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Model Experimental School of the University of Macedonia (GREECE)
Zespół Szkół w Żychlinie (POLAND)
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I.E.S. Luis de Góngora (SPAIN)
Hüseyin Okan Merzeci Anadolu Lisesi (TURKEY)

ESL GUIDEBOOK

Activities for All

basic, social, language & ICT skills [ENG]



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basic, social, language & ICT skills [ENG]

ISBN 978-960-99808-1-4

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“ESL Guidebook – Activities for All” is part of the educational material that has been produced within the framework of the Erasmus+/KA2 European Educational Programme “Our School, My Future – ESL Project”, which is funded by the European Union. The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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ISBN 978-960-99808-1-4

The main hope of a nation lies...

in the proper education of its youth

Erasmus Desiderius Roterodamus
(1466-1536)

Editor's Note

Early School Leaving (ESL) is a major problem in many European Union (EU) countries and a multitude of factors are taken into account in the effort to limit it. School teachers can contribute in this direction, wielding the means they can use best: education. That is why we planned, implemented, and propose a number of teaching lesson plans, which are freely available to all colleagues interested in tackling this important issue.

The proposed plans can be adapted easily to satisfy the peculiarities that render each school different. They have been grouped together in thematic blocks according to their subject matter and/or the cognitive areas covered (basic skills, social and life skills, foreign language learning, and technology). All lesson plans are the result of cooperation among the participating teachers from partner schools in the project and have been tried in class. The common denominator that binds them together is the use of cooperative learning which aims to foster a sense of belonging in students so that the chances of dropping out of school can be reduced.

Our reasoning is based on the supposition that children love what they can be good at. As a result, teaching should aim beyond the pursuit of knowledge and offer all students the opportunity of experiencing success. This could act as yet another motive for them to stay in school and even view it as second home...

Contents

Basic Skills	10 - 45
Social Skills	46 - 57
Language and ICT Skills	58 - 77
References	79 - 80

BASIC SKILLS

Museum Educational Game

Eleni Mouzoura

Subject: Greek language and literature

Grade level: 1st (12-13y)

Summary: The activity was completed successfully as cooperation with the head librarian of the Municipal Library and the curator of the Museum of Greek Refugees was impeccable since they were eager to show the students around the halls and the exhibits. Students were enthusiastic about the museum education game. After getting their instruction cards, they organized their group and worked methodically. The experiential and inquiry-based features of the activity got the students interested and actively involved. Students competed fairly to create a multi-modal text, which they presented in class using different and innovative techniques, such as visualization or playing a musical instrument while a member of the group was presenting (e.g. a violin, a flute, etc.) to keep their classmates' attention and interest high. In-class assessment, teacher assessment through questions and comments, and, finally, self-assessment on a group level gave the students the opportunity to develop inquiry, collaboration, critical, meta-cognitive, and other skills. Furthermore, students enjoyed this methodological approach and its notable outcome, as it linked content and school with the actual world around them.

Overview & Purpose: Exploring Greek literature and language through a museum education game at the Museum of Greek Refugees: Getting to know the Museum of Greek Refugees and the services offered by the Municipal Library of Neapolis through interactive and experiential inquiry. Making use of experiential and inquiry learning, students will approach Greek literature and language through the exhibits at the Museum of Greek Refugees, a museum education game, as well as group-oriented and collaboration-promoting practices.

Teaching Method: Museum education game, group work, and inquiry learning to create a multi-modal text that will summarize the results of student research at the Museum of Greek Refugees, as an outcome of group activities.

