo znale ceniti pomen trajnostnega turizma kot ciljno usmerjene spremembe v turizmu. Na Gorenjskem je trajnostna turistična ponudba zelo dobro razvita, kot tudi drugod po Sloveniji, kar predstavlja svetlo prihodnost slovenskemu turizmu.

KLJUČNE BESEDE: ekološki turizem, trajnostni turizem, Slovenia Green Label for destinations, Green Key

TRENDS IN ECOLOGICALLY SUSTAINABLE TOURISM WITH EXAMPLES OF GOOD TOURISM PRACTICES IN GORENJSKA REGION

SUMMARY

Ecotourism is travel to natural areas with unspoilt nature, as a form of tourism that preserves nature and benefits the local population. Tourists are consciously responsible for the environment they visit, respectful for different cultures and protective to nature. Sustainable tourism protects nature and local people in a responsible way. The principles of sustainable tourism relate to the cultural, social, environmental and economic aspects of the tourism offer, with the addition in recent years of the crucial aspect of climate change, on which the tourism industry is bound to have an impact through its scale.

Gorenjska as a tourist destination has been the most visited location in Slovenia in recent years. This is also due to its invaluable nature and tourist offer based on ecologically sustainable tourism. I have compared 25 local tourism providers that have their websites certified with the Slovenia Green Label for destinations in Green Key. I analysed which aspects of sustainable tourism they provided: adaptation to environmental protection, energy saving, adaptation to cultural heritage, adaptation to jobs and adaptation to climate change mitigation. By benchmarking these aspects, I found that the tourism providers are very well developed, because 22 out of 25 having developed several of the sustainability aspects for which they have been awarded these certificates.

By highlighting and educating the importance of eco-sustainable tourism, it is necessary to raise awareness among the younger generations so that they can appreciate the importance of sustainable tourism as a targeted change in tourism. Sustainable tourism is well developed in Gorenjska, as elsewhere in Slovenia, which represents a bright future for Slovenian tourism.

KEYWORDS: ecotourism, sustainable tourism, Slovenia Green Label for destinations, Green key

OD MAJICE DO VEČNAMENSKE VREČKE

POVZETEK

Ker živimo v svetu sodobnih tehnologij, hitrega tempa in žal med drugim izgublamo tudi občutek za naravo in našo skupno prihodnost, je skrb za trajnostni razvoj bistvenega pomena za človeško preživetje in preživetje našega planeta. Pomembno je, da z učenci skupaj soustvarjamo prihodnost, se zavedamo in izpostavljam različne svetovne ekološke probleme, o njih govorimo in se izobražujemo. Kot družba vsekakor vedno bolj postajamo ozaveščeni o učinkih, ki jih imamo ljudje na okolje, zato je prav, da različne organizacije in tudi izobraževalne institucije uveljavljamo to zavest. V šolah se tako učenci srečujejo in spoznavajo z različno okoljsko problematiko in v njej tudi aktivno sodelujejo v različnih projektih kot so: ločevanje odpadkov, zbiranje starega papirja, spoznavanje ekologije v prometu, recikliranjem, srečujejo pa se tudi z ponovno uporabo različnih odpadnih in uporabnih materialov. V prispevku se dotikam življenjske filozofije Zero Waste, ki smo ga z učenci 5. razreda Osnovne šole Prebold uporabili tudi v praksi. Naš cilj je bil spoznavanje s tovrstno življenjsko filozofijo, kot drugo pa otroke ozavestiti o recikliranju, okolju škodljivi plastiki, in da ni vse odpadek,, temveč, da lahko predmete ponovno uporabimo in ustvarimo povsem nov izdelek, ne da bi pri tem škodovali okolju.

KLJUČNE BESEDE: majica, večnamenska vrečka, zero waste, recikliranje

FROM T-SHIRT TO MULTIPURPOSE

ABSTRACT

Since we live in a world of modern technologies, a fast pace, and unfortunately, among other things, we are also losing a sense of nature and our common future, concern for sustainable development is essential for human survival and the survival of our planet. It is important that we co-create the future together with the students, we are aware of and point out various global ecological problems, we talk about them and educate ourselves. As a society, we are certainly becoming more and more aware of the effects that humans have on the environment, so it is right that various organizations and educational institutions should enforce this awareness. In schools, students meet and learn about various environmental issues and actively participate in various projects such as: separating waste, collecting old paper, learning about ecology in transport, recycling, and also encountering the reuse of various waste and useful materials. In the article, I touch on the Zero Waste philosophy of life, which we also put into practice with the students of the 5th grade of Prebold Elementary School. Our goal was to get to know this kind of life philosophy, as well as to make children aware of recycling, environmentally harmful plastics, and that not everything is waste, but that objects can be reused and create a completely new product, without harming the environment.

KEYWORDS: t-shirt, multipurpose bag, zero waste, recycling

ZELENE STREHE IN NJIHOVA ENERGIJSKA UČINKOVITOST

POVZETEK

Poznamo intenzivne, pol-intenzivne in ekstenzivne zelene strehe, ki se razlikujejo po debelini podlage in vegetaciji ter zahtevnosti njenega vzdrževanja. Z dijaki smo izvedli raziskovalno nalogo, kjer smo preverili ali ekstenzivna zelena streha res pripomore k energijski učinkovitosti stavb, kar smo preverili z merjenjem temperatur na površini in pod substratom ekstenzivne zelene strehe. Z eksperimentom smo potrdili eno od hipotez, da zelena streha pripomore k izolativnim lastnostim stavbe, nismo pa uspeli potrditi drugo hipotezo, da zmanjšuje tudi toplotne otoke.

Z anketo, na katero je odgovorilo 285 anketirancev, smo preverili poznavanje tega področja gradbeništva med ljudmi in skušali izluščiti težave in koristi, ki jih ljudje najbolj cenijo. Na podlagi tega bi lahko ponudniki preverili, kje so še rezerve in katere težave morajo bolje naslavljati, da naročnike prepričajo v korist zelenih streh in posledično pomagajo blažiti podnebne spremembe.

KLJUČNE BESEDE: zelene strehe, izolacijski materiali, toplotni otok, toplotna upornost

GREEN ROOFS AND THEIR ENERGY EFFICIENCY

ABSTRACT

We know intensive, semi-intensive and extensive green roofs, which differ in the thickness of the substrate and the greenery and their maintenance requirements. We carried out a research task with the students to check whether the green roof really contributes to the energy efficiency of the buildings, which we verified by measuring the temperatures on the surface and under the substrate of the extensive green roof. With the experiment, we confirmed one of the hypotheses that the green roof contributes to the insulating properties of the building, but we could not confirm the second hypothesis that it also reduces heat islands.

With a survey in which 285 people participated, we checked people's knowledge about this area of construction and tried to find out the problems and benefits that people value most. Based on this, providers can to examine where there are still reserves and which problems they need to address better in order to convince customers of green roofs and thus contribute to climate protection.

KEYWORDS: green roofs, insulating materials, heat island, thermal resistance

EKOLOŠKO OZAVEŠČANJE UČENCEV PREKO ŠPORTA

POVZETEK

V današnjem času zelo pogostokrat zasledimo besede, kot so ekologija in onesnaževanje. Znanstveniki nas opozarjajo, naj se obnašamo ekološko, torej nas ta beseda tako rekoč spremlja na vsakem koraku. Kaj pa sploh je ekologija in kako razumemo njen pomen? Ekologija je veda, ki proučuje porazdelitev in bogastvo živih organizmov in odnose med živimi bitji ter živim in neživim okoljem. Ekologija prav tako opisuje sobivanje in soodvisnost živih bitij ter prilagajanje organizmov življenjskim razmeram, v katerih se nahajajo, le-te pa v veliki meri danes spreminja prav človek. Naša ekološka ozaveščenost je še vedno nizka, vsako leto proizvedemo več odpadkov, kar lahko opazimo že na krajšem sprehodu skozi nam najbližji gozd. Vse bolj pa nam je lahko jasno, da nas narava preko očitnih sprememb, naravne katastrofe, jasno, nazorno in vse bolj kruto opozarja na to, da se ne moremo mačehovsko obnašati do nje, da si ne smemo vsega dovoliti in si jo na svoj način podrežati. Sam odnos do narave, njene čistosti in ekološko ozaveščenost sedaj in za naše zanamce je potrebno začeti graditi že od najmlajših – predšolskih otrok – naprej. Namen razmišljanja v tem članku je, kako povezati ekologijo s športom in, kako lahko učenci s pomočjo športnih dejavnosti prispevajo k večji ekološki ozaveščenosti. Eden izmed ciljev je, da učenci ob športni vadbi hkrati skrbijo še za čisto okolje, ter hkrati poglobljajo ekološko znanje. Cilj take športne vadbe pa je priti do spoznanja, da frazem »prijetno s koristnim« tu še kako pride v ospredje in da učenci razumejo njegov pomen.

KLJUČNE BESEDE: ekologija, ekološka ozaveščenost, naravne spremembe, zdravje, športna dejavnost

ENVIRONMENTAL AWARENESS OF STUDENTS THROUGH SPORTS

SUMMARY

Nowadays, we often see words like ecology and pollution. Scientists warn us to behave ecologically, so this word accompanies us practically every step of the way. But what exactly is ecology and how do we understand its meaning? Ecology is a science that studies the distribution and abundance of living organisms and the relationships between living things and the living and non-living environment. Ecology also describes the coexistence and interdependence of living beings and the adaptation of organisms to the living conditions in which they find themselves, which are largely changed today by humans. Our ecological awareness is still low, we produce more waste every year, which can be seen even on a short walk through the nearest forest. It can be increasingly clear to us that nature, through obvious changes and natural disasters, clearly, vividly and increasingly cruelly warns us that we cannot behave like a stepfather towards it, that we must not allow ourselves everything and have it in our own way to subdue. The very relationship to nature, its purity and ecological awareness must be started now and for our descendants from the youngest - preschool children - onwards. The purpose of thinking in this article is how to connect ecology with sports and how students can contribute to greater ecological awareness with the help of sports activities. One of the goals is for students to take care of a clean environment while practicing sports, and deepen their ecological knowledge at the same time. The goal of such sports training is to come to the realization that the phrase "pleasant with useful" still comes to the fore here and that the students understand its meaning.

KEYWORDS: ecology, ecological awareness, natural changes, health, sports activity

STORIMO DANES ZA BOLJŠI JUTRI

POVZETEK

Z vse večjim naraščanjem prebivalstva, različnih panog, s tem pa tudi potreb po obdelavi in predelavi različnih odpadkov in odpadnih snovi, smo na Šolskem centru Celje, srednja šola za strojništvo, mehatroniko in medije v sklopu projekta »Podnebni cilji in vsebine v vzgoji in izobraževanju« začeli z aktivnim izvajanjem ukrepov za zmanjšanje različnih vrst odpadkov in njihovo ponovno uporabo/reciklažo. Projekt zajema ponovno uporabo/reciklažo embalaže, odvečne hrane, tekstila, papirja, elektronskih naprav. Tako uvajamo optimizacijo na področju uporabe papirja oz. brezpapirno poslovanje. Promoviramo učinkovito rabo energije in zmanjševanje/optimiranje delovnih sestankov, konferenc, info. točk. Vključevanje trajnostnih tem v obstoječe strokovne module (npr. energetske sisteme). Izobraževanje in spodbujanje dijakov k izdelavi seminarских, raziskovalnih in projektnih nalog na področju učinkovite rabe energije. Izdelava navodil za energijsko učinkovito prezračevanje z okni. Pasivne in aktivne oblike ozaveščanja učinkovite rabe energije. Spodbujanje k ločevanju odpadkov. Zbiranje in pravilno skladiščenje nevarnih odpadkov, ki nastajajo v okviru učnih delavnic za praktično usposabljanje. Namestitve termostатов na ogrevalna telesa. Uravnavanje tlačnih razlik za doseganje optimalnejše porazdelitve toplote po nadstropjih. Z metodo primerjanja (komparacija) in vizualnega povzemanja (kompilacija) rezultatov sem prišel do ključnih ugotovitev na katerem področju in kaj se odraža s takojšnjimi rezultati in kje se pojavlja zaostanek v realizaciji. Ugotovitve ključno pripomorejo k nadaljnjemu načrtovanju sprememb v smeri ekologije in doseganja pričakovanih in praktično doseženih rezultatov.

KLJUČNE BESEDE: zbiranje, ločevanje, recikliranje, optimizacija

DO IT TODAY FOR BETTER TOMORROW

ABSTRACT

With an exponentially growing population and various industries, and also the need for the treatment and processing of various waste, we started actively implementing measures to reduce various types of waste and their reuse/recycling as part of the project "Climate Goals and Content in Education" at School Centre Celje, Secondary School of Mechanical Engineering, Mechatronics and Media. The project involves the reuse/recycling of packaging, surplus food, textiles, paper and electronic devices. Thus, we are introducing optimization in the area of paper use or so-called paperless business. We have been promoting the efficient use of energy and the reduction/optimization of work meetings, conferences and info points. Moreover, we have been encouraging the integration of sustainability topics into existing professional modules (e.g. energy systems). We have been educating and encouraging students to do seminar papers, research and project assignments in the field of efficient energy use. Creation of instructions for effective window ventilation. Passive and active forms of awareness of the efficient use of energy. The project also encourages waste separation, collection and proper storage of hazardous waste that is generated within the framework of workshops for practical training, installation of thermostats on heating elements. Furthermore, students have been learning the regulation of pressure differences to achieve a more optimal distribution of heat across the floors. Using the method of comparison and visual comparison of the results I came to key findings in which area, what is reflected by immediate results and where there is a lag in realization. The findings provide a key contribution of changes in the direction of ecology and the achievement of expected and practically achieved results.

KEYWORDS: collection, separation, recycling, optimisation

OZAVEŠČANJE O OKOLJSKI PROBLEMATIKI IN PONOTRANJANJE IDEJ TRAJNOSTNEGA RAZVOJA V 5. RAZREDU

POVZETEK

Zaščita okolja oz. okoljevarstvo je tema, ki je na razredni stopnji osnovne šole pogosto vpletena v mnoge dejavnosti. Večkrat jo zmotno enačimo le z ekologijo, ki pa je širša veda in vključuje veliko področij biologije. Pri pregledu ciljev učnega načrta za spoznavanje okolja (1., 2. in 3 razred) ter naravoslovje in tehniko (4. in 5. razred), sem ugotovila, da se učenci v prvih letih šolanja pogosto srečujejo z okoljsko problematiko in z njo povezanim trajnostnim razvojem.

Zanimalo me je, koliko so učenci 5. b razreda že vedeli o tej problematiki in koliko so pridobili z izvajanjem različnih dejavnosti tekom šolskega leta (slikali so na temo trajnostnega razvoja, izdelovali didaktične in družabne igre iz odpadnega materiala, merili temperaturo v učilnicah ter meritve primerjali, izdelovali ekološko naravnane piktograme za učilnice, brali eko bralno značko, se učili uporabe računalniških orodij med raziskovanjem ekoloških tem, razvrščali šolske odpadke, zbirali star papir, zbirali podatke o času, ki ga preživijo na internetu, obiskali ekološko kmetijo, raziskovali lišaje v okolici, sodelovali pri projektu Trajnostna mobilnost).

V prispevku je torej predstavljen napredek otrok na področju rednega programa (UN) ter tudi, kako se je temo vpletlo v druge predmete in dejavnosti z namenom ponotranjanja želje po uresničevanju trajnostnega razvoja.

Izvedba dejavnosti je bila predstavljena na pedagoški konferenci z namenom širjenja dobre prakse.

Širši kot bo krog otrok, ki bodo okoljsko ozaveščeni, več možnosti obstaja za preživetje prihodnjih rodov.

KLJUČNE BESEDE: okoljevarstvo, trajnostni razvoj, učenci, medpredmetno povezovanje, odpadki

RAISING AWARENESS ABOUT ENVIRONMENTAL ISSUES AND ADOPTING IDEAS ON SUSTAINABLE DEVELOPMENT WITHIN THE 5TH GRADE CLASSROOM

ABSTRACT

Preserving the environment, or environmental protection, is a topic seldomly embedded into a variety of activities in Elementary School. We often mistakenly liken it to »ecology«, the applied science covering many an area of biology.

When revising the objectives of the Environmental Education curriculum in grades 1-3 and Science and Technology in grades 4-5 I noticed that children in the early years often encounter the topic of environmental issues and sustainable development.

I was interested to see how much the students on a Grade 5 level had already known about the topic and how much knowledge had they obtained via the activities throughout the school year (painting addressing sustainable development, creating didactical and board games out of waste materials, take indoor temperature in classrooms and comparing the results, creating ecology-oriented pictograms to exhibit in classrooms, participate in Eco reading badge, learning to use computer tools to research environment-based topics, separate school waste, collect waste paper, conduct a survey on time spent on the internet, visiting an eco-farm, research moss around the school, participate in the Sustainable Mobility Project).

Therefore, the article and presentation focus on the children's development within the regular curriculum and how this topic has seeped and been intertwined into other subject as well in order to adopt and intrinsically motivate the students to contribute to and become aware of sustainable development.

Activities as a whole have been presented at a whole-school conference to present an example of good teaching practice.

The wider the circle of children, knowledgeable on the topic of environmental protection, the more chances the future generations have to survive.

KEY WORDS: environmental protection, sustainable development, early-years students, transdisciplinary teaching, waste

OKOLJSKO OZAVEŠČANJE PRI POUKU NEMŠKEGA JEZIKA

POVZETEK

Pri pouku nemščine kot prvega tujega jezika v srednji šoli je po učnem načrtu eno od predvidenih tematskih poglavij tudi varovanje narave in okolja, ki mu je v različnih učbenikih vedno namenjena vsaj ena enota v 3. ali 4. letniku. Drugače je pri pouku nemščine kot drugega tujega jezika, ki ga imajo dijaki v 1. in 2. letniku; takrat se jezika učijo brez predznanja, kar omejuje obravnavo okoljskih tem, saj še nimajo zadostnega besednega zaklada za pogovor o teh temah. Te dijake zato ozaveščamo o varstvu okolja pri drugih temah, kot so prehrana, promet, nakupovanje, prosti čas. S tem prispevkom želim predstaviti možnosti ozaveščanja mladih o nujnosti skrbi za okolje in zmanjšanju okoljskega odtisa skozi usvajanje jezikovnega znanja. V prispevku kot doprinos k poučevanju jezika in okoljskega ozaveščanja predstavljam različna dodatna gradiva in dejavnosti, ki jih lahko učitelji vključijo v pouk nemščine in tako dijake hkrati ozaveščajo o nujnosti in možnostih skrbi za okolje.

KLJUČNE BESEDE: pouk nemščine, okolje, odgovornost posameznika, učbeniki, dodatno gradivo

ENVIRONMENTAL AWARENESS IN GERMAN LANGUAGE LESSONS

ABSTRACT

The German as a first foreign language at secondary school curriculum also includes a thematic unit on the protection of nature and the environment, which is always reserved for at least one unit in Year 3 or Year 4 in various textbooks. The situation is different in the case of German as a second foreign language, which is taught in Years 1 and 2 without prior knowledge of the language, which limits the treatment of environmental topics, as students do not yet have sufficient vocabulary to discuss these topics. Therefore, we raise their awareness of environmental protection in a variety of other topics, such as food, transport, shopping and leisure. In this paper I would like to present the possibilities of raising young people's awareness of the need to take care of the environment and to reduce their ecological footprint through the acquisition of language skills. As a contribution to language teaching and environmental awareness, I present various supplementary materials and activities that German teachers can integrate into their German lessons and at the same time raise students' awareness of the necessity and possibilities of caring for the environment.

KEYWORDS: German lessons, environment, individual responsibility, textbooks, supplementary material

EKOLOŠKI POSTOPKI PRI PREDELAVI VOZILA CLIO V DIRKALNO VOZILO

POVZETEK

V šoli smo v okviru projektne naloge izvedli predelavo vozila Renault Clio. Dijaki so spoznali pri izvajanju naloge, katere vrste odpadkov se pojavljajo pri predelavi vozila. Pri izvedbi projekta smo se najprej pogovorili o materialih, njihovim uradnim poimenovanjem, in uradni klasifikaciji teh odpadkov. Pozornost smo posvetili odpadkom v avtokleparski in avtoservisni delavnici, lakirnici in komunalnim odpadkom. Dijaki so morali med izvajanjem naloge poiskati uradne nazive za odpadne materiale, jih ustrezno klasificirati in voditi evidenco odpadkov. Dijaki so na praktičnem primeru spoznali upoštevanje okoljevarstvenih predpisov glede ločevanja odpadkov že na samem mestu nastajanja.

Dijaki so spoznali da se pojavlja problem tudi v klasifikaciji odpadkov, saj ni poznana kemična sestava. Samo z doslednim izvajanjem postopkov ekološke predelave vozila, lahko vplivamo na zmanjšanje porabe energije in obremenitve na okolje. Dijaki bodo pridobljeno znanje, pri izvedbi naloge, lahko uspešno uporabili na več področjih; kot običajni potrošnik; pri izvajanju del in opravil v avtoservisni dejavnosti; pri širjenju ozaveščanja ekološkega ravnanja z odpadki.

Naloga bo doprinosila stroki, k večjemu razumevanju pravilnega ekološkega popravila ali predelave vozil in motorjev. Naloga je lahko vodnik pri organizaciji izvedbe podobne predelave. Lahko se uporabi kot opomnik pri postavitvi in organizaciji delavnice ali obrata za predelavo vozil, ker je potrebno že pri snovanju delavnice poskrbeti za ekološko izvajanje dejavnosti. Naloga prikazuje tudi načine vodenja in klasificiranja odpadkov v delavnici.

KLJUČNE BESEDE: predelava vozila, ekološke norme, predpisi, klasificiranje, recikliranje odpadkov

ECOLOGICAL PROCEDURES WHEN CONVERTING THE CLIO VEHICLE INTO A RACING VEHICLE

ABSTRACT

At school, as part of the project tasks, we carried out the conversion of a Renault Clio vehicle. During the task, the students learned what types of waste are produced during the conversion of a vehicle. When implementing the project, we first discussed the materials, their official names, and the official classification of this waste. We paid attention to waste in auto body shops and auto repair shops, paint shops and municipal waste. During the task, the students had to find official names for waste materials, classify them accordingly and keep waste records. Through a practical example, the students learned about the observance of environmental protection regulations regarding the separation of waste at the very place of generation.

The students realized that there is also a problem in the classification of waste, since the chemical composition is not known. Only by consistently implementing ecological vehicle conversion procedures can we influence the reduction of energy consumption and the burden on the environment. The students will be able to successfully use the acquired knowledge in several areas when completing the assignment; as a normal consumer; when performing work and tasks in the car service business; in spreading awareness of ecological waste management.

The task will be a contribution to the profession, to a greater understanding of the correct ecological repair or conversion of vehicles and engines. The task can be a guide in organizing the implementation of similar processing. It can be used as a reminder when setting up and organizing a workshop or a vehicle conversion plant, because it is necessary to take care of the ecological implementation of activities already when designing the workshop. The task also shows ways of managing and classifying waste in the workshop.

KEY WORDS: vehicle conversion, ecological norms, regulations, classification, waste recycling

O TRAJNOSTNI MODI PRI POUKU NEMŠČINE

POVZETEK

Pri pouku nemščine se dijaki z ekološkimi temami neposredno ne srečujejo. Zato sem se odločila za drugačno obravnavo lekcije o oblačilih. Dijaki 1. letnika štiriletnega programa tako kot večina mladih sledijo spletnim »vplivnicam« in ne vedo, da se za bleščečo fasado skrivajo senčne plati modne industrije, ogromne onesnaževalke našega planeta. To je pokazala tudi anketa, ki so jo reševali s pametnimi telefoni in je razkrila njihove nakupovalne navade, odnos do oblačil ter nepoznavanje ekološkega vidika v zvezi z modno industrijo. Prednost dajejo kvantiteti pred kvaliteto, o možnosti recikliranja oblačil, trajnosti modi in modni industriji kot onesnaževalki okolja ne vedo skoraj nič. Dijaki so ob branju besedil spoznali pojma trajnostna in hitra moda, obiskali spletno trgovino s trajnostno modo, razmišljali o prednostih in slabostih trgovin z rabljenimi oblačili in si ogledali kratek film. Na koncu so rešili kviz in na zabaven način preverili, kaj so se naučili. Njihov besedni zaklad se je povečal, a še pomembneje je, da so spoznali, kako se lahko sleherni z majhnimi koraki in brez odrekanja bori proti onesnaževanju okolja. Ugotovila sem, da je mogoče s sodobnimi pristopi v pouk vključevati ekološko tematiko, ne da bi se pri tem oddaljili od predpisane snovi, ki jo moramo obravnavati. To je nujno, ker le z vztrajnim ozaveščanjem lahko vplivamo na spremembo razmišljanja in obnašanja vsakega posameznika. Menim, da bo potrebno vključiti ekološke »drobtinice« še v veliko lekcij, če želimo doseči cilj.

KLJUČNE BESEDE: modna industrija, trajnostna moda, spletna trgovina, trgovina z rabljenimi oblačili, splet.

ON SUSTAINABLE FASHION IN GERMAN LESSONS

ABSTRACT

In German lessons, the students do not directly encounter ecology topics. That is why I decided for a different approach on the clothing lesson. The first-year students of the four-year program, as many other young people, follow »influencers« and do not know there is also the dark side behind the shiny facade of the fashion industry, one of the greatest world polluters. This was shown by a smartphone survey which revealed their shopping habits, attitude towards clothing and ignorance regarding fashion industry. They prefer quantity over quality, know almost nothing about the possibility of clothes recycling, sustainable fashion and fashion industry as a polluter of the environment. Reading texts, the students learnt about the concepts of sustainable and fast fashion, visited an online sustainable fashion shop, considered advantages and disadvantages of second-hand clothing shops, and watched a short movie. Eventually, they took a quiz to see what they had learned in a fun way. Their vocabulary has increased, but more importantly, they have learnt, how everyone can take small steps without sacrificing to fight pollution. I realized it is possible to incorporate ecological topics into the classroom using modern approaches without deviating from the prescribed content we have to cover. This is essential because only through a persistent awareness raising we can have impact on thinking and behaviour of each individual. I believe that ecological »crumbs« will have to be included in many more lessons if we want to reach the goal.

KEYWORDS: fashion industry, sustainable fashion, online shop, second-hand clothing shop, web.

KREPITEV LOKALNE PRIPADNOSTI IN EKOLOŠKE OZAVEŠČENOSTI – TELOVADNICE V NARAVI

POVZETEK

Prispevek predstavi projekt, pri katerem smo z učenci ugotavljali, v kolikšni meri in kako kakovostno telovadnice v naravi v Žireh zadovoljijo potrebe prebivalcev. Predvidevali smo, da potreba po telovadnicah tudi v naravi narašča ter da obstoječe telovadnice niso enakomerno razporejene po celotnem območju mesta. Glavni vzorec so predstavljale že obstoječe telovadnice, izboljšave pa smo naredili s pomočjo 30 lokalnih prebivalcev, med katerimi smo izpeljali anketni vprašalnik, in so uporabniki telovadnic na prostem. Rezultat projekta je podan predlog in izboljšave prostorskega načrtovanja oz. umestitve telovadnic na prostem in na drugi strani izboljšava obstoječih telovadnic v naravi. Ker so bili glavni nosilci projekta učenci raziskovalci, smo z omenjeno raziskavo krepili tako lokalno pripadnost kot ekološko zavest učencev.

KLJUČNE BESEDE: ekologija, fizična aktivnost, lokalna skupnost, telovadnice na prostem

STRENGTHENING LOCAL AFFILIATION AND ECOLOGICAL AWARENESS - GYMS IN NATURE

ABSTRACT

The article presents a project in which the students and teachers determined to what extent and to what quality outdoor gyms in Žiri meet the needs of the residents. We assumed that the need for gyms in nature is also growing and that the existing gyms are not evenly distributed throughout the city area. The main sample were already existing gyms, and improvements were made with the help of 30 local residents, among whom we carried out a questionnaire, and are also users of outdoor gyms. The result of the project is a suggestion and improvements to spatial planning, the placement of outdoor gyms and, on the other hand, the improvement of existing outdoor gyms. Since the main participators of the project were the students - researchers, we strengthened both the local affiliation and the ecological awareness of the students with the mentioned research.

KEYWORDS: ecology, local community, outdoor gyms, physical activity

SPOZNAVANJE GOZDNIH ŽIVALI IN PTIC PO ZIMI V NAŠI OKOLICI S POMOČJO EKOLOŠKIH DEJAVNOSTI

POVZETEK

Sredi Ptujkega polja, na levem bregu reke Drave, stoji naš vrtec – Vrtec Gorišnica. Obdajajo ga polja, njive, travniki, gozdovi ter vinogradi. To vse lahko vidimo vsak dan. Kdo pa se še drug skriva in živi okrog nas? To je zanimalo naših 19 otrok, starih 2 do 4 leta. Katere živali živijo v naših gozdovih, katere ptice ostanejo čez zimo pri nas in se krmijo v ptičjih krmilnicah, kdo se skriva na njivah in poljih, zakaj so deževniki pozimi zunaj na snegu? S pomočjo raziskovanja, aktivnega učenja, opazovanja narave, pogovora smo prišli do zanimivih spoznanj, na katere otroci do tedaj niso poznali odgovorov. S spoznavanjem, prepoznavanjem živali pa so otroci spoznavali tudi našo bližnjo okolico vrtca. Otroci so spoznali značilnosti prehranjevanja, gibanja ter telesne značilnosti gozdnih živali ter ptic. S pomočjo lovca smo prišli do natančnih, temeljitih in strokovnih odgovorov, ki je naša predvidevanja ali potrdil ali ovrzel. Z ekološkimi vsebinami smo vplivali na celosten razvoj otroka, pri čemer pa smo zajeli tudi vsa ostala področja kurikuluma. Gozd je postal naš raziskovalni center, kjer smo ugotovili, da je narava zelo pisana, gosto poseljena, če si le vzamemo dovolj časa, da ji prisluhnemo in jo opazujemo. Pridobili smo pozitiven ter odgovoren odnos do narave.

Zgodnje seznanjanje otrok z ekologijo je bistvenega pomena za sedanje in vse prihajajoče generacije, kajti le tako bomo lahko še naprej uživali v možnostih, ki nam jih ponuja vrtec na vasi.

KLJUČNE BESEDE: ekologija, vrtec, predšolski otroci, gozd, aktivno učenje.

GETTING TO KNOW FOREST ANIMALS AND BIRDS AFTER WINTER IN OUR LOCAL ENVIRONMENT WITH A HELP OF ECOLOGICAL ACTIVITIES

ABSTRACT

In the middle of the Ptuj field and on the left bank of Drava river stands our kindergarten-Kindergarten Gorišnica. It is surrounded by fields, meadows, forests and vineyards. We can see this every day. But who else is hiding and living around us? Our 19 children aged 2 to 4 were interested in this. Which animals live in our forests, which birds stay over the winter and feed themselves in the bird feeders, who hides in the fields and why are earthworms outside in the snow during the winter? With the help of researching, active learning, observing nature and conversations we came to interesting insights to which the children did not know the answers until then. The children learned about the habits of eating, moving and physical characteristics of forest animals and birds. With the help of a hunter we came up with accurate, thorough and professional answers, which either confirmed or denied our predictions. With ecology content, we influenced the development of the child, while also covering all other areas of the curriculum. The forest became our research center, where we realized that nature is very colorful and densely populated, if we only take enough time to listen to it and observe it. We have acquired a positive and responsible attitude towards nature. Introducing children to ecology at an early age is essential for the present and future generations, because only this way will we be able to enjoy the possibilities offered by the kindergarten in the village.

KEY WORDS: ecology, kindergarten, preschool children, forest, active learning.

VKLJUČEVANJE EKOLOŠKIH TEM V ŠOLSKI SPLETNI ČASOPIS

POVZETEK

Izbirni predmet šolsko novinarstvo ponuja veliko možnosti za okoljsko vzgojo sodelujočih učencev, s pomočjo šolskega časopisa pa vpliva še na ostale učence. Slednji način »vzgajanja« se izkaže za zelo učinkovitega, saj uporabimo moč medijev in vzpostavljamo vrednostni sistem, ki je v skladu z okoljsko vzgojo. Na začetku prispevka povzemam ključne ugotovitve strokovnjakov o vplivu medijev na najstnike in pomenu medijske pismenosti, nato osvetlim še moč vpliva vrstnikov. Osredotočam se na učence tretje triade osnovne šole, ker sodelujejo pri izbirnem predmetu šolsko novinarstvo. V nadaljevanju prispevka predstavim izbirni predmet šolsko novinarstvo, nato še naš šolski spletni časopis. V osrednjem delu je predstavljen primer dobre prakse: način vključevanja ekoloških tem v šolski časopis (izdelava loga za prispevke o ekoloških temah, kritična analiza novinarskih prispevkov z ekološkimi vsebinami, izbira tem za lastno ustvarjanje prispevkov in proces pisanja) ter možnosti za uspešno okoljsko vzgojo bralcev šolskega časopisa. Vsakoletne evalvacije dela kažejo, da mladi novinarji uspešno spoznajo, da mediji pravzaprav kreirajo svet, zato s svojimi prispevki skrbijo, da osvetlijo teme, ki se jim zdijo pomembne. Zelo spodbudno je, da pogosto izbirajo ekološke teme, saj med raziskovalnim delom spoznajo, da te teme lahko povežejo z mnogimi drugimi področji, ki jih zanimajo.

KLJUČNE BESEDE: šolsko novinarstvo, okoljska vzgoja, vpliv medijev, vpliv vrstnikov

ECOLOGICAL TOPICS IN SCHOOL ONLINE NEWSPAPER

ABSTRACT

Elective subject School Journalism offers many opportunities for environmental education of the participating students, and with the help of the school newspaper, it also influences the rest of the students in our school. This method of "education" turns out to be very effective, as we use the power of the media and promote values from environmental education. At the beginning of the paper, I summarize the experts' key findings on the influence of media on teenagers and the importance of media literacy, then I highlight the power of peer influence. I focus on the students of the third triad of elementary school, since they participate in the elective subject School Journalism. In the continuation of the paper, I present the elective subject School Journalism and our school online newspaper. In the main part, an example of good teaching practice is presented: the method of including ecological topics in the school newspaper (creating a logo for articles on ecological topics, critical analysis of journalistic articles with ecological content, choosing topics for own articles and the writing process) and possibilities for successful environmental education of the readers of our school newspaper. Annual work evaluations show that young journalists during lessons successfully realize that the media actually creates the world, therefore they use their articles to expose topics they find important. It is very encouraging that they often choose (all by themselves) ecological topics, also because they realize that they are connected with their other interests.

KEYWORDS: School Journalism, environmental education, influence of media, peer influence

PALMOVO OLJE – SESTAVINA, KI ŠKODI OKOLJU

POVZETEK

Palmovo olje je najbolj uporabljeno rastlinsko olje na svetu, saj ga v takšni ali drugačni obliki uporablja tako rekoč vsak od nas. Posledično je povpraševanje po tem vsestranskem olju v razcvetu. Velika večina svetovnega palmovega olja prihaja z območij, kjer je širitev nasadov oljne palme uničila na milijone hektarjev tropskega deževnega gozda. Ti gozdovi so biomi izjemne raznovrstnosti rastlin in živali, vendar so resno ogroženi. Okoljska vprašanja, med katere sodi izginjanje tropskega deževnega gozda, so pomemben del vzgojno-izobraževalnih ciljev predmeta geografije. V prispevku je prikazana učna ura pri pouku geografije, pri kateri so učenci spoznavali značilnosti in ogroženost tropskega deževnega gozda preko študije primera palmovega olja. Učno delo v 8. razredu je trajalo 4 šolske ure. Vzgojno-izobraževalni cilji so bili usvojeni preko različnih oblik in metod dela: individualno in skupinsko delo, razlaga, pogovor, delo z zemljevidom in videoposnetki, s slikovnim in grafičnim materialom. Učenci so preko primera gojenja oljne palme in proizvodnje palmovega olja spoznali pomen tropskega deževnega gozda za naš planet ter kateri so vzroki in posledice nepremišljenega človekovega posega v to naravno okolje. Kot doprinos k stroki smo naredili pomemben korak naprej v smeri dojemanja celostnosti tega prostorskega vprašanja, hkrati pa v razvijanju ekološke ozaveščenosti učencev ter njihove vloge pri zmanjševanju pritiskov na tropski deževni gozd, kar nam je potrdila anketa, ki smo jo na koncu izvedli med učenci.

KLJUČNE BESEDE: geografija, palmovo olje, tropski deževni gozd.

PALM OIL – AN INGREDIENT THAT HARMS THE ENVIRONMENT

ABSTRACT

Palm oil is the most widely used vegetable oil in the world, used in one form or another by virtually all of us. As a result, demand for this versatile oil is booming. The vast majority of the world's palm oil comes from areas where the expansion of oil palm plantations has destroyed millions of hectares of tropical rainforest. These forests are home to an extraordinary diversity of plants and animals, but they are seriously threatened. Environmental issues, including the disappearance of tropical rainforests, are an important part of the educational objectives of the subject of geography. This paper presents a lesson from a geography class in which pupils learnt about the characteristics and threats of the tropical rainforest through a case study of palm oil. The lesson in Grade 8 lasted 4 school periods. The educational objectives were acquired through various forms and methods of work: individual and group work, explanation, discussion, work with maps, videos, pictorial and graphic material. Through the example of oil palm cultivation and palm oil production, the pupils learned about the importance of the tropical rainforest for our planet and the causes and consequences of reckless human intervention in this natural environment. As a contribution to the profession, we have taken an important step forward in understanding the complexity of this spatial issue, while at the same time in developing pupils' ecological awareness and their role in reducing pressures on tropical rainforest, which was confirmed by the survey conducted among the pupils.

KEYWORDS: geography, palm oil, tropical rainforest.

EKOTURIZEM V PROGRAMU MYP S Poudarkom na PRIDOBIVANJU UČNIH KOMPETENC IN VEŠČIN

POVZETEK

Middle Years Programme je petletni program. V zadnjih dveh letih dijakom (15-16 let) omogočimo, da izpolnijo zahteve šolskega programa in osebne učne cilje. V učnem sklopu Turizem izhajamo iz trditve, da imajo različne države različne možnosti za gospodarski razvoj in turizem, postaja pri marsikateri državi celo najpomembnejša panoga. Uporabljena literatura je učbenik, različni internetni viri in primeri treh turističnih destinacij, ki se tržijo preko interneta. Dijaki si postavijo raziskovalno vprašanje in napišejo kritičen članek o tem, koliko je ena od izbranih destinacij trajnostna oziroma zelena. Dijaki pri pouku razvijajo kritično razmišljanje s primerjavo ponudb nastanitvenih kapacitet, odigrajo vloge (okrogla miza) posameznih akterjev v turizmu, izdelajo seznam predlogov, kako bi ukrepali v primeru negativnih ekonomskih rezultatov. Velik izziv je priprava predlogov (.ppt) za bolj trajnosten turistični razvoj otoka Ibiza, kjer poiščejo svojo rešitev za zmanjšanje masovnega turizma v bolj ekološko-zelenega. Dijaki izdelajo tudi evalvacijo svojega članka. Tak način izvajanja pouka v nacionalnem programu redko izvajamo, ker zahteva veliko časa in visoko motivacijo dijakov. Prav tako imamo redko izdelane opisne ocene za te vrste projektov, da jih pretvorimo v številčno oceno. Moje mnenje je, da bi tak pristop k izvajanju teme Turizem prispeval k boljši digitalni pismenosti, kritičnemu razmišljanju in evalvaciji lastnega dela.

KLJUČNE BESEDE: Trajnostni razvoj, globalizacija, zeleni turizem.

ECOTOURISM IN THE MYP, WITH A FOCUS ON THE ACQUISITION OF LEARNING COMPETENCES AND SKILLS

ABSTRACT

The Middle Years Programme is a five-year programme. In the last two years, we give students (aged 15-16) the opportunity to meet the requirements of the school curriculum and their personal learning goals. In the Tourism strand, we start from the premise that different countries have different potential for economic development and that tourism is even becoming the most important industry in many countries. The literature used is a textbook, various Internet sources and examples of three tourist destinations marketed via the Internet. The students ask themselves a research question and write a critical article on how sustainable or green one of the selected destinations is. In class, students develop critical thinking by comparing accommodation offers, role-play (round table) the different actors in tourism, make a list of suggestions on how to act in case of negative economic results. A big challenge is to prepare proposals (ppt.) for a more sustainable tourism development of the island of Ibiza, where they find their own solution to reduce mass tourism to a more eco-green one. The students also produce an evaluation of their paper. This way of delivering lessons is rarely implemented in the national curriculum because it requires a lot of time and high motivation of the students. We also rarely have descriptive evaluations of this type of projects to convert them into a numerical evaluation. My opinion is that such an approach to the implementation of the Tourism topic would contribute to better digital literacy, critical thinking and evaluation of one's own work.

KEYWORDS: Sustainable development, Globalisation, Green tourism

OKOLJSKA OZAVEŠČENOST DIJAKOV V AVTOLIČARSKI DELAVNICI

POVZETEK

Biti del avtoservisne stroke je odgovornost vsakega, ki se s to stroko ukvarja. V avtoličarski delavnici imamo opravka z nevarnimi odpadki, s katerimi večinoma ne ravnamo pravilno.

Veliko je napak tudi v samih obdelovalnih postopkih, saj delovna območja niso ustrezna, kar posledično pomeni onesnaževanje okolja in podtalnice.

Cilji raziskovalne naloge so, da vam predstavim pedagoški del odgovornosti. Obrazložil bom kako pomembno je, da bodoče izvajalce del podučimo o pravilni uporabi materialov, ravnanja z nevarnimi odpadki in varovanja zdravja in okolja.

Rezultat našega dela je viden ob končanem šolanju, cilj pa je povratna informacija iz gospodarstva.

Pomembno je, da dijaki poznajo kako se soočijo s problematiko onesnaževanja in na nepravilno ravnanje opozorijo tudi izvajalce v gospodarstvu.

KLJUČNE BESEDE : avtoreparatura, nevarni odpadki, vpliv na okolje, ozaveščenost

ENVIRONMENTAL AWARENESS OF STUDENTS IN THE AUTOMOTIVE WORKSHOP

ABSTRACT

Being part of the auto service profession is the responsibility of everyone involved in this profession. In the body shop, we deal with hazardous waste, most of which are not properly recycled.

There are also many errors in the processing procedures themselves, as the working areas are not suitable, which in turn means pollution of the environment and groundwater.

The goals of the research paper are to present you with the pedagogical part of the responsibility. I will explain how important it is to teach future contractors about the correct use of materials, the handling of hazardous waste, and the protection of health and the environment.

The result of our work is visible upon completion of education, and the goal is feedback from the economy.

It is important that students know how to deal with the problem of the pollution and warn contractors in the economy about improper behavior.

KEY WORDS: auto repair, hazardous waste, impact on the environment, awareness

RAZVIJANJE EKOLOŠKE ZAVESTI PRI UČENCIH Z MOTNJAMI V DUŠEVNEM RAZVOJU

POVZETEK

V Osnovni šoli Roje se izobražujejo otroci in mladostniki z lažjo, zmerno, težjo in težko motnjo v duševnem razvoju, ki obiskujejo tri različne programe in sicer prilagojen program z nižjim izobrazbenim standardom, posebni program vzgoje in izobraževanja, imamo pa tudi eno skupino razvojnega vrtca. Številni naši učenci imajo tudi zelo različne pridružene težave in potrebujejo specializirane oblike poučevanja. V prispevku želimo izpostaviti, da začnemo že v razvojnem vrtcu uvajati izkustveno učenje s katerim spodbujamo odgovoren odnos otrok do njihovega življenjskega okolja, kasneje v šolskem programu pa to še nadgradimo. Učencem ekološke teme predstavimo prek različnih ozaveščevalnih akcij, ki vključujejo spoznavanje naravnih virov iz lokalnega okolja, skrb za zmanjševanje odpadkov in reciklažo, učenje ponovne uporabe predmetov, skrb za zmanjševanje odpadne hrane. Učenci se vključujejo v številne dodatne dejavnosti, ki razvijajo ekološko zavest – skrbijo za šolski eko vrt, se vključujejo v eko bralno značko, spoznavajo gozdno pedagogiko. Naš skupen cilj je, da učence z motnjami v duševnem razvoju opolnomočimo za odgovorno življenje v odraslosti, ki vključuje tudi odgovoren odnos do okolja.

KLJUČNE BESEDE: učenci s posebnimi potrebami, skrb za okolje, ekološka zavest.

DEVELOPMENT OF ECOLOGICAL AWARENESS IN STUDENTS WITH INTELLECTUAL DISABILITIES

SUMMARY

The Roje Primary School educates children and adolescents with mild, moderate, severe and profound intellectual disabilities, who attend three different programmes: an adapted programme with a lower educational standard, a special education programme, and a developmental kindergarten group. Many of our pupils also have a wide variety of associated difficulties and require specialised forms of teaching. In this paper we would like to point out that we start introducing experiential learning as early as in the developmental kindergarten to promote a responsible attitude towards the children's living environment, and we build on this later in the school curriculum. We introduce ecological issues to the pupils through various awareness-raising activities, including learning about natural resources from the local environment, reducing waste and recycling, learning how to reuse objects, and reducing food waste. Pupils are involved in a number of additional activities to develop their ecological awareness - tending the school's eco-garden, taking part in an eco-reading badge, learning about forest pedagogy. Our common goal is to empower students with intellectual disabilities to live a responsible adult life, which includes a responsible attitude towards the environment.

KEYWORDS: students with special needs, care for the environment, ecological awareness.

ŠOLSKA IZMENJEVALNICA OBLAČIL ZA TRAJNOSTNI NAČIN ŽIVLJENJA

POVZETEK

V letošnjem šolskem letu je naša gimnazija vključena v projekt VITR – Vzgoja in izobraževanje za trajnostni razvoj. Tudi šolska knjižnica se je vključila in sicer tako, da smo pripravili projekt izmenjave in ponovne uporabe oblačil. Za začetek projekta smo si z dijaki 3.letnika pri medpredmetni povezavi »Študij okolja« pogledali dokumentarni film. Na podlagi filma in drugih virov smo pripravili plakate o ozaveščanju kako proizvodnja oblačil in potrošništvo v tako imenovani »hitri modi« škodljivo vpliva na okolje, ter izpostavili možne rešitve za trajnostni način oblačenja. Ukvarjali smo se z iskanjem rešitev kako bi povečali ponovno uporabo izdelkov, kako nakupovati trajnostno in predvsem razmisliti ob vsakem nakupu, da bi zmanjšali industrijo hitre mode, ki onesnažuje in vsiljuje potrošništvo. V šolski knjižnici smo ob plakatih pripravili prostor z oblačili in nakitom. Vsi dijaki in zaposleni so lahko sodelovali tako, da so prinesli oblačila, ki jih ne nosijo več in si izberejo drug kos oblačila. Izmenjevalnica je potekala cel mesec, hkrati smo izvedli tudi šiviljsko predelavo oblačil, pri čemer smo iz starih kosov oblačil izdelali nove uporabne izdelke. Oblačila, ki so ostala smo oddali v Center ponovne uporabe, kamor smo tudi peljali dijake na ogled. Kot doprinos k stroki verjamemo, da je projekt pripomogel k ozaveščanju mladine in spodbudo k trajnostnemu življenju. Z dejavnostmi smo dijakom praktično predstavili problematiko ter približali ponovno uporabo, ter jih spodbudili k iskanju rešitev za boljši jutri.

KLJUČNE BESEDE: proizvodna oblačil, hitra moda, potrošništvo, vpliv na okolje, zavržena oblačila, ponovna uporaba.

CLOTHING EXCHANGE IN OUR SCHOOL FOR A SUSTAINABLE LIFESTYLE

ABSTRACT

This school year, our high school is included in the VITR project - Education and training for sustainable development. The school library also got involved by preparing a clothing exchange and reuse project. To start the project, we watched a documentary film with the 3rd year students at the crosscurricular "Environmental Studies". Based on the film and other sources, we prepared posters on raising awareness of how clothing production and consumption in so-called "fast fashion" have a harmful effect on the environment, and highlighted possible solutions for a sustainable way of dressing. We have been engaged in finding solutions to increase the reuse of products, how to shop sustainably and above all to think with every purchase, in order to reduce the fast fashion industry that pollutes and imposes consumerism. In the school library, next to the posters, we prepared a space with clothes and jewelry. All students and staff could participate by bringing clothes they no longer wear and choosing another item of clothing. The exchange took place for a whole month, and at the same time we also carried out sewing by reusing some clothes and made new useful products from old pieces of clothing. We took the remaining clothes to the Center for reuse, where we also took the students on a tour. As a contribution to the profession, we believe that the project helped raise awareness among the youth and encourage sustainable living. With the activities, we practically presented the problem to the students and approached reuse, and encouraged them to find solutions for a better tomorrow.

KEYWORDS: clothing production, consumerism, discarded clothing, environmental impact, fast fashion, reuse.

S POMOČJO EKOLOGIJE DO BOLJŠE BRALNE PISMENOSTI

POVZETEK

Branje oziroma njegov širši pojem bralna pismenost je ena najpomembnejših veščin sodobnega časa. Na koncu razvoja bralne pismenosti tako lahko otrok informacije, ki jih je pridobil pri branju, učinkovito uporabi na različnih področjih. Na osnovni šoli Trzin se zavedamo, da ima vedno več otrok težave z bralno pismenostjo oziroma motiviranostjo za branje. Stanje se je še poslabšalo s šolanjem na daljavo. Odraža se predvsem pri slabši tehniki branja, slabšem razumevanju prebranega in kar je še posebno skrb vzbujajoče, pri besednem, še bolj pa pri pisnem izražanju učencev. Težavo motiviranosti za branje smo zaznali tudi pri 21 učencih tretjega razreda. Učenci so bili zato v začetku šolskega leta 2022/2023 aktivno vključeni v projekt izdelave eko bralnice, manjšega bralnega kotička. Eko bralnico so izdelali iz odpadne embalaže. Dolgoročni cilji eko bralnice so pri učencih spodbujati željo po branju, s sošolci izmenjevati vtise o prebranih besedilih in poustvarjati po prebranih besedilih, torej, da branje učencu postane prijetno in da bo razvil dalj časa trajajočo motivacijo za branje. Učenci so v okviru izvajanja projekta raje in večkrat segali po knjigah. Hkrati pa se je pokazalo, kako željni so učenci sodelovati pri nečem drugačnem in kako povezovalno je vplivalo sodelovanje pri skupni nalogi na razredno klimo.

KLJUČNE BESEDE: učenci tretjega razreda, bralna pismenost, motivacija, ekologija.

IMPROVING READING LITERACY WITH THE HELP OF ECOLOGY

ABSTRACT

Reading, or its broader term - reading literacy, is one of the most important skills of modern times. When a child completes the development of reading literacy, he/she can effectively apply the information he/she acquired while reading in various areas of learning. At Primary school Trzin, we are aware that more and more children have problems with reading literacy or motivation to read. The situation has worsened with distance learning. It is mainly reflected in poorer reading techniques, insufficient understanding of what is read and what is even more concerning, in the pupils' verbal and written expression. I also see the problem of reading motivation at 21 pupils in third class. So they were actively involved in the project at the beginning of the 2022/2023 school year, where they created an eco-reading room, a small reading corner. The eco-reading room was made from waste packaging. Its long-term goals are to encourage students' desire to read, to share impressions of the texts they have read with their classmates and to work on different activities based on the texts they have read, to make reading enjoyable for the pupil and to develop a long-lasting motivation for reading. During the implementation of the project, pupils preferred and repeatedly reached for books. At the same time, the project proved that the pupils are eager to participate in something that is a bit different. It also became an activity that induces cooperation in joint tasks among the pupils and creates a positive classroom environment.

KEYWORDS: third grade pupils, reading literacy, motivation, ecology.

OKOLJSKA VZGOJA IN LIKOVNO RECIKLIRANJE V PODALJŠANEM BIVANJU

POVZETEK

Vsa večja ekosistemska obremenitev našega planeta s strani človeka nas vodi v propad naravnega okolja in z njim tudi človeštva. Če želimo našim potomcem zapustiti planet, ki smo ga poznali do sedaj, moramo začeti živeti bolj ekološko. Da bomo to dosegli, moramo z okoljsko vzgojo začeti že pri najmlajših. Poučujem drugošolce v oddelku podaljšanega bivanja. Moj namen je bil, da bi v urnik podaljšanega bivanja vključili okoljsko vzgojo. Cilja, ki sem si ju zadala za letošnje šolsko leto, sta: seznanjanje učencev z vplivom človeka na okolje in posledice tega ter ustvarjanje iz odpadne embalaže. V prispevku predstavljam vključevanje okoljske vzgoje v urnik podaljšanega bivanja, dejavnosti, ki jih izvajamo na ravni celotne šole – Ekošola, ter tiste, ki jih izvajam v svojem oddelku podaljšanega bivanja – serija risank Lepši svet, tovarna reciklarna in dan Zemlje. Z izvedenimi dejavnostmi so učenci spoznali, kaj se dogaja, ko ljudje vplivamo na okolje in kakšne so posledice tega ravnanja. Učence sem motivirala in spodbudila k razmišljanju, kaj je dobro za okolje, kako skrbeti zanj, kako varovati naš planet in kako lahko k temu pripomore prav vsak izmed nas z majhnimi stvarmi. Rezultat tega so dejanja, kot so: ugašanje luči, sodelovanje v čistilni akciji, zbiranje, ločevanje in recikliranje odpadkov. Končni izdelki naše »tovarne reciklarne« so dokaz, da lahko z različnimi odpadnimi materiali likovno ustvarjamo in tako odpadke spremenimo v prave umetnine, s katerimi okrasimo svoj dom in šolski prostor. Predstavljene dejavnosti spodbujajo učitelje k vključevanju okoljskih vsebin v svoje delo.

KLJUČNE BESEDE: ekologija, okoljska vzgoja, trajnostni razvoj, 2. razred, recikliranje.

ENVIRONMENTAL EDUCATION AND ART RECYCLING IN AFTER- SCHOOL CLASSES

ABSTRACT

The growing strain on our planet's ecosystem caused by humans is leading us into the decay of our natural environment and human kind along with it. If we want our progeny to live in the same environment as we do now, we need to start living more ecologically. In order to achieve that goal, we need to start educating our children about environmental issues at a very young age. I teach a group of children in the after-school class programme. My purpose was to include environmental education into our curriculum. The two objectives I have set to accomplish in this school year were: to familiarise the students with the effect of people on the environment and the consequences thereof, and making crafts out of packaging waste. In this article I present including environmental education into the after-class programme curriculum, the activities which we have implemented at the school-wide level through the Ekošola programme, and activities I carry out in my class. We are watching a series of cartoons titled "Lepši svet" ("A more beautiful world"), we have a recycling factory and we celebrate Earth Day. By performing these activities, the students have learnt what happens when people impact the environment and what the consequences of doing so are. I have motivated and encouraged my students to start thinking about what is good for the environment, how to take better care for it, how to protect our planet and how we can all contribute with small actions. The results of this are turning off the lights, participating in a cleaning campaign, sorting and recycling rubbish. The final products of our "Recycling factory" are proof that we can make artistic crafts with waste materials and thus create real works of art that adorn our homes and the school premises. The presented activities encourage teachers to include environmental topics into their work.

KEY WORDS: ecology, environmental education, sustainability, year two, recycling.

Z MERJENJEM PORABE ELEKTRIČNE ENERGIJE DO VEČJE OZAVEŠČENOSTI O UČINKOVITI RABI

Nemotena oskrba z električno energijo zagotovo predstavlja temeljno potrebo vsakemu posamezniku, saj je dejstvo, da sodoben način življenja brez električne energije ni možen. Gospodarnejše ravnanje z električno energijo pomembno zmanjšuje obremenjevanje okolja, zato je zavest, da električne energije ne porabljamo po nepotrebnem, pomembno vzbuditi pri posamezniku že skozi izobraževalni proces. Strokovni del tega prispevka opisuje, kako dijaki po rokovanju z merilniki električne energije kritično razmišljajo o porabi električne energije posameznih električnih naprav v šolskih delavnicah, učilnicah in v domačem gospodinjstvu. Zastavljen je bil konkreten cilj, da s praktičnimi meritvami na posameznih napravah izmerijo nesmotno porabljeno električno energijo in jo ovrednotijo glede na trenutne cene na trgu z električno energijo. Iz opravljenih meritev in analize sledi, da lahko največ električne energije prihranimo z rednim izklapljanjem računalniške opreme v računalniških učilnicah, nato sledijo nekateri postroji v delavnicah, nezanemarljiv pa ni niti delež po nepotrebnem porabljene električne energije mikrovalovne pečice v domačem gospodinjstvu.

KLJUČNE BESEDE: električna energija, merjenje, ozaveščanje, učinkovita raba energije.

BY MEASURING ELECTRICITY CONSUMPTION TO GREATER AWARENESS OF EFFICIENT USE

ABSTRACT

An uninterrupted supply of electricity is certainly a fundamental need for every individual, as it is a fact that a modern way of life is impossible without electricity. More economical use of electricity significantly reduces the burden on the environment, so it is important to instill in the individual the awareness that electricity is not consumed unnecessarily through the educational process. The expert part of this paper describes how students, after handling electricity meters, critically think about the electricity consumption of individual electrical devices in school workshops, classrooms and at the home. A concrete goal was set to measure the inappropriately used electricity with practical measurements on individual devices and evaluate it according to the current prices on the electricity market. From the measurements and analysis, it follows that the most electricity can be saved by regularly switching off computer equipment in computer classrooms, followed by some equipment in workshops, and the share of unnecessarily consumed electricity from microwave ovens in domestic households is not negligible.

KEYWORDS: electricity, measurement, awareness, efficient use of energy.

KAKO DOSEČI VPLIV NA EKOLOŠKE VREDNOTE V ŠOLI?

POVZETEK

Trendi v vzgojno-izobraževalnih programih so izrazito povezani z ekološkimi vsebinami. Glede na to, da se vsak dan bolj zavedamo pomena ohranjanja okolja in trajnostnega razvoja, je temu primerno prilagojeno tudi vključevanje vsebin v redni pouk in razširjen program osnovno šolskega izobraževalnega programa. V skladu s temi cilji vzgojno-izobraževalni programi zagotavljajo kakovostno in raznovrstno izobraževanje o ekoloških vsebinah, da bi pomagali mladim pridobiti znanja in spretnosti vezane na le te. Primeri dobrih pedagoških praks so pomemben prispevek pri podajanju ekoloških vsebin. Kot učiteljica sem se ukvarjala s podajanjem raznolikih primerov ekoloških vsebin, kot so na primer onesnaženost s hrupom in svetlobna onesnaženost. Kot vodja programa Ekošola sem skušala celostno naravnati razvojni program šole, da bodo v njem prepoznane tudi ekološke vsebine. Danes pa je moj cilj povezati aktivnosti po celotni vertikali ter hkrati kot vodstvena oseba šole učencem dati možnost pri oblikovanju ekoloških vsebin v korist vseh vključenih deležnikov v vzgojno-izobraževani ustanovi. V prispevku skušam predstaviti kakšna je moč vpliva učencev name in kako lahko posamezni učenci v vlogi Ekodetektivov vplivajo na vrstnike ter pomen vidnosti sledi mojega učiteljskega delovanja izpred nekaj let, ki je še danes vidna pri učencih. Rezultat skupnega delovanja je tudi uporaba papirnatih brisačk, ki so narejene iz odpadne tetra embalaže. Celoten postopek izbire ponudnika in realizacija oziroma implementacija v uporabo v našem zavodu je bila izpeljana skupaj z učenci. Le ti so nato prevzeli nalogo ozaveščanja ostalih za smotno porabo papirnatih brisačk v celotnem zavodu. Pogled iz različnih zornih kotov daje jasen vpogled na celostno delovanje zavoda. Rezultati delovanja in sodelovanja so vidni na vsakem koraku. Predvsem pa je pomembno, da se vsi, ki bivamo pod isto streho držimo določenih smernic povezanih z ekološkimi vsebinami.

KLJUČNE BESEDE: ekološke vsebine, vzgojno-izobraževalne aktivnosti, moč posameznika

HOW TO ACHIEVE INFLUENCE ON ECOLOGICAL VALUES IN SCHOOL?

SUMMARY

Trends in educational programs are strongly related to ecological content. As we become increasingly aware of the importance of environmental conservation and sustainable development, the inclusion of these topics in education and expanded programs has been appropriately adjusted. In line with these goals, educational programs provide quality and diverse education on ecological topics to help young people gain knowledge and skills related to them. Good pedagogical practices are an important contribution to delivering ecological content. As a teacher, I have dealt with presenting diverse examples of ecological content, such as noise pollution and light pollution. As the leader of the Eco-School program, I have tried to holistically align the school's development program so that ecological content is also recognized in it. Today, my goal is to connect activities throughout the vertical and as a school leader, give students the opportunity to shape ecological content for the benefit of all stakeholders involved in the educational institution. In this article, I try to present the power of students' influence on me and how individual students in the role of Eco Detectives can influence their peers, as well as the importance of the visibility of my teaching activities from a few years ago, which is still visible to students today. The result of our joint work is also the use of paper towels made from waste packaging. The entire process of selecting a provider and implementing its use in our institution was carried out together with the students, who then took on the task of raising awareness of the proper use of paper towels throughout the institution. A view from different perspectives gives a clear insight into the holistic functioning of the institution. The results of the operation and cooperation are visible at every step. Above all, it is important that we all living under the same roof adhere to certain guidelines related to ecological content.

KEYWORDS: ecological content, educational activities, individual power

ČEBELARSKI KROŽEK NA SREDNJI ŠOLI ZA STROJNIŠTVO, MEHATRONIKO IN MEDIJE, ŠOLSKI CENTER CELJE

POVZETEK

Čebelarstvo ima v Sloveniji poseben pomen, tako z vidika bogate kulturne dediščine, ohranjanja avtohtone medonosne čebele kranjske sivke, kot tudi zagotavljanja oprashačevalnega servisa za gospodarsko pomembne agrokulture. Že leta 2015 sem se odločil, da bom dijakom na Srednji šoli za strojništvo, mehatroniko in medije omogočil spoznavanje čebelarstva v okviru prosto izbirnih interesnih dejavnosti. V čebelarski krožek se lahko vpišejo dijaki vseh letnikov in smeri Srednje šole za strojništvo, mehatroniko in medije. V povprečju se krožku pridruži 6 dijakov letno. Čebelarska zveza Slovenije omogoča in podpira izvajanje čebelarskih krožkov na osnovnih in srednjih šolah po Sloveniji. Vrsto let vodim čebelarski krožek, kjer članom krožka predstavim biologijo čebele, tehnologijo čebelarjenja, medonosne rastline, praktični prikaz čebelarjenja, ogled Mednarodnega čebelarskega sejma v Celju in še vrsto drugih aktivnosti. Dijaki s tem spoznajo čebelarstvo in njegov pomen za človeštvo, naučijo se opazovati naravo in njene zakonitosti. Določen delež dijakov se odloči in začne svojo čebelarsko pot. S tem mentorji čebelarskih krožkov prispevamo k ohranjanju bogate tradicije čebelarstva na slovenskem in zagotavljamo podmladek, ki bo skrbel in ohranjal avtohtono medonosno kranjsko sivko. Vsi ostali dijaki, ki se ne odločijo za samostojno pot čebelarjenja, ozavestijo pomen lokalno pridelane hrane in pomen oprashačevalnega servisa. Rezultat krožka sta tudi dve na državnem srečanju mladih raziskovalcev Slovenije nagrajeni raziskovalni nalogi, postavitve opazovalnega panja na šoli ter vsakoletno medpredmetno povezovanje. Čebelarski krožki se na srednjih šolah redkeje izvajajo, zato menim, da je doprinos krožka na srednji šoli toliko bolj pozitiven.

KLJUČNE BESEDE: čebelarstvo, krožek, dijaki, lokalno pridelana hrana, oprashačevalni servis

BEEKEEPING CLUB AT THE SECONDARY SCHOOL OF MECHANICAL ENGINEERING, MECHATRONICS AND MEDIA, CELJE SCHOOL CENTRE

ABSTRACT

Beekeeping has a special importance in Slovenia, both as a part of rich cultural heritage, as the preservation of the autochthonous honey bee *Apis mellifera*, as well as the pollination service of economically important agriculturals. I decided in 2015 to give students at the Secondary school of mechanical engineering, mechatronics and media, Celje school centre an opportunity to learn about beekeeping as part of leisure activities at the school. Any student can enroll and on average 6 students join the club each year. The Beekeeping Association of Slovenia provides support for the implementation of beekeeping clubs in primary and secondary schools throughout Slovenia. For many years, I have led a beekeeping club. I teach students about bee biology, beekeeping technology, honey plants, demonstrate them beekeeping in practice, we attend International Beekeeping Fair in Celje and have a number of other activities. Students learn about beekeeping and its importance for humanity, they learn to observe nature and its laws. A certain proportion of students decide and start their own beekeeping journey. With clubs, mentors contribute to the preservation of the rich tradition of beekeeping in Slovenia and educate young people who will take care of and preserve the autochthonous honey-bearing *Apis mellifera*. All other students, who do not decide for an independent beekeeping, recognise the importance of locally produced food and the importance of the pollination. The club also resulted in two award-winning research projects at the national meeting of young researchers in Slovenia, the installation of an observation hive at the school, and annual cross-curricular networking. Beekeeping clubs are held less often in high schools, so I think that it has a positive contribution at the high school.

KEY WORDS: beekeeping, club, students, locally produced food, pollination

EKOLOŠKO OZAVEŠČEN UČITELJ JE DOBER ZGLED

POVZETEK

Kadar je učiteljeva zavzetost za okoljsko vzgojo pogojena z notranjo motivacijo, učenci prek učiteljevega poučevanja težave bolje začitijo tudi sami. Izvajanje pouka na prostem je priložnost, da otrok spozna okolje z vsemi čutili, da ugotovi, da je čas v naravi zanimiv in zabaven; s tem vzpodbuja in usmerja učenčevo lastno aktivnost in sodelovanje v procesu pouka. Namen in cilj učne ure v naravi je, da si učenec stvari zapomni in razume veliko bolje, če jih lahko doživi, kot pa če mu jih kdo pripoveduje. Ugotovila sem, da jih je treba voditi korak za korakom, usmerjati njihovo pozornost, saj večina učencev ni vajena opazovati narave od blizu. Pred izvajanjem učne ure v naravi sem v sklopu predmeta Spoznavanje okolja, učence s pogovorom in natančnimi navodili pripravila na aktivnost. V 1. razred je vključeno pet učencev s kombiniranimi motnjami. Učenje v naravi je pozitivno vplivalo tudi na razvoj socialnih spretnosti, saj je spodbujalo socialno interakcijo med njimi. Sama aktivnost je iz učencev izvabila spontano dogovarjanje in sodelovanje. Drugačen koncept dela so dobro sprejeli. Napredek je opazen tudi na čustvenem področju, pri samopodobi in samozavesti. Za delo so bili motivirani, ustrezala jim je neformalna oblika dela. Bilo je manj vedenjskih težav. Ker so učenci, ki imajo kombinirane motnje, izziv pri poučevanju, jim tak način podajanja snovi omogoča, da pridejo do boljših učnih uspehov.

KLJUČNE BESEDE: vloga učitelja, učilnica v naravi, ekologija

AN ECOLOGICALLY AWARE TEACHER IS A GOOD EXAMPLE

ABSTRACT

When the teacher's commitment to environmental education is conditioned by internal motivation, the students feel the problems themselves better through the teacher's teaching. Carrying out lessons outdoors is an opportunity for the child to get to know the environment with all his senses, to find out that time in nature is interesting and fun; these encourages and directs the student's own activity and participation in the learning process. The purpose and goal of the lesson in nature is that the student remembers and understands things much better if he can experience them, than if someone tells him about them. I found that it is necessary to guide them step by step, to direct their attention, since most students are not used to observing nature up close. Before conducting the lesson in nature, I prepared the students for the activity with a conversation and detailed instructions as part of the Getting to Know the Environment subject. Five students with combined disabilities are included in the 1st grade. Learning in nature also had a positive effect on the development of social skills, as it encouraged social interaction between them. The activity itself elicited spontaneous agreement and cooperation from the students. The different concept of work was well received. Progress is also noticeable in the emotional area, in self-image and self-confidence. They were motivated to work, the informal form of work suited them. There were fewer behavioral problems. Since students with combined disabilities are a challenge in teaching, this way of delivering the material allows them to achieve better learning outcomes.

KEYWORDS: the role of the teacher, classroom in nature, ecology

HITRA MODA V NAŠEM RAZREDU

POVZETEK

Na osnovi dolgoletnih izkušenj tudi naša osnovna šola izbira vsako leto okoljevarstvene vsebine, katere so se skozi leta pokazale kot dobre prakse. To pomeni, da jih učenci ponotranjijo, saj učitelji z njimi uspešno vplivajo na miselne in vedenjske vzorce učencev.

Cilj dejavnosti je bil, da mladi oblikujejo in udeležujejo zamisli v šolskem, lokalnem in širšem okolju s svojim proaktivnim mišljenjem. Eden glavnih ciljev je še, da krepijo (samo)spoštovanje, (samo)zaupanje ter odgovornost do sebe, drugih in okolja.

Učenci najbolje ločujejo odpadke, saj so zrasli z eko miselnostjo o ločevanju odpadkov, tako doma kot v šoli in je njihovo delo že avtomatizirano. Večina otrok razmišlja na »eko način« od vrta in seveda z zgledom družine.

Ekološke vsebine v šoli povežemo z večino predmetnika. Pri likovnem pouku in pouku tehnike učenci ustvarjajo iz odpadnih snovi in odpadnih materialov. Pri matematiki uporabljajo poznane podatke, ki jih pridobi šola iz zbiralne akcije papirja, zamaškov, zobnih ščetk. Pri glasbenem pouku so v letošnjem šolskem letu učenci naredili glasbilo iz odpadnih steklenic, glasbilo so uporabili in predstavili na šolskem nastopu. Za popestritev pouka učitelji pridobijo podatke tudi v šolski kuhinji. Pri pouku tako uporabijo realne podatke naše šole o količini bioloških odpadkov, ki nastanejo ob prehranjevanju v šolskih prostorih, o porabi vode in električne energije.

Del eko razmišljanja bomo letos razširili in namenili številu oblačil, ki jih imajo učenci in s tem povezani ceni hitre mode. Analiza ankete, ki smo jo izvedli med osmošolci, bo osnova za kasnejšo delavnico, ogled filma ter spodbujanju razmišljanja ob dnevu rabljenih oblačil. Učenci bodo tako dobili večji vpogled v globalno onesnaževanje okolja ter pravični trgovini.

KLJUČNE BESEDE: okoljevarstvene vsebine na šoli, ekološke vsebine v našem predmetniku, cena hitre mode

FAST FASHION IN OUR CLASS

ABSTRACT

Based on many years of experience, our elementary school also chooses environmental protection topics every year, which have proven to be best practices over the years. This means that students internalize them, as teachers use them to successfully influence students' thinking and behavioral patterns.

The goal is for young people to formulate and implement ideas in the school, local and wider environment with proactive thinking. One of the main goals is to strengthen (self) respect, (self)confidence and responsibility towards oneself, others and the environment.

Students are the best at separating waste, because they have grown up with an eco-thinking about separating waste, both at home and at school, and their work is already automated. Most children think about the "eco way" from kindergarten and, of course, with the example of their family.

We successfully connect ecological contents with most of the existing curriculum. In art classes and technology classes, students create their works using waste materials, which they reuse. In mathematics, known data obtained by the school from the collection campaign of paper, plastic bottle caps, and toothbrushes are used. During the music lesson this school year, a musical instrument was made from waste glass bottles, and the students also used it in the school performance. Data is also obtained in the school kitchen, what is the amount of biological waste generated when eating in the school premises, water and electricity consumption. This is how ecological topics are treated in all other subjects, because today we can no longer avoid them.

This year, we also envisioned a place where students can borrow toys, especially boardgames and books from other students. This corner also collects books and toys that students bring from home and do not need anymore.

In the upper classes, this year's theme of ecology is the price of fashionable clothing, the number of clothes and the price of fast fashion. For this purpose, we held a workshop among students and carried out a survey.

KEY WORDS: environmental protection contents at school, ecological contents in our curriculum, the price of fast fashion

DIJAKI KOT AKTIVNI DRŽAVLJANI O ZELENI PRIHODNOSTI IN BOJU PROTI PODNEBNIM SPREMENBAM

POVZETEK

V zavedanju, da je potrebno nekaj korenito spremeniti v načinu našega življenja, če hočemo naš planet ohraniti za prihodnje generacije, učitelj dijaka vse prevečkrat postavlja v vlogo pasivnega prejemnika informacij. Ko se obravnavajo tako pomembne teme, kot je varovanje okolja in prihodnost človeka na Zemlji, učitelji in mediji neprestano podajajo opozorila, navodila in dijake pripravljajo do tega, da se vedejo okolju prijazno, vendar vse prevečkrat mladi pri tem igrajo le vlogo pasivnega poslušalca in izvrševalca zahtev. Da bi dijaki prepoznali pomen aktivnega državljanstva v boju proti podnebnim spremembam, sem vpeljala izkustveno učenje, ki daje dijaku možnost za lasten angažma, izražanje, razmišljanje, komentiranje in podajanje mnenj in idej, kjer dijaki izražajo svojo aktivno vlogo.

Dijaki so s pomočjo podanega gradiva in spletnih strani pojasnjevali neznane termine, ki se v zadnjem času pojavljajo v povezavi s podnebjem. V okviru razprav »Če bi jaz odločal o zeleni prihodnosti in boju proti podnebnim spremembam, bi ...« so oblikovali svoje ideje in jih predstavili evropskim poslancem in strokovnjakom.

Dijaki so se spopadli tudi z zelenim izzivom in v obliki svetovne kavarne razmišljali, kako lahko razred ali šola prispevata k zmanjšanju ogljičnega odtisa šole in s tem k oblikovanju bolj zelene Evrope. Predloge so predstavili dijaški skupnosti in vodstvu šole.

Dijaki na način izkustvenega učenja dobijo vpogled v delovanje EU na področju podnebnih sprememb.

Na podlagi izbranih aktivnosti dijaki, prepoznajo pomen aktivnega državljanstva in možne načine aktivne participacije na ravni dijaške skupnosti in države. Vlogo aktivnih državljanov izvajajo s predstavitvijo in argumentacijo idej in načrtovanjem konkretnih podnebnih akcij v šolskem okolju.

KLJUČNE BESEDE: aktivno državljanstvo, evropski zeleni dogovor, podnebno nevtralna družba, ogljični odtis.

STUDENTS AS ACTIVE CITIZENS ABOUT A GREEN FUTURE AND THE FIGHT AGAINST CLIMATE CHANGE

ABSTRACT

In the awareness that it is necessary to change something radically in the way we live, if we want to preserve our planet for future generations, teachers all too often place the student in the role of a passive recipient of information. When such important topics as the protection of the environment and the future of man on Earth are discussed, both teachers and the media constantly give warnings, instructions and try to prepare students to behave in an environmentally friendly way, but all too often I notice that young people only play the role of a passive listener and executor of requests. That is why I introduced experiential learning, which gives students the opportunity for their own engagement, expression, thinking, commenting and giving opinions and ideas, where students express their active role.

With the help of the given material and websites, the students explained unfamiliar terms that have recently appeared in connection with the climate. In the framework of the discussions "If I were to decide on a green future and the fight against climate change, I would...", they formulated their ideas and presented them to MEPs and experts.

The students also tackled the green challenge and, in the form of a global cafe, thought about how a class or school can contribute to reducing the school's carbon footprint and thereby creating a greener Europe. The proposals were

presented to the student community and the school management. Through experiential learning, students get an insight into the activities of the EU in the field of climate change.

Based on the selected activities, students recognize the importance of active citizenship and possible ways of active participation at the level of the student community and the country. They play the role of active citizens by presenting and arguing ideas and planning concrete climate actions in the school environment.

KEY WORDS: active citizenship, European Green Deal, climate neutral society, carbon footprint.

OKOLJSKA VZGOJA V PROGRAMU OSNOVNA ŠOLA ZA ODRASLE

POVZETEK

V prispevku je predstavljen pouk izbirnega predmeta okoljska vzgoja v javno veljavnem programu osnovna šola za odrasle, ki se izvaja na Ljudski univerzi Murska Sobota. Pri predmetu preko medpredmetnega povezovanja in povezovanja z lokalnim okoljem izvajamo različne aktivnosti, ki usmerjajo udeležence v trajnostno naravnano odnos do okolja. V osnovno šolo za odrasle se vključujejo pretežno ranljive ciljne skupine (Romi, osipniki, brezposelne osebe, priseljenci), zato delo zahteva empatičen in fleksibilen pristop. Prilagoditi je potrebno načrtovanje in izvedbo izobraževalnih vsebin. S prispevkom želim predstaviti primer dobre prakse, ki dokazuje, da lahko udeležencem iz ranljivih skupin približamo pouk okoljske vzgoje na izkustven in vseživljenjski način. Le-ti spoznajo, da lahko z odgovornim ravnanjem vplivajo na ohranjanje naravne in kulturne dediščine ter trajnostno prihodnosti. S praktičnim prikazom in aktivnostjo pletenja iz slame spoznajo način življenja nekoč in ga primerjajo z današnjim. Udeleženci kritično presojujejo posledice človekovega posega v okolje in njegov vpliv na proizvodnjo hrane. Vzбудimo njihovo zavest varstva okolja, ki ga prenašajo tudi v svoje vsakdanje življenje in družinsko okolje. Istočasno pa je predstavljen primer izvedbe učnih vsebin lahko spodbuda in pomoč učiteljem pri izvedbi pedagoškega procesa.

KLJUČNE BESEDE: ljudska univerza, osnovna šola za odrasle, izbirni predmet

ENVIRONMENTAL EDUCATION IN THE PROGRAM OF PRIMERY SCHOOL FOR ADULTS

ABSTRACT

The contribution presents the teaching of the optional subject environmental education in publicly valid formal program of primary school for adults, which is implemented at the University for adults Murska Sobota. With the subject through cross curricular linking and linking with local environment we carry out various activities that guide the participants into a sustainability oriented attitude towards the environment. Primary school for adults mainly includes vulnerable target groups (Roma, dropouts, unemployed people, immigrants), so the work requires empathetic and flexible approach. Planning and implementation need to be adjusted educational content. With this article I would like to present an example of good practice which shows that one can draw nearer the lessons of environmental education to vulnerable groups in an experiential and lifelong way. They find out that acting responsibly can have an impact on the preserving of natural and cultural inheritance, as well as on the sustainable future. With a practical demonstration and activity of straw knitting they get to know the way of life in the past and compare it with today's life. The participants critically estimate the consequences of human intervention on the environment and its impact on food production. We raise their awareness of environmental protection which they also transfer to their everyday life and family environment. At the same time, the presented example of the implementation of learning content can encourage and help teachers by the implementation of the pedagogical process.

KEYWORDS: university for adult education, primary school for adults, optional subject

KAKO PREDSTAVITI ODNOS MED EKOLOŠKIMI IN TRENUTNIMI DRUŽBENIMI PROBLEMI

POVZETEK

V strokovnem prispevku se bomo osredotočili na odnos in povezavo med škodo, ki jo povzročamo naravi in aktualnimi družbenimi problemi, ki izhajajo iz škode, ki jo človek povzroča okolju. Namen je, da učenci skozi avtentične tekste na spletu ter v učbeniku spoznajo prepletenost med dvema pojmom in se zavedajo kako uničevanje življenjskega okolja, klimatske spremembe, onesnaženje naravnega okolja vplivajo na kvaliteto življenja. Človek je zaradi okoljevarstvenih problemov v družbi ogrožen, njegovo življenje se spremeni saj mu pretijo nevarnosti, revščina, izguba službe, izguba doma, ki vplivajo na kvaliteto življenja. Kako se torej odražajo okoljevarstveni problemi po svetu in kakšne posledice imajo za človeka? S pomočjo nalog esejskega tipa, verižnih stavkov kjer omenimo problem in iščemo rešitve, pridemo do posledic, ki so za družbo škodljive. Izpostavimo primer potaplajočih se otokov in klimatskih beguncev, vpliv na ekonomijo in s pomočjo aktualnih tekstov in posnetkov pokažemo kako resna je situacija, v kateri se je znašel človek. Osredotočimo se na problem- vzrok- posledice- rešitve. To metodo dela lahko uporabimo za izboljševanje različnih slovničnih struktur ob različnih tekstih bodisi naravoslovnih ali družboslovnih. Dosežek takšnega dela je, da o tej temi začnejo razmišljati širše in imajo uvid v to kako se okoljevarstveni problemi odražajo v globalnih družbenih problemih pogosto v najbolj ranljivih delih sveta.

KLJUČNE BESEDE: ekologija, družbeni problemi, posledice, vpliv, zavedanje

HOW TO PRESENT THE RELATIONSHIP BETWEEN ECOLOGICAL AND CURRENT SOCIAL ISSUES

ABSTRACT

In this professional article we will focus on the relationship between the harm inflicted on nature and current social issues resulting from the damage inflicted on the environment. The purpose is that the students become aware through authentic texts online and their student's books how destroying habitats, climate change and pollution of natural environment are intertwined and how ecological issues affect the quality of our lives. How are environmental issues reflected and what are the consequences for human beings? People's lives are threatened by environmental issues leading to poverty, unemployment or loss of home. Through essays stating the problem and finding solutions or chain sentences where the problem is stated, we find the consequences harmful for our society. We point out the sinking islands, climate refugees, effects on country's economy and by reading most recent news and texts or watching footages try to emphasize the gravity of the situation. We concentrate on the problem-cause-consequence-solutions. Such method can be also applied to enhance grammatical structures through other types of texts, both scientific or sociological. The achievement of such work is that the students have a broader perspective on the topic and have an insight of how the consequences of environmental issues on global social problems are mostly found in the most vulnerable parts of the world.

KEY WORDS: ecology, social issues, consequences, impact, awareness

EKOLOGIJA PRI PREDMETU ŠPORT – Z GIBANJEM OČISTIMO LOKALNO OKOLJE IN OZAVESTIMO OKOLJSKO VZGOJO

POVZETEK

Ljudje vsako leto proizvedemo več odpadkov ter na različne načine onesnažujemo okolje. Emisije toplogrednih plinov so se od predindustrijske dobe povečale predvsem zaradi gospodarske rasti in rasti prebivalstva ter so sedaj višje kot kadar koli prej. Naftna, premogovna in plinska podjetja s svojimi produkti povzročajo tretjino svetovnih toplogrednih emisij. Seveda pa niso odgovorni samo ti največji onesnaževalci zraka in okolja, soodgovorni smo vsi uporabniki, ki poganjamo povečanje ogljičnega odtisa. Ljudje sami in naši napredni okoljevarstveni ukrepi smo rešitev za zmanjšanje onesnaževanja okolja na vseh ravneh. Ozaveščanje na temo ekologije se naj prične že v predšolski vzgoji in se implementira skozi vzgojno-izobraževalni program osnovnih in srednjih šol. Učenci naj bodo proaktivni s svojimi dejanji, zato je namen prispevka poiskati vsebinska in praktična povezovanje športa ter ekologije. Cilj je skozi okoljsko vzgojo, ki jo posredujejo njihovi učitelji, vzgojno-izobraževalna ustanova ter lokalno okolje, pridobiti še več znanja. Eden izmed ciljev je tudi ozaveščanje učencev o konkretni okoljevarstveni problematiki ter z različnimi tekmovalnimi aktivnostmi sodelovati pri čiščenju lokalnega okolja in spoznavanju največjih okoljskih onesnaževalcev. Ob tem, ko se izobražujejo, pa tudi z lastnimi idejnimi rešitvami ozaveščajo svoje vrstnike o pomenu trajnostnih rešitev za zmanjšanje onesnaževanja na vseh ravneh. Glavna ugotovitev prispevka je ta, da otroci skozi razne gibalne aktivnosti z večjo motivacijo in zanimanjem pridobivajo znanje, vrednote in zavedanje glede skrbi za okolje. Pozitiven odnos do okolja in ozaveščenost posameznika na dolgi rok vplivata na zmanjšanje onesnaževanja okolja in iskanje ekoloških rešitev za bolj čist planet.

KLJUČNE BESEDE: ekologija, gibanje, okolje, onesnaževanje, ozaveščanje, sodelovanje, šport, tekmovanje, vzgoja

ECOLOGY IN THE SUBJECT OF SPORT - USING MOVEMENT TO CLEAN UP THE LOCAL ENVIRONMENT AND RAISE AWARENESS OF ENVIRONMENTAL EDUCATION

ABSTRACT

People produce more waste every year and pollute the environment in different ways. Greenhouse gas emissions have increased since pre-industrial times mainly due to economic and population growth and are now higher than ever before. Oil, coal and gas companies use their products to account for a third of the world's greenhouse emissions. Of course, it is not only these major emitters of the air and environment that are responsible, we are all the users who are driving the increase in the carbon footprint. The people themselves and our advanced environmental measures are a solution to reduce environmental pollution at all levels. The people themselves and our advanced environmental measures are a solution to reduce environmental pollution at all levels. Awareness-raising on the topic of ecology should start in early childhood education and be implemented through the education programme of primary and secondary schools. Students should be proactive with their actions, so the purpose of the paper is to find the substantive and practical integration of sport and ecology. The aim is to gain even more knowledge through environmental education provided by their teachers, educational institution and local environment. One of the objectives is also to raise awareness among pupils about concrete environmental issues and to engage with various competitive activities in cleaning up the local environment and learning about the greatest environmental polluters. While educating, as well as through their own conceptual solutions, they raise awareness among their peers about the importance of sustainable solutions to reduce pollution at all levels. The main finding of the contribution is that children gain knowledge, values and awareness of environmental care

through various physical activities with greater motivation and interest. Positive attitudes towards the environment and individual awareness in the long run have an impact on reducing environmental pollution and finding ecological solutions for a cleaner planet.

KEY WORDS: awareness, cooperation, competition ecology, education, environment, movement, pollution, sport,

VPLIV POUKA GEOGRAFIJE NA VSAKODNEVNO IZBIRO PREHRANE

POVZETEK

Ozaveščeni potrošniki imajo moč zmanjševati povpraševanje po hrani, ki je sporna z ekološkega vidika, povzroča socialne konflikte ali zahteva dolg transport. Povpraševanje po avokadu, mandljih in indijskih oreščkih kljub zgoraj naštetim težavam narašča tudi zato, ker kupci niso dovolj seznanjeni z okoliščinami pridelave. Zanimalo nas je, kako pouk regionalne geografije, pri katerem so predstavljeni sporni načini pridelave in poudarjen velik ekološki odtis avokada, mandljev in indijskih oreščkov, vpliva na odnos učencev do nakupa in uživanja te hrane. Z anketo smo ugotovili, da učenci osmega razreda srednje dobro prepoznavajo hrano z velikim ogljičnim odtisom, zelo slabo pa poznajo socialnih konflikte, povezane s pridelavo navedenih vrst hrane. Kasneje so učenci pri pouku spoznavali pridelavo avokada, mandljev in indijskih oreščkov, pripravili plakate in vrstnike seznanjali s svojimi ugotovitvami. Z metodo strukturiranega intervjuja, ki smo ga izvedli en mesec kasneje, smo ugotovili, da so nastale razlike v znanju in pripravljenosti učencev za nakup določenih vrst hrane. Ugotavljamo tudi, da učenci po izvedenih urah bolje prepoznavajo izbrane vrste hrane, redkeje jo jedo in celo čutijo do nje odpor. Najbolj zavzeti so celo ugotavljali, s katerimi vrstami hrane bi lahko nadomestili npr. avokado.

KLJUČNE BESEDE: geografija, izbira hrane, avokado.

INFLUENCE OF GEOGRAPHY LESSONS ON CHOOSING DAILY DIETE

ABSTRACT

Informed consumers have the ability and the power to reduce the demand for food which is controversial from an ecological point of view, causes social conflicts or demands long transportation. Despite all these problems, the demand for avocados, cashews and almonds is increasing. The reason is also because the buyers are not familiar with the processing methods. We were interested in the influence of regional geography lessons, where all these controversial processing methods and big ecological footprint of avocados, cashews and almonds are introduced, on students' attitude towards buying and eating this food. Using the survey among eight graders we found out that the recognition of the food with the large carbon footprint is medium good and social conflicts connecting with the production of mentioned food are not well-known between them. Later, the students learned about the production of avocados, cashews and almonds, prepared the posters and informed the peers with their findings. With the method of the structured interview, performed a month later, we found out that there are some differences in students' knowledge and willingness to buy a certain type of food.

We also note, that the students' recognition of selected type of food is better, they eat it less often or even feel the resistance to it. The most engaged even noted, which type of food could replace for example, avocado.

KEYWORDS: geography, food choices, avocado.

SLIŠATI IN POSLUŠATI PTICE V DOMAČEM OKOLJU

POVZETEK

Skozi različne delavnice smo skupaj z otroki spoznavali naravne zvoke, in sicer tako, da smo odšli v naravni park Jovsi in v gozd. Tu smo poslušali predvsem oglašanje ptic in se tudi sami preverili v tem s pihanjem na ptičje piščali. Nato smo to znanje podkrepili še s teorijo, igranjem igre, ki smo jo sami naredili, risanjem, izdelovanjem ptic. Delo je potekalo predvsem po skupinah, tako da so si otroci lahko med seboj izmenjevali različna mnenja in se pri tem tudi veliko novega naučili. Ugotovila sem, da takšen način dela pozitivno pripomore h kritičnemu razmišljanju otrok in k lažjemu pomnjenju snovi, zato se bomo takšnih strategij učenja posluževali tudi v prihodnje. Pomembno je tudi, da so otroci ugotovili, da če tiho in pozorno poslušamo, slišimo tudi tiste zvoke, ki jih sicer ne oz. se nam zdijo samoumevni. Prav tako smo pri tem uporabili različne tehnike, na primer igranje na ptičje piščali, s pomočjo katerih so otroci lahko sami preizkusili oglašanje ptic. Ob vsem tem pa smo ozaveščali tudi dragocen pomen narave in se naučili, da jo je treba spoštovati.

KLJUČNE BESEDE: zvoki narave, skrb za naravo, spoznavanje ptic, naravni park Jovsi, ptičje piščali

HEAR AND LISTEN THE BIRDS IN LOCAL ENVIRONMENT

ABSTRACT

Working within various workshops, we learned about the natural sounds while exploring the National Park Jovsi and the forest. The children were focused mainly on the bird's sounds, and they checked out themselves in blowing on a bird whistle. To substantiate the knowledge, we continued with the theory, playing the game, that we made by ourselves, drawing, making bird sculptures. The work was mainly done in groups, so the children could exchange different opinions, and learn from each other. I found out that such way of learning positively helps in critical thinking of children and they can also remember the topic easier, so we are also going to use that strategies of learning in the future. It is also important that the children found out that we hear various sounds, which are maybe for us self-evident, only if we listen carefully. In doing so we used also different ways, for example a playing on bird whistle to find out how the birds sing. We also made awareness how important is nature and that we should to appreciate it.

KEY WORDS: natural sounds, care for nature, research of birds, natural park Jovsi, birds whistle

STALIŠČA DIJAKOV 2. IN 4. LETNIKA SREDNJEGA STROKOVNEGA IZOBRAŽEVANJA O KROŽNEM GOSPODARSTVU

POVZETEK

Dijaki srednjega strokovnega izobraževanja se v procesu 4-letnega usposabljanja srečajo z različnimi predmeti, katerih vsebine razvijajo njihov odnos do okolja. Pridobivajo znanja, povezana z razumevanjem vpliva proizvodnje in potrošnje na izrabo naravnih virov in na okolje. V naravi, ki je živ sistem, ima vse svojo vlogo. V naravnem procesu ni odpadka brez smisla. Za razliko od še vedno prisotnega linearnega gospodarstva, lahko s krožnim gospodarstvom zmanjšujemo količino odpadkov in potrebo po vedno novih naravnih virih. V prispevku smo z anketno metodologijo ocenili seznanjenost in stališča dijakov 2. in 4. letnika srednjega strokovnega izobraževanja s krožnim gospodarstvom. Tako dijaki 2. letnika kot dijaki 4. letnika so večinoma pokazali pozitiven odnos do krožnega gospodarstva, čeprav je pri nekaterih vprašanjih četrtna ali celo tretjina dijakov menila, da predlagani ukrepi za krepitev krožnega gospodarstva niso potrebni. Večinoma so seznanjeni z razlogi, zakaj je pomembno spodbujati krožno gospodarstvo. Pri vprašanjih, povezanih z razumevanjem pomena osebne angažiranosti, so dijaki višjega letnika v večjem deležu pokazali pripravljenost sodelovati pri ukrepih za zagotavljanje krožnega gospodarstva. Ugotovitve ankete lahko nudijo učiteljem pomoč pri dajanju usmerjenih poudarkov posameznim temam, ki so sicer del kurikuluma, za doseganje boljšega razumevanja tematike že v nižjih letnikih.

KLJUČNE BESEDE: anketa, mnenje dijakov, SSI, trajnostni razvoj

VIEWS OF STUDENTS IN THE 2ND AND 4TH YEAR OF TECHNICAL SECONDARY EDUCATION ON THE CIRCULAR ECONOMY

ABSTRACT

During the 4-year training process, students of technical secondary education encounter various subjects, the contents of which develop their relationship to the environment. They acquire knowledge related to understanding the impact of production and consumption on the use of natural resources and the environment. In nature, which is a living system, everything has its role. In the natural process there is no waste without meaning. Unlike the still present linear economy, with a circular economy we can reduce the amount of waste and the need for ever new natural resources. In this paper, we used survey methodology to assess the familiarity and attitudes of 2nd and 4th year technical secondary education students with the circular economy. Both 2nd year and 4th year students mostly showed a positive attitude towards the circular economy, although in some questions a quarter or even a third of the students thought that the proposed measures to strengthen the circular economy were not necessary. They are mostly familiar with the reasons why it is important to promote the circular economy. When it comes to questions related to understanding the importance of personal engagement, a higher percentage of students in the senior year showed a willingness to participate in measures to ensure a circular economy. The findings of the survey can provide teachers with help in giving targeted emphasis to individual topics that are otherwise part of the curriculum, in order to achieve a better understanding of the topic already in the lower grades.

KEY WORDS: survey, students' opinion, technical secondary education, sustainable development

ZMANJŠANJE HRUPA S POMOČJO OBLIKOVANJA PROSTOROV V ŠOLAH

POVZETEK

Mnogo osnovnih šol v Sloveniji se sooča s hrupom v notranjosti šole, kar vpliva na zdravje učencev in učiteljev. Obiskala sem različne šole v tujini, kjer so šolski prostori odprti, z manjšimi prostori in s kotički, opremljeni v domačem stilu in v »tihem hrupu«, kar razumemo, da je to stanje med glasnostjo in tišino. Vse to primerjam s slovenskimi šolami, kjer se prehaja iz razreda v razred, kjer se mnoge šole bojujejo z neznosnim hrupom. Skozi leta sem postala pozorna na okolje in kako se odzivajo učenci. Prišla sem do sklepa, da je okolje tihi kurikulum in da prostor nezavedno prispeva k aktivnosti vseh v šoli. Zato je bil moj cilj raziskati, ali dobro oblikovan prostor prispeva k zmanjšanju hrupa glede na aktivnost, ki jo omogoča in ponuja. Cilj je bil tudi ugotoviti, kako bi lahko prostore slovenskih šol spremenili v bolj oblikovane prostore, ki bi bili prilagojeni učenčevim potrebam in ustrežnejši za učenje v današnjem času, saj verjamem, da bi se hrup zmanjšal. Pri tem raziščem, na kaj je potrebno pri načrtovanju paziti, da bodo prostori narejeni po željah in potrebah šole ter uporabni.

Ključne besede: hrup, šolski notranji prostori, zdravje, načrtovanje in oblikovanje prostorov

REDUCING NOISE THROUGH THE DESIGN OF SPACES IN SCHOOLS

ABSTRACT

Many primary schools in Slovenia suffer noise pollution inside the school building, which affects the health of both students and teachers. The author has visited various schools abroad, where school buildings are open spaces, with smaller rooms and corners furnished in a homely style, and with "quiet noise", which is understood as a state between loudness and quietness. The author then compares this to Slovenian schools, where students move from classroom to classroom between individual classes, and many schools consequently struggle with unbearable noise. The author's years of experience as a school teacher have made her sensitive to such environment and students' reactions. Her conclusion is that the environment acts as a silent curriculum and that space unconsciously contributes to everyone's activities at school. Her objective therefore was to investigate whether a well-designed space contributed to noise reduction in relation to activities it facilitates and offers. Her aim was also to find out how Slovenian school buildings could be transformed into better designed spaces tailored to the needs of students and more suitable for learning in today's times, which in the author's opinion would help reduce the noise. She therefore explores what factors need to be taken into account in the design process to ensure that school premises are tailored to a school's needs and wishes and are usable.

Key words: noise, school interior, health, planning and designing of premises

NOVI PRISTOPI K UČENJU ZA LEPŠI JUTRI

POVZETEK

Izobraževanje za trajnost bo moralo zaradi podnebnih in okoljskih razmer, ki smo jim priča, postati prednostno področje, na katerega se bodo osredotočale šole. V prispevku predstavim dejavnosti, ki podpirajo poučevanje in učenje o okolju in trajnostnem razvoju in smo jih v okviru večletnega projekta izvajali na OŠ Davorina Jenka Cerklje na Gorenjskem. Projekt je bil sofinanciran s strani Evropske unije.

S projektom smo želeli izboljšati odnos in uporabo dobrin, bolje »prodajati« učno snov, znanje in kompetence ter za tak način dela navdušiti več učiteljev. Želeli smo izboljšati ozaveščenost o trajnostnem razvoju, se naučiti strategij za zmanjšanje presežkov dobrin v šoli kot doma, navajati na zeleno gospodarstvo, delo v naravi, recikliranje, spreminjati potrošniške in prehranjevalne navade in s tem vplivati na količino zavržene hrane, plastike in drugih dobrin ter boljšo socialno vključenost. Naš cilj je bil izboljšati didaktične pristope, učne oblike in orodja ter motivacijske tehnike za večjo aktivnost učencev, kakovostnejše in trajnejše znanje. Vpeljali smo nove učne metode, projektno in izkustveno učenje, igrifikacijo, računalniško mišljenje, raziskovalno delo, učenje izven učilnice ...). Spoznali smo orodja za boljšo implementacijo trajnostnih vsebin v kurikulum in jih zbrali na spletni strani projekta.

KLJUČNE BESEDE: aktivne učne oblike, trajnostni razvoj, osnovnošolsko izobraževanje

NEW LEARNING APPROACHES FOR A BETTER TOMORROW

ABSTRACT

Due to the climate and environmental conditions, we are witnessing, education for sustainability will have to become a priority area for schools to focus on. In this article, I present the activities that support teaching and learning about the environment and sustainable development, which were carried out as part of a multi-year project at Elementary school Davorin Jenko Cerklje na Gorenjskem. The project was co-financed by the European Union. With the project, we wanted to improve the attitude towards goods and the use of goods, in a better way "deliver" learning material, knowledge, and competencies, and to inspire more teachers to work in this way. We wanted to improve awareness of sustainable development, learn strategies to reduce excess goods at school and at home, introduce the green economy, work in nature, recycle, change consumption and eating habits, and thereby influence the amount of wasted food, plastic, and other goods, and better social involvement. Our goal was to improve didactic approaches, learning forms, and tools, as well as motivational techniques for greater student activity, better quality, and more lasting knowledge. We introduced new teaching methods, project-based and experiential learning, gamification, computational thinking, research work, and learning outside the classroom...). We learned about tools for better implementation of sustainable content in the curriculum and collected them on the project's website.

KEYWORDS: active forms of learning, sustainable development, primary school education

TEMATSKA UČNA POT – SPOZNAJMO OPRAŠEVALCE

POVZETEK

Na Osnovni šoli Tržič izvajamo projekt Okolju prijazna šola, v okviru katerega smo vključili temo Spoznajmo oprasovalce. Cilji projekta so bili spoznavanje različnih oprasovalcev, ki živijo v naših ekosistemih, seznanjanje s pomenom oprasovanja za ohranjanje biotske raznolikosti in naravnega ravnovesja ter zavedanje, da je oprasovanje v naravi zelo pomemben proces, od katerega imajo korist vsa živa bitja. Z željo pripraviti dan aktiven, zanimiv in poučen smo ob koncu projekta za učence od 1. do 5. razreda pripravili različne delavnice in učno pot. Učenci so se v manjših skupinah, ob spremstvu učiteljev, podali na pot po bližnjih gozdovih in travnikih. Na učni poti sta jih kot maskoti vodila čebela in metulj. V nalogah sta jim pomagala prepoznati in poimenovati oprasovalce, prepoznavati različne rastline in cvetove, učenci so odkrivali, kako oprasovalci srkajo medičino in prenašajo cvetni prah, kako poteka razvoj in rast rastlin, s čutili so prepoznavali vonje in okuse v naravi, spoznali nevarnosti onesnaževanja za oprasovalce in se preizkusili v gibalnih spretnostih na gozdnem poligonu ter v likovnem poustvarjanju na travniku ali v delavnici z glasbenimi rimami. Naloge so bile diferencirane in prilagojene njihovi starosti, sposobnostim, predvsem pa je bilo poudarjeno aktivno učenje in gibanje. Navdušenje učencev in učiteljev ob koncu projekta je bilo zelo veliko. Učenci so z aktivnim delom, z izkušnjijskim učenjem ter ob stiku z naravo začutili in spoznali, kako pomembna so ta drobna bitja za naše življenje in obstoj.

KLJUČNE BESEDE: oprasovalci, tematska učna pot, aktivno učenje

THEMATIC LEARNING TRAIL – LET'S GET TO KNOW POLLINATORS

SUMMARY

At Tržič Elementary School we are involved in a school project called the Environmentally Friendly School. One of the recent topics of the project was Let's Get to Know Pollinators. Our goals were to teach the pupils about the pollinators which are present in our ecosystem, to make pupils aware of the importance of pollination in preserving biodiversity and natural balance, and to understand pollination as a very important process in nature that benefits all the living things. At the end of the project, we prepared an active, interesting and educational day for pupils from 1st to 5th grade. The day included various workshops as well as a thematic learning trail. Small groups of pupils, accompanied by their teachers, set off for a walk through the nearby forests and meadows. The learning trail was marked with a bee and a butterfly logo. In various tasks pupils identified and named pollinators, identified different plants and flowers, discovered how pollinators sip honey and carry pollen, how plants develop and grow, used their senses to identify smells and tastes in nature, learnt about dangers of pollution, tried out their movement skills in the forest polygon, created art sitting in the middle of the meadow and used rhymes in music. The tasks were adapted to their age and abilities, and above all, active learning and movement were emphasized. The enthusiasm of the pupils and teachers at the end of the day was beyond expectations. With the help of active, experimental learning in touch with nature, pupils recognized the importance of pollinators for our life and existence.

KEY WORDS: pollinators, thematic learning trail, active learning

SPREMINJANJE VSAKODNEVNIH NAVAD UČENCEV Z NAMENOM ZMANJŠEVANJA KOLIČINE ODPADKOV

POVZETEK

V luči intenzivnega vplivanja človeka na okolje v zadnjih letih in pospešenega odzivanja okolja na človekovo dejavnost smo pri pouku tehnike in tehnologije izvedli projektno učno delo, s katerim smo ugotavljali, kako lahko s spremembo vsakodnevnih navad zmanjšamo količino odpadkov. Pri pripravi prispevka smo sledili namenu intenzivnejšega osveščanja učencev o problemih, povezanih s trajnostnim razvojem. Naši cilji so bili predstaviti problematiko količine odpadkov na teoretični ravni ter z aktivnimi oblikami in metodami dela doseči transfer v obliki intenzivnega kritičnega razmišljanja in konkretizacije načrtov za dejanske spremembe na personalnem nivoju. Ključni rezultati našega prispevka so bili: izdelano inovativno didaktično gradivo za izvedbo učne enote, razstava izdelkov učencev v šolski avli, objava rezultatov projektne dela na spletni strani in s tem zasnova mehanizma za razvijanje motivacije deležnikov (ostali učenci, učitelji, starši,...) za trajnostno delovanje v družbi. Ugotovili smo, da lahko z aktivnimi učnimi metodami pri pouku tehnike in tehnologije zelo hitro dosežemo, da učenci problematiko ponotranjijo in poiščejo konkretne predloge za reševanje, ki vodijo k spreminjanju vsakodnevnih navad v smeri zmanjševanja količine odpadkov.

KLJUČNE BESEDE: ekologija, odpadki, tehnika in tehnologija, kritično razmišljanje, navade

CHANGING THE DAILY HABITS OF STUDENTS TO REDUCE THE AMOUNT OF WASTE

ABSTRACT

In the light of the intense influence of man on the environment in recent years and the accelerated response of the environment to human activity, we carried out a project-based learning work in the technique and technology classes, with which we determined how we can reduce the amount of waste by changing our daily habits. When preparing the contribution, we followed the aim of making students more aware of the problems related to sustainable development. Our goals were to present the problem of the amount of waste on a theoretical level and, with active forms and methods of work, to achieve transfer in the form of intensive critical thinking and concretization of plans for actual changes on a personal level. The key results of our contribution were: the creation of innovative didactic material for the implementation of the learning unit, the exhibition of students' products in the school hall, the publication of the results of the project work on the website and thus the design of a mechanism for developing the motivation of stakeholders (other students, teachers, parents,...) for sustainable operation in society. We have found that with active learning methods in engineering and technology lessons, we can very quickly achieve that students internalize the problem and find concrete solutions for solving it, which lead to changing daily habits in the direction of reducing the amount of waste.

KEYWORDS: ecology, waste, technique and technology, critical thinking, habits

EKOLOŠKE VSEBINE IN PRAKTIČNI PRIMERI OSVEŠČANJA DIJAKOV PRI POUKU NEMŠČINE

POVZETEK

Namen prispevka je predstaviti obravnavo ekoloških vsebin pri pouku nemščine v okviru medpredmetnega povezovanja. Dijaki znanje iz različnih predmetov povežejo ter nadgradijo. Predstavljena je učna enota Okolje in podnebje iz učbenika Studio D B1 ter gradivo za osveščanje dijakov na področju podnebnih sprememb, vpliva posameznika na svet, v katerem bivamo. V povezavi z drugimi predmeti in s projektom Vzgoja in izobraževanje za trajnostni razvoj predstavljamo praktične primer ekoloških vsebin pri nemščini. Pričujoči prispevek opisuje interdisciplinarni pristop pri spoznavanju izrazoslovja v nemščini, ki se nanaša na koncept trajnostne mode in njegovo implementacijo v praksi.

KLJUČNE BESEDE: ekološke vsebine pri pouku nemščine, praktični primeri osveščanja dijakov, medpredmetno povezovanje, koncept trajnostne mode

ECOLOGICAL TOPIC AND PRACTICAL EXAMPLES OF AWARENESS-RAISING IN GERMAN LESSONS

ABSTRACT

The purpose of this paper is to present the dealing with ecological topics when teaching the German language in the context of cross-curricular integration. Students integrate and build on knowledge from different subjects. The teaching unit Environment and Climate from the Studio D B1 textbook and the awareness-raising material on the topic of climate change are presented as well as the impact of the students on the world we live in. In connection with other subjects and the Education for Sustainable Development project we also present practical examples of ecological content in German. This paper describes an interdisciplinary approach to learning German vocabulary related to the concept of sustainable fashion and its implementation in practice.

KEYWORDS: ecological topics in teaching German, practical examples of awareness-raising, cross-curricular integration, the concept of sustainable fashion

PRAKTIČNA UPORABA POSAMEZNIH NAPRAV IZ PRENOSNEGA SOLARNEGA KOVČKA

POVZETEK

Danes si težko predstavljamo življenje brez elektrike. V vsakdanjem življenju smo se navadili na uporabo raznolikih električnih naprav. Na šoli imamo laboratorij za električno energijo iz sonca. Pri meni učenci aktivno sodelujejo v delavnicah iz sestavljanja otočnih fotonapetostnih sistemov. Delavnice so glede varstva pri delu povsem varne zaradi kakovostne opreme. Opisal bom posamezne naprave iz prenosnega solarnega kovčka. Nato bom prikazal praktično vezavo posameznih naprav in enostavne električne meritve. Sončne module lahko vežemo zaporedno, vzporedno ali pa kombinirano. Učenci dobijo občutek, koliko sončne energije je treba vložiti, da dobimo na koncu pretvorjeno električno energijo. Nekateri izmed učencev bodo našli zaposlitev v industriji za solarno tehniko. Veliko ljudi prehaja na obnovljive vire, saj to ni dobro le za okolje, ampak tudi dolgoročno prihrani stroške.

Ključne besede: Električne naprave, prenosni solarni kovček, električne meritve, obnovljivi viri.

PRACTICAL USE OF INDIVIDUAL DEVICES FROM A PORTABLE SOLAR UNIT

ABSTRACT

It's hard to imagine life without electricity. In everyday life, we have become accustomed to the use of various electrical devices. We have a solar power lab at our school. In my class, students actively participate in workshops on the assembling island photovoltaic systems. Workshops are completely safe in terms of occupational safety due to quality equipment. I will describe the individual devices from the portable case for photovoltaics. Next, I will describe the practical connection of individual devices and simple electrical measurements. Solar modules can be tied in sequence, parallel or combined. Students get to know how much solar energy needs to be invested to get the electricity converted in the end. Some of the students will find employment in the solar technology industry. Many people switch to renewable sources, as this is not only good for the environment, but also saves costs in the long run.

Keywords: Electrical appliances, portable solar case, electrical measurements, renewable sources.

S PROJEKTI eTWINNING IN ERASMUS PLUS DO EKOLOŠKEGA OZAVEŠČANJA IN IZOBRAŽEVANJA UČENCEV NA OŠ APAČE

POVZETEK

V današnjem času se soočamo z vse večjimi okoljskimi problemi, kot so onesnaževanje in poseganje v naravo, zato je ozaveščanje mladih o tej problematiki ključnega pomena. Vnos vsebin z ekološko oz. okoljevarstveno tematiko v okviru učnega načrta in z izvajanjem trajnostnih aktivnosti je na Osnovni šoli Apače premajhen, zato se načrtno usmerjamo in aktivno sodelujemo v eTwinning in Erasmus plus projektih, s čimer uresničujemo dolgoročne cilje na tem področju. Ugotavljamo, da ima sodelovanje v tovrstnih projektih pozitiven vpliv na naše učence, saj so njihova življenja neposredno vpletena v izzive trajnostnega razvoja, da se naši učenci razvijajo v odgovorne državljane, ki jim je mar za okolje, svoje pridobljeno znanje pa prenašajo na starše in lokalno okolje. V prispevku je kot primer dobre prakse predstavljeno okoljsko izobraževanje v okviru eTwinning projekta Okolje in trajnostni razvoj pri predmetu nemščina, ki sem ga koordinirala od julija 2020 do decembra 2021. Učenci so pri pouku predlagali teme, ki so povezane z njihovim doživljanjem okoljske problematike ter z njihovim lokalnim oz. regionalnim okoljem, brali članke učencev iz drugih držav in le-te komentirali. Izkazalo se je, da so v projektu pridobili številne pozitivne izkušnje in bogato znanje, nadgradili svoje besedišče v nemščini, obenem so se pri posameznih aktivnostih medpredmetno povezovali ter razvijali ključne kompetence in veščine.

KLJUČNE BESEDE: okoljska problematika, trajnostni razvoj, eTwinning, Erasmus plus.

PROMOTING ECOLOGICAL AWARENESS AND EDUCATING STUDENTS THROUGH ETWINNING AND ERASMUS+ PROJECTS AT PRIMARY SCHOOL APAČE

ABSTRACT

In today's world, we are facing with increasingly serious environmental problems such as pollution and encroachment on nature, so raising awareness among young people about these issues is crucial. At Primary school Apače, the introduction of ecological and environmental content within the curriculum and the implementation of sustainable activities is insufficient, so we are deliberately directing our efforts and actively participating in eTwinning and Erasmus+ projects which help us achieve long-term goals in this area. Participating in such projects has a positive impact on our students, as their lives are directly involved in the challenges of sustainable development, and they develop into responsible citizens who care about the environment, and they pass on their acquired knowledge to their parents and the local community. As an example of good practice, this paper presents environmental education within the eTwinning project "Environment and Sustainable Development" in German class, which I coordinated from July 2020 to December 2021. The students suggested topics related to their experiences with environmental issues and their local or regional environment, read articles by students from other countries and commented on them. It turned out that the project provided them with many positive experiences and rich knowledge, they improved their vocabulary in German, and since certain activities involved cross-curricular integration, they developed key competencies and skills.

KEYWORDS: environmental issues, sustainable development, eTwinning, Erasmus+.

ČESAR VI NE POTREBUJETE, MI UPORABIMO – RECIKLIRANJE V VRTCU

POVZETEK

Narava v vsej svoji lepoti in razsežnosti je tudi uničljiva. Veliko predmetov ljudje zavržejo, ob tem pa pozabijo, da s tem škodijo okolju. Pomembno je, da že v predšolskem obdobju otroke vzgajamo, kako ravnati z odpadnim materialom. Otrokom lahko na različne načine približamo recikliranje in ponovno uporabo, hkrati pa delujemo ekološko in ohranjamo okolje. Cilj v tem obdobju strmi k temu, da se postavijo temelje moralnih in ekoloških stališč, hkrati pa se razvije interakcija otroka z naravo. Kot vzgojiteljica nenehno posegam po odpadnem materialu, ga zbiram, vključujem starše, okolico in podjetja. Iz starega nastane novo. Kot ekokoordinatorica v vrtcu v to tematiko ne vključujem le otrok, ampak tudi celoten kolektiv. S tem preko igre in z zanimivimi dejavnostmi lahko v predšolskem obdobju naredimo veliko za našo naravo in zelen planet. V prispevku so predstavljene različne dejavnosti okoljske vzgoje, ki so pomagale razviti kompetenten, skrben odnos do okolja in ljubezen do narave.

KLJUČNE BESEDE: recikliranje, odpadni material, predšolsko obdobje.

WHAT YOU DON'T USE, WE REUSE - RECYCLING IN THE KINDERGARTEN

ABSTRACT

Nature in all its beauty and reflections can also be destroyed. People, forgetting that they are harming the environment, throw many items away. It is important to teach children how to deal with waste material already in the pre-school period. We can introduce recycling and reuse to children in various ways, while at the same time acting ecologically and preserving the environment. The objective in this period is to establish the foundations of moral and ecological attitude, while also developing a child's interaction with nature. As an educator, I constantly reach for waste material, collect it, involve parents, the environment and companies. Out of the old comes the new. As an eco-coordinator in the kindergarten, I involve not only children in this topic, but also the entire team. Through play and animating activities, we can do a lot for our nature and green planet in the preschool period. The article presents various environmental education activities that have helped develop a competent, caring attitude towards the environment and a love for nature.

KEY WORDS: recycling, waste material, preschool period

RECIKLIRAJMO DANES ZA BOLJŠI JUTRI

POVZETEK

V našem okolju je vedno več odpadnega materiala, ki ga proizvajamo ljudje in ogroža naš planet. Z učenci drugega razreda podaljšanega bivanja smo se dogovorili, da ga bodo prinašali v šolo in ga bomo uporabili za različne izdelke. Izdelali smo eko koše za odpadni material. Pri recikliranju embalaže so si pomagali med seboj, se dogovarjali, sklepali kompromise in izmenjevali različne ideje. Učenci in starši so se preko dejavnosti zbiranja, ozaveščanja in recikliranja embalaže povezali kot skupnost, izboljšali so se medsebojni odnosi, starši so bolj sodelovali in skupaj z učitelji ozaveščali otroke o varovanju okolja. Izvedli smo anketo o porabi embalaže v enem tednu in ugotovili smo, da družine z več otroci porabijo več embalaže, kadar praznujejo rojstne dneve porabijo več jajčne embalaže, plastenk. To smo prikazali s plakatom. V enoletnem projektu v šoli smo naredili veliko uporabnih, dekorativnih predmetov in didaktičnih iger, kar so prenesli tudi na dom in nekateri starši imajo njihove uporabne izdelke tudi v službi. Izboljšala se je socialna klima v razredu, ekološka zavest učencev in staršev. Učenci so ustvarjalno preživljali prosti čas doma z manj igrice na telefonih.

KLJUČNE BESEDE: odpadni material, recikliranje, ustvarjalnost, medsebojni odnosi

LET'S RECYCLE TODAY FOR A BETTER TOMORROW

ABSTRACT

There is more and more waste material in our environment, which is produced by humans and threatens our planet. With the pupils of second grade we decided that they will bring the waste materials to school and that we will use it to make various products. We made eco bins for waste materials. When recycling the materials, pupils helped each other, planned, made compromises and exchanged different ideas. Pupils and parents connected as a community through the activities of collecting, raising awareness and recycling different packaging, mutual relations improved, parents cooperated more and, together with teachers, made children aware of environmental protection. We conducted a survey on the consumption of packaging in one week and we found that families with several children use more packaging, when they celebrate birthdays they use more egg packaging, bottles. We illustrated this with a poster. In a one-year project at school, we made many useful, decorative objects and didactic games, which were also transferred to the home, and some parents have their useful products at work as well. The social climate in the classroom improved, as did the ecological awareness of students and parents. Students spent their free time creatively at home and less playing games on their phones.

KEY WORDS: waste material, recycling, creativity, mutual relations

MEDPREDMETNA OKOLJSKA VZGOJA ŠESTOŠOLCEV

POVZETEK

Onesnaženost okolja predstavlja vedno večji problem. Kot ekošola smo se odločili, da je potrebno učence seznaniti in podučiti kako lahko sami pripomorejo k skrbi za okolje.

S šestošolci smo se lotili projekta in pripravili aktivnosti skozi katere bi učence seznanili in podučili o ravnanju z odpadki. Povezala sem se z učiteljicami nekaterih drugih predmetov ter se z njimi dogovorila o poteku aktivnosti. Učenci so pri pouku gospodinjstva najprej odgovorili na nekaj kratkih vprašanj o ravnanju z odpadki, z namenom, da smo se seznanili koliko dejansko vedo kako je potrebno z njimi pravilno ravnati. Izvedli smo tehniški dan s predavanjem na temo ločevanja odpadkov ter z obiskom Zbirnega centra ter Centra ponovne uporabe. Kasneje smo na šoli pri različnih predmetih pripravili naloge in delavnice kjer so poglobljali svoje znanje. Tako so se učenci v okviru različnih predmetov in dejavnosti naučili kako varovati naše okolje, kako ločevati odpadke in spoznali kako je za okolje pomembno ravnanje vsakega posameznika.

Ob koncu vseh aktivnosti so učenci z izdelki in idejami pokazali ogromno novo pridobljenega znanja ter okoljske ozaveščenosti, kar pa je bil tudi namen našega projekta. Spoznanja predstavljena v prispevku so torej pomembna tako za učence kot tudi za učitelje, da bodo v prihodnje v svoj pouk vključili okoljske vsebine in s tem doprinesli k okoljski ozaveščenosti otrok ter k razvijanju odgovornega odnosa do okolja.

KLJUČNE BESEDE: odpadki, okolje, ločevanje, recikliranje, medpredmetno povezovanje

CROSS-CURRICULAR ENVIRONMENTAL EDUCATION OF SIXTH GRADERS

ABSTRACT

Environmental pollution is a growing problem. As an eco-school we have decided that it is necessary to inform and teach students how they can help in taking care of the environment by themselves.

We started a project with the sixth graders and prepared activities through which we introduced and taught the students about dealing with waste. I connected with the teachers of some other subjects and agreed with them about the activities that will be involved in our project. Students answered a few short questions about waste management then we had a technical day with a lecture on the topic of waste separation. Later, at school, we prepared workshops by various subjects where they deepened their knowledge. They have learned how to protect our environment, how to separate waste and how the behavior of each individual is important for the environment. At the end of all the activities students with their products and ideas showed a huge amount of newly acquired knowledge and environmental awareness, which was also the purpose of our project. The findings presented in this paper are therefore important for both students and teachers who will include environmental content in their lessons in the future and contribute to the environmental awareness of children and to the development of their responsible attitude towards the environment.

KEY WORDS: waste, environment, separation, recycling, cross-curricular integration

UPORABA NARAVNIH MATERIALOV Z NAMENOM RAZVIJANJA OTROKOVIH SPRETNOSTI

POVZETEK

Na vseh ravneh izobraževanja se srečujemo z naravo, saj je človek od nekdaj povezan z njo. V prispevku je predstavljen gozd kot najbolj naraven del našega okolja in vpliv, ki ga ima na človeka. V dobi potrošništva ljudje pozabljamo na naravo in izgublamo prvinski stik z njo, vodilo našega ravnanja je podrejeno udobju, ob tem pa se premalo zavedamo okoljske problematike in našega doprinosa k odgovornemu ravnanju. Otroka materialne dobrine zadovoljijo zgolj za kratek čas, pozitivni občutki ob novih doživetjih in lastno ustvarjanje pa ga osebno obogatijo in spremljajo dlje časa. V osrednjem delu je predstavljenih nekaj idej in uporabnih izdelkov, ki jih lahko naredimo skupaj z otrokom. Ob tem se družimo in poglobljamo odnos, aktivno preživljamo čas z njim, vzpostavljamo dvosmerno komunikacijo, ga spodbujamo k poslušanju in opazovanju, ustvarjanju, sodelovanju in izmenjavi idej, razvijamo vzdržljivost, njegovo grobo motoriko in finomotorične spretnosti. Otrok bo spoznaval materiale na multisenzoren način in se osvestil okoljske problematike. Zdravje, zabava, uživanje, veselje, ustvarjalni dosežki, sožitje z naravo, lepota, moralna načela, novo znanje in izkušnje, nesebičnost ipd. so vrednote, ki bodo ob vsem tem zanj dobile globlji pomen.

KLJUČNE BESEDE: okoljska problematika, izkustveno učenje, vrednote, medosebni odnos

THE USE OF NATURAL METERIALS FOR DEVELOPING CHILDREN'S SKILLS

ABSTRACT

Nature is encountered at all levels of education, because humans have always been connected to it. The paper presents the forest as the most natural part of our environment and the impact it has on humans. In the age of consumerism, we have forgotten about nature and lost our primary contact with it. Our behaviour is guided by comfort and our environmental awareness and responsibility is in decline. Material goods only satisfy a child for a short period. On the other hand, positive emotions encouraged by new experiences and creativity enrich and follow a child for longer. The central part of the paper presents ideas and products that can be made together with a child. In such a way we promote socialization, deepen the relationships, spend quality time together, encourage a two-way communication, encourage listening, observing, creativity, cooperation and the exchange of ideas. We also encourage the development of endurance, as well as the gross and fine motor skills. A child will get familiar with different materials in a multi-sensory way and become aware of environmental issues. Health, fun, enjoyment, joy, creative achievements, coexistence with nature, beauty, moral principles, new knowledge and experience, selflessness, etc; these values will take on a deeper meaning.

KEYWORDS: environmental issues, experiential learning, values, interpersonal relationship

OKOLJSKA OZAVEŠČENOST DIJAKOV V POVEZAVI S ŠOLSKIMI DEJAVNOSTMI

POVZETEK

Ozaveščanje dijakov o ravnanju z odpadki je pomemben del okoljske vzgoje, ki se izvaja v šolah. Cilj je ozavestiti dijake o pomenu učinkovitega ravnanja z odpadki in jim ponuditi informacije in znanja, ki jim bodo pomagali pri sprejemanju odgovornih odločitev glede uporabe in odlaganja odpadkov. To lahko vključuje učenje o različnih vrstah odpadkov, načinih za zmanjšanje količine odpadkov, ki jih proizvajamo in načinih za recikliranje in ponovno uporabo materialov. Prav tako lahko vključuje praktične dejavnosti, kot je učenje o pravilnem ločevanju odpadkov, organiziranje čistilnih akcij in učenju o trajnostni potrošnji. Zavedati se je treba, da živimo v sodobni družbi velike potrošnje in posledično globalnega onesnaževanja planeta s prekomernim odlaganjem odpadkov. Za manjše onesnaževanje moramo odpadke ločevati in z njimi ravnati gospodarno. O resnosti nastalega položaja ozaveščamo tudi dijake šole; pri urah športne vzgoje vplivamo na vzgojni element izobraževanja o obravnavi ekoloških vsebin. V času izvedbe pouka športne vzgoje ter športnih dnevi, združimo gibanje in pobiranje odpadkov. Primer dobre pedagoške prakse prikazuje ozaveščanje dijakov tudi kasneje pri recikliranju in ločevanju odpadkov v šoli in lokalni skupnosti.

KLJUČNE BESEDE: Ozaveščanje, odpadki, onesnaževanje, športna vzgoja.

ENVIRONMENTAL AWARENESS OF STUDENTS IN CONNECTION WITH SCHOOL ACTIVITIES

ABSTRACT

Raising students' awareness of waste management is an important part of environmental education implemented in schools. The goal is to make students aware of the importance of efficient waste management and to offer them information and knowledge that will help them make responsible decisions regarding the use and disposal of waste. This can include learning about different types of waste, ways to reduce the amount of waste we produce and ways to recycle and reuse materials. It can also include practical activities such as learning about proper waste separation, organizing clean-up campaigns and learning about sustainable consumption. It is necessary to be aware that we live in a modern society of high consumption and, as a result, global pollution of the planet through excessive disposal of waste. In order to reduce pollution, we must separate waste and handle it economically. We also make school students aware of the seriousness of the situation; in physical education classes, we influence the educational element of education on the treatment of ecological content. During physical education lessons and sports days, we combine exercise and waste collection. An example of good pedagogical practice shows the awareness of students even later on recycling and separating waste in the school and the local community

KEYWORDS: Awareness, pollution, physical education, waste.

**PRIHODNOST ELEKTRIČNIH AVTOMOBILOV IN ZMANJŠEVANJE
ONESNAŽEVANJA OKOLJA IZ VIDIKA UDELEŽENCEV
IZOBRAŽEVALNEGA PROCESA ZA POKLIC AVTOSERVISNEGA
TEHNIKA**

POVZETEK

Pri praktičnem pouku avtoservisnih vsebin smo z dijaki 2. letnika, ki se izobražujejo za poklic avtoservisnega tehnika raziskovali prihodnost električnih prevoznih sredstev. Cilj raziskave je poizkus napovedi pogonskega vira prihodnosti. Dijaki so v dvojicah pridobivali informacije na dodeljeno temo in ugotovitve predstavili sošolcem. Po vsaki posamični predstavitvi sem zbral mnenja slušateljev in izpostavil nasprotujoča. Dvojice so raziskovale: Zakaj električna vozila ne dohajajo napovedanih načrtov?; Kdaj in za koliko bo napredoval domet?; Avtomobilistični šport in električna vozila; V kolikšni meri so električni avtomobili okolju prijazni od njihove izdelave pa do njihovega konca življenjskega cikla?; Dostopnost polnilne infrastrukture in čas polnjenja v primerjavi s polnjenjem rezervoarja s fosilnimi gorivi; Ali bodo električna vozila cenovno dostopnejša. Po izvedenih predstavitvah in debatah sem zbral splošna mnenja dijakov o prihodnosti električnih vozil z anketo, ki povzema trenutno dilemo glede sprejetja prepovedi prodaje avtomobilov brez škodljivih izpustov do leta 2035.

KLJUČNE BESEDE: alternativni viri energije, prednosti in slabosti električnih prevoznih sredstev, surovine

**THE FUTURE OF ELECTRIC CARS AND THE REDUCTION OF
ENVIRONMENTAL POLLUTION FROM THE POINT OF VIEW OF
THE PARTICIPANTS IN THE EDUCATION PROCESS FOR THE
PROFESSION OF A CAR MECHANIC TECHNICIAN**

ABSTRACT

During the practical lesson on car service content, we researched the future of electric vehicles with second-year students studying to become car service technicians. The aim of the research is try to predict the power source of the future. In pairs, the students obtained information on the assigned topic and presented their findings to their classmates. A debate followed each presentation in groups with conflicting opinions. The pairs researched: Why do electric vehicles not keep up with announced plans?; When and by how much will the range advance?; Motor sports and electric vehicles; To what extent are electric cars environmentally friendly from their production to their end-of-life cycle?; Availability of charging infrastructure and charging time compared to filling a tank with fossil fuels; Will electric vehicles become more affordable? After the presentations and debates, a survey presented the students' general opinions about the future of electric means of transportation. The survey summarizes the current dilemma of adopting a ban on the sale of zero-emission car by 2035.

KEYWORDS: alternative sources of energy, advantages, and disadvantages of electric means of transport, raw materials

VKLJUČEVANJE EKOLOŠKIH TEM NA FESTIVALU OBLIKOVANJA

POVZETEK

Oblikovanje je osrednja tema projektne tedna na Festivalu oblikovanja (FOMB), ki ga vsako leto organizira Srednja šola za oblikovanje Maribor. Festival je sestavljen iz številnih praktičnih skupinskih delavnic, ki prispevajo k poglobljenemu razmišljanju o oblikovanju za kakovostno življenje sodobnega časa. Sodoben način izvajanja učnega procesa ponuja v okviru FOMBA raznolike možnosti vključevanja ekoloških tem v program. Na festivalu sem izvedla likovne delavnice oblikovanja mozaika iz odpadnih keramičnih ploščic. Dijaki so ustvarjali likovna dela z likovno in ekološko vrednostjo. Preko aktivne likovne prakse so s svojim delom izrazili različne ekološke probleme. Motivika mozaikov se je navezovala na naravo in živa bitja. Povezava motiva z spreminjajočim se okoljem in uporabe recikliranega materiala, poudarja občutek odgovornosti sodobnega umetnika in ponuja različne možnosti sodobnega likovnega izražanja.

KLJUČNE BESEDE: oblikovanje, recikliranje, okolje, likovno izražanje, projektno delo

INCLUSION OF ECOLOGICAL THEMES IN THE DESIGN FESTIVAL

ABSTRACT

Design is the central theme of the Maribor Design Festival - FOMB, which is organized every year by the Maribor High School of Design. The festival brings together a number of practical group workshops, that contribute to deepening thinking about design for a better quality of life in modern times. Modern teaching methods offered us various ecological topics within the framework of the FOMB program. As part of the Festival, I held art workshops for mosaic works using exclusively waste ceramic tiles. Our high school students created mosaics of artistic and ecological values. Active artistic praxis enabled them to find expressions of various ecological problems. The motifs showed their connection to our changing environment and the use of recycled materials. Our work emphasized feelings of responsibility of a modern artist. This directed him to various possibilities for a modern creativity.

KEYWORDS: design, recycling, environment, artistic expression, project work

KAJ LAHKO STORIMO S STARIMI KOSI TEKSTILA?

POVZETEK

Nakopičena stara oblačila in odpadni kosi tekstila postajajo vedno večji problem, ki se ga zavedajo tudi mladi. Učenci v 5. razredu pri učnem predmetu Gospodinjstvo spoznavajo različne vrste tekstilnih vlaken, pri predmetu Naravoslovje in tehnika pa se učijo o recikliranju odpadkov. V prispevku je predstavljeno, kako so učenci iskali različne rešitve za čim manj tekstilnih odpadkov. Doma so s starših izvedli anketo, s katero so izvedeli, kaj naredijo ljudje s starimi kosi oblačil in tekstila. Na podlagi rezultatov ankete so v omarah doma pregledali oblačila in tekstil, ki ga ne uporabljajo več, ter izvedli menjalnico oblačil. Ostalo je še kar nekaj kosov tekstila, ki si jih učenci niso izmenjali in jih tudi niso uporabljali. Nekaj oblačil je bilo celih, nekaj pa raztrganih na več koncih. Te kose tekstila so učenci predelali in jih ponovno uporabili. Za nasvete pri obdelavi tekstila smo prosili diplomirano modno oblikovalko Simono Rojnik, ki je pokazala, kako se lotiti dela. Učenci so se tako naučili, da lahko iz odpadnih kosov tekstila ustvarimo nov izdelek. Nekaj učenk je izdelalo unikatne torbice.

KLJUČNE BESEDE: tekstil, tekstilni odpadki, menjalnica oblačil, predelava tekstila

WHAT CAN WE DO WITH OLD PIECES OF TEXTILES?

SUMMARY

Accumulated old clothes and waste pieces of textiles are becoming a growing problem which young people are aware of. Pupils in the 5th grade learn about different types of textile fibers in Home Economics and about waste recycling in Science and Technology. This article describes how the pupils searched for different solutions to reduce textile waste as much as possible. At home, they conducted a survey with their parents to find out what people do with old pieces of clothing and textiles. Based on the results of the survey, they looked for clothes and textiles which they no longer use in their home wardrobes, and held a clothing exchange. There were quite a few pieces of textiles left which the pupils neither exchanged nor used. Some of the clothes were intact, some were torn on several ends. These pieces were recycled and reused with the help of Simona Rojnik, a fashion designer, who offered advice on processing textiles and showed us how to get started. This way the pupils learned that new products can be created from waste pieces of textiles. A few pupils made unique handbags.

KEY WORDS: textile, textile waste, clothing exchange, textile processing.

RAZVIJANJE ODNOSA DO HRANE PRI PREDŠOLSКИH OTROCIH, V POVEZAVI S KULTURNO DEDIŠČINO

POVZETEK

Živimo v družbi oz. obdobju, v katerem je hrana kot dragocena dobrina izgubila svoje poslanstvo. Hrana predstavlja temeljno človekovo potrebo, ki daje energijo našemu telesu, da lahko optimalno deluje. Tako zelo je potrebna za obstoj vsakega posameznika, a žal z njo rokujemo zelo neodgovorno in jo v velikih količinah zavržemo med odpadke.

V Vrtnu Antona Medveda Kamnik smo se odločili, da bomo prve korake k ozaveščanju o zdravi prehrani zastavili že pri predšolskih otrocih. Otrokom želimo privzgojiti odnos do hrane kot dragocene dobrine, kulturo prehranjevanja v povezavi s kulturno dediščino in trajnostnim razvojem. Ko smo v lanskem šolskem letu celostno pristopili k projektu, se je pogosto zgodilo, da je pri zajtrku na vozičku s hrano ostalo veliko koščkov načetega kruha (odpadek), danes pa so opazni zeleni rezultati, saj so se otroci naučili, da si vzamejo toliko kruha, kot ga dejansko lahko pojedjo.

Znano je, da je zgodovina naša učiteljica in če bi upoštevali zgodovinska dejstva glede človekovega odnosa do hrane, danes zagotovo ne bi bilo toliko zavržene hrane. Naši predniki so hrano znali ljubiti, spoštovati, ceniti do zadnje drobtinice. V naših prizadevanjih v okviru celoletnega projekta smo izhajali iz kulturne dediščine, naših dedkov in babic, iz časov črne kuhinje. Za otroke smo v vrtnu pripravili razstavo »*Bilo je nekoč na deželi ... - Hrana ni za tjavendan*».

Skupaj vzgajamo prihodnje generacije, da bodo znale ceniti kakovost življenja, zdravo naravo in okolje, da hrana ni in ne sme biti odpadek, v povezavi s trajnostnim razvoju ter zdravim in okoljsko osveščenem življenjskem slogu.

Glavne besede: predšolski otroci, odnos do hrane, kulturna dediščina, trajnostni razvoj

RAISING A POSITIVE ATTITUDE TOWARDS FOOD WITH PRESCHOOL CHILDREN IN CONNECTION TO CULTURAL HERITAGE

ABSTRACT

Society in our modern period does not consider food as a valuable commodity. Food represents the basic human need that enables our body to function optimally. Food is very important for the existence of every individual, but sadly we are very irresponsible with it and we throw large quantities of food away.

In our kindergarten Anton Medved Kamnik we have decided to prepare the first steps to raise awareness about healthy food and food waste among preschool children. We would like to raise kids so that they have a respectful attitude towards food, and we want to make them aware that food is an important commodity and is strongly connected to our cultural heritage. It happened very often during breakfast that children took too much food and couldn't eat it all, resulting in food waste. when we started our project in the last school year. Today we can say that we have achieved our goal that children take as much food as they can eat.

History is our teacher and if we considered historical facts regarding human attitude to food there would not be so much wasted food. Our ancestors loved food, they respected it and they were very careful with it. In our project we showed the children the cultural heritage of our grandparents from the times of 'the black kitchen'. We prepared the exhibition »*Once upon a time in the countryside ... - The food is not a waste*«.

Together we are trying to raise future generations to appreciate the quality of life, healthy environment and to cherish food in relation to sustainability, not waste any food and to have a healthy mindful lifestyle.

Key words: preschool children, , cultural heritage, food waste, sustainability

SPODBUJANJE POUČEVANJA STROKOVNIH VSEBIN S PODROČJA EKOLOGIJE IN KROŽNEGA GOSPODARSTVA NA PRIMERIH V SREDNJI ŠOLI

POVZETEK

V strokovnem prispevku se osredotočam na izzive vključevanja poučevanja strokovnih vsebin trajnostnega razvoja, ekologije in podjetništva v srednješolskem izobraževanju v programu Ekonomski tehnik pri dijakih. Predstavljam konkretne ideje in rešitve kako lahko mladim udeležencem izobraževanja skozi različne projekte med seboj in s poučevanjem trajnostne ekonomije v času pouka aktivno približamo te vsebine. Z motivacijo učenja v zunanjem učnem okolju, medsebojni interakciji učiteljev, mentorjev ter dijakov lahko v sodelovanju z gospodarstvom stopimo korak bližje do bolj kakovostnega poučevanja podjetništva in ekologije v luči trajnostnega razvoja v srednjih šolah.

Namen vključevanja teh vsebin je, da dijaki v stimulativnem in varnem okolju, pridobijo motivacijo in poglobljen, kakovosten ter celovit pogled na vsebine: reševanja izzivov trajnostnega podjetništva, pomena recikliranja in ponovne uporabe, zavesti o omejenih dobrinah in virih za proizvodnjo dobrin. Učiteljem, ki nastopajo kot mentorji pa omogočimo plačano mentorstvo, izobraževanje in usposabljanje novih učnih vsebin ter nove možnosti osebnega razvoja in strokovne usposobljenosti.

Cilj je, da dijaki pridobijo prvo konkretno, poglobljeno in novo realno izkušnjo z vsebinami trajnostnega razvoja, zelenim podjetništvom v varnem okolju, ki jim bo omogočila osebno rast ter lažje razumevanje in reševanje trajnostnih izzivov ter uspešno podjetniško delovanje v kasnejšem kariernem razvoju in življenju.

V članku predstavljam pozitivne učinke in prednosti izobraževanja in vključevanja vsebin trajnostnega razvoja skozi pouk in mednarodne projekte, ki so na voljo v Sloveniji. Opisane so številni konkretni praktični primeri, ki lahko omogočajo spodbujanje trajnostnega razvoja v šolskem sistemu.

KLJUČNE BESEDE: Ekologija, trajnostni razvoj, projektno delo, srednja šola, izobraževanje.

TEACHING SUSTAINABLE DEVELOPMENT THROUGH ENTREPRENEURIAL PROJECTS AND PROFESSIONAL MODULES IN THE HIGH SCHOOL PROGRAM ECONOMIC TECHNICIAN

ABSTRACT

In this article, I focus on the challenges of combining the teaching of sustainable development, ecology and entrepreneurship in secondary education in the Economic Technician program for students. I present concrete ideas and solutions on how we can combine different projects with teaching sustainable economics during school courses and at the same time motivate employees and students to step closer to better and quality teaching of entrepreneurship in the light of sustainable development in secondary schools.

The purpose of the connection is for students in a stimulating and safe environment to gain motivation and an in-depth, high-quality and comprehensive view of the content: solving the challenges of sustainable entrepreneurship, and teachers to provide paid mentoring, education and training and new opportunities for personal development and skills.

The goal is for students to gain their first concrete, in-depth and new real experience with the contents of sustainable development, green entrepreneurship in a safe environment that will enable them personal growth and easier understanding and solution of sustainable challenges and successful entrepreneurship in later career development and life.

In the article, I present the positive effects and advantages of education and the inclusion of sustainable development content through lessons and international projects available in Slovenia. Many concrete practical examples are described, which can enable the promotion of sustainable development in the school system.

KEYWORDS: Ecology, sustainable development, project work, high school, education

EKO DAN V ČETRTEM RAZREDU – SPOZNAVAJ IN VARUJ SVOJE DOMAČE OKOLJE TER UŽIVAJ V GIBANJU PO NJEM

POVZETEK

Učencem gibanje še vedno predstavlja eno najzanimivejših in priljubljenih aktivnosti in to kljub dejstvu, da vse več mladih veliko časa preživi pred elektronskimi napravami. Prav učitelj je tisti, ki lahko odigra zelo pomembno vlogo pri oblikovanju pozitivnega mnenja o pomenu gibanja, saj učencem predstavlja vzornika. In če je vsaj malo iznajdljiv, lahko ljubezen do gibanja hitro prenese tudi na druga področja, kot so skrb in varovanje ter opazovanje okolja. Sama sem želela združiti dve področji, gibanje in opazovanje rastlin in dreves v naravi. V ta namen smo se s četrtošolci peš odpravili v višje ležečo vas in v naravi, ob gozdu in jezu, izvedli aktivne delavnice. V prvem delu so učenci s pomočjo raziskovalnih knjižic in določevalnih ključev spoznavali razlike med grmi in drevesi, prepoznali značilne drevesne in grmovne vrste, razložili zunanjo zgradbo rastlin in poimenovali njihove dele. Drugi del pa je bil namenjen gibalnim nalogam. Preizkusili so se v sestavljanju stolpa iz lesenih blokov, metanju storžev v tarčo, hoji po vrvi in opazovanju predmetov na tleh, ki ne sodijo v gozd. Poleg tega so se preizkusili v krajinski umetnosti in v ustvarjanju zvokov z naravnimi materiali. Dejavnost smo zaključili z igro, pri kateri so se učenci spremenili v drevo in posnemali gibanje drevesa po opisu učitelja.

KLJUČNE BESEDE: opazovanje, grmi, drevesa, delavnice, gibanje

ECO DAY IN THE FOURTH GRADE - GET TO KNOW AND PROTECT YOUR HOME ENVIRONMENT AND ENJOY MOVING AROUND IT

ABSTRACT

Movement is still one of the most interesting and popular activities for pupils, despite the fact that more and more young people spend a lot of time with electronic devices. Teacher are the ones who can play a very important role in forming a positive attitude towards the importance of movement, as they are role models for pupils. And if they are at least a little resourceful, they can quickly spread this love of movement to other areas, such as care and protection and observation of the environment. I wanted to combine movement and observation of plants and trees in nature. For this purpose, the fourth-graders and I walked to a higher-lying village and held active workshops in nature, next to a forest and a dam. In the first part, with the help of research booklets and dichotomous keys, pupils learned about the differences between shrubs and trees, recognized typical tree and shrub species, understood the external structure of plants and named their parts. The second part was dedicated to movement. They tried their hand at building a tower from wooden blocks, throwing cones at a target, walking a tightrope and observing objects on the ground that did not belong in the forest. In addition, they experimented with landscape art and created sounds with natural materials. We ended the activity with a game in which the pupils turned into a tree and imitated its movement according to the teacher's descriptions.

KEY WORDS: observation, bushes, trees, workshops, movement

POUK DRŽAVLJANSKE IN DOMOVINSKE VZGOJE TER ETIKE KOT POMEMBEN DEL OKOLJSKE VZGOJE

POVZETEK

Osnovnošolski obvezni predmet z najdaljšim imenom in hkrati z najmanjšim obsegom ur, ki se izvaja le v 7. in 8. razredu, je pomemben del okoljske vzgoje. Z učnimi cilji in vsebinami učenčeve znanje in veščine praviloma pri nekaterih temah nadgrajuje, aktualizira in se medpredmetno povezuje. V prispevku je predstavljeno, katere učne vsebine in cilji obravnavajo oziroma se dotikajo te tematike. Predstavila bom, kako lahko učenci razvijajo kompetence s številnimi in raznolikimi dejavnostmi. Kot primer dobre prakse bom predstavila Eko dan kot dan dejavnosti na naši šoli.

KLJUČNE BESEDE: državljanska in domovinska vzgoja ter etika, okoljska vzgoja, vloga učitelja, Eko dan

CIVIC AND PATRIOTIC EDUCATION AND ETHICS LESSONS AS IMPORTANT PART OF ENVIRONMENTAL EDUCATION

ABSTRACT

Civic and patriotic education and ethics lessons is a mandatory subject in primary school. It is a subject with the longest name and at the same time with the minimum range of hours. This mandatory subject is implemented in the seventh and eighth school grade and it is also the important part of environmental education. At certain themes learning objectives and content are upgraded, actualizes and interconnects.

In this contribution it is presented, which objectives and content are treated with this theme. I will introduce the activities which help students to develop competencies. As an example of good practice, I will represent EKO day as an activity day at our school.

Key words: Civic and patriotic education and ethics, environmental education, the role of the teacher, EKO day

TEMATSKI SKLOP EKOLOGIJA PRI POUKU ANGLEŠČINE V VIŠJIH RAZREDIH OSNOVNE ŠOLE

POVZETEK

V osnovni šoli so tematski sklopi iz področja ekologije razpršeni čez celo leto. Najdemo jih v vseh učbenikih za poučevanje tujih jezikov. V višjih razredih osnovne šole se obravnava več tematik iz področja ekologije, saj se smatra, da so učenci usvojili dovolj besedišča, s pomočjo katerega lahko obravnavajo posamezne teme. Pomembno je, da učence ne le naučimo besedišča, s pomočjo katerega lahko debatirajo o okoljski tematiki, ampak da jih tudi naučimo, kako se odgovorno obnašati do okolja.

V tem članku so predstavljene teme iz področja ekologije, ki jih učenci posameznih starostnih skupin obravnavajo pri pouku angleščine, skupaj s primeri dobre prakse in dodatnimi gradivi, ki so dostopna na posameznih spletnih straneh. Predstavljeno je tudi, kako lahko s pomočjo različnih spletnih platform, najdemo video gradiva, s pomočjo katerih lahko obogatimo pouk. Sledi še analiza posameznih področij, ki jih obravnavamo pri pouku.

Učenci v posameznem starostnem obdobju obravnavajo določene tematike iz področja ekologije, ki so primerne njihovi starosti. S tem dosežemo, da usvojijo posamezne slovnične strukture in besedišče, predpisane v kurikulumu, ter da aktivno razmišljajo o okoljski problematiki, iščejo in predlagajo svoje rešitve za posamezne probleme. Učence je potrebno naučiti, da vidijo kako lahko z majhnimi dejanji dosežejo velike spremembe, ki pozitivno vplivajo na njihov odnos do okolja.

KLJUČNE BESEDE: ekologija, okolje, poučevanje v OŠ, učenje za življenje

TEACHING ENVIRONMENTAL TOPICS IN ENGLISH LESSONS IN HIGHER GRADES OF THE PRIMARY SCHOOL

ABSTRACT

Environmental topics are dispersed through the whole year in the primary school. Those topics can be found in different textbooks for teaching foreign languages. In the upper grades of primary school, several topics from the field of ecology are discussed, since it is considered that the students have acquired enough vocabulary to be able to discuss individual topics. It is important that beside teaching students vocabulary with which they can debate environmental topics, we also teach them how to change their behaviour to be more responsible towards the environment.

This article presents topics from the field of ecology that students of individual age groups deal with in English lessons. Those topics are presented together with the examples of good practice and additional materials that are available on individual websites. It is also presented how, with the help of various online platforms, we can find video materials that can be used to enrich lessons. This is followed by an analysis of the individual environmental topics which are covered during the lessons.

Students of different grades deal with certain topics from the field of ecology that are suitable for their age group. Besides learning grammatical structures and vocabulary prescribed in the curriculum, they also learn to actively think about environmental issues. We teach them to search for and to propose their own solutions for individual problems. Pupils need to be taught to see how they can achieve big changes with small actions that positively affect their attitude towards the environment.

KEY WORDS: ecology, environment, teaching in elementary school, learning for life

BIO HRANA NA ŠOLSKEM JEDILNIKU

POVZETEK

Bio predelana hrana je trend v živilski industriji, ki vključuje uporabo biotehnologije za ustvarjanje novih, bolj zdravih in bolj trajnostnih živilskih izdelkov. Z vse večjim zavedanjem o pomenu zdravega prehranjevanja, šole zdaj v svoje jedilnike vključujejo biološko predelano hrano. Zadnja leta opažamo, da je hrana bio in eko izvora bolj cenjena. V trgovinah so posebne police na katerih ponujajo bolj zdravo hrano in s tem seveda, tudi dražjo, redki pa si lahko privoščijo hrano od kmeta, ki je ekološko neoporečna. V članku bom predstavila pomembnost ekološke prehrane v šolstvu ter kako šolski jedilnik in na njem natančno opisana hrana, vpliva na odnos otrok oz. učencev do hrane. Jo zaradi tega raje jedo? Jih tovrstni opis pritegne ali s tem dosežemo večji negativni učinek? S petošolci smo pregledali dobre strani bio hrane in s pomočjo ankete ugotoviti, kaj je tisto, kar jih na jedilniku pritegne. Naš cilj je bil ozavestiti uživanje zdrave hrane in prikazati stranske učinke predelane hrane, ki med drugim kroji tudi naše zdravstveno stanje.

KLJUČNE BESEDE: bio predelana hrana, šolski jedilnik, naravna hrana

BIO PROCESSED FOOD ON THE SCHOOL MENU

ABSTRACT

Bio processed food is a trend in food industry, which includes usage of biotechnology for creating new, healthier and more sustainable food products. With growing awareness of healthier nourishment and its meaning, schools nowadays in their menus intergrate biologically processed food. In the last few years we can see that eco and bio food is more valuable than before. In the stores there are special shelves on which they offers healthier and also more expensive food, but not many can afford ecologically irreproachable food direct from the farmer. In this article I will present importance of ecologic food in educational system and how school's menu and precisely described food on it, influences on children's attitude towards the food. Do they eat it rather because of that? Do descriptions of that kind attracts them or we achieve right the opposite? With 5th graders we examined good sides of the bio food and with the help of survey we found out what draw their attention on the menu. Our goal was to make children aware of eating healthy food and show side effects of the processed food, which is responsible also for our health condition.

KEYWORDS: bio processed food, school's menu, natural food