Objectives/targets

Student will:

- 1) Link literature to actual life and other forms of art (unit: Greek nature in poetry).
- 2) Practice writing and speaking through experiential activities.
- 3) Become acquainted and create a relationship with the Municipal Library of Neapolis (book borrowing, visits to the library), aiming to encourage reading and library use as a source of books and study area.
- 4) Make good use of a remarkable venue that is easily accessible from and in close proximity to the school (short walking distance) and encourage the development of dynamic interaction between the museum, the library, and the school.
- 5) Interactive contact with the significant exhibits of the museum and its halls, school textbooks, antiquarian books, and the collection of old newspapers that is available.
- 6) Become aware of the process that lies behind setting up a museum and the research that needs to be done, involving historical resources and museum exhibits.
- 7) Learn to work in groups and student autonomy is encouraged while the teacher acts as a facilitator and coordinator.
- 8) Use museum education games to promote learning.
- 9) Activate life-long learning and teach research that leads to knowledge through historical sources, whose reliability is then evaluated.

Materials & Resources: Computers at the Municipal Library and at home, cameras, mobile phones to take pictures and record an interview, web resources and, especially, the books at the Municipal Library of Neapolis and the exhibits at the Museum of Greek Refugees to create a multi-modal text.

Activity and Method Description

Type of activity: Experiential and open to cooperation with and observation by any school teacher (regardless of specialization).

Location: Museum of Greek Refugees, Municipal Library of Neapolis, and associated auditorium (in the three-storey building).

Duration: 2 consecutive teaching hours (15 min to walk to and return from the aforementioned building and 75 min for the activities).

Procedure: Having studied the exhibits at the Museum of Greek Refugees and visited the library and the two auditorium at the Municipal Library of Neapolis, the teacher planned five different activities for five groups of students. Four groups of five students and one more group of six students were involved.

Total number of students: 26. The students were briefed on the activity ahead of time.

Assessment

Presentation: Two hours (90 min) were allocated for the groups to present their work as multi-modal texts in plenary.

session during the week that followed the activities. Student work was assessed on three levels: i) during the plenary session through questions, comments, etc., ii) teacher assessment, and iii) self-assessment by the groups themselves through self-reflection.

Teacher Guide

1) Introductory phase:

- The teacher planned the activity after coordinating with the head librarian of the Municipal Library and the curator of the Museum of Greek Refugees during a visit to the two institutions. Having looked into the possibility of organizing a museum education game, the game was planned to use the facilities available at the Municipal Library and the exhibits of the Museum of Greek Refugees.
- Students were prepared to carry out the experiential activities at the Museum of Greek Refugees and the Municipal Library after completing the unit entitled "Greek nature in poetry".
- Students were given a tour around the Municipal Library and the Museum of Greek Refugees before the lesson.

2) Implementation phase:

- Each group of students was handed a card with clear instructions on the research and group work they had to do.
- The members of each group studied the instruction card, assigned roles and work load, and started researching and collecting data.
- They used notebooks and pens to keep notes, cameras and mobile phones to take pictures and record the interview.

Additional Notes

Students were offered a tour around the Municipal Library by the head librarian and a tour around the Museum of Greek Refugees by the museum curator.

Additional Notes

You can find the guidance for the students to the following link:

<http://www.slideshare.net/matrixm/guidelines-to-studentsmuseum>

Types of Poetry

Hatice Utaş and Sibel Aykasim

Subject: Language (poetry)

Grade level: 9th (14-15y)

Summary: Presentation - a) Motivation: Draw attentions to the poems. Style, rhyme, theme etc. are told. Questions are asked to check their previous knowledge on poems, b) presenting the poem: M. Akif Ersoy's poem "Küfe"* is read aloud and analyzed in aspects of style, rhyme and theme, c) a discussion is organized on the theme of the poem: school love. Practice - Students read the poem by couplets and try to translate it into modern Turkish language. They discuss the theme of the topic and try to create opinions on it. Production - They are encouraged to work in groups and write similar poem.

Overview & Purpose: By the end of the course the students will be able to learn the poems in art works and have the interest and awareness of fine arts.

Teaching Method: Narration, question & answer, giving examples, dramatization.

Objectives/targets

Student will:

- 1) Learn the poem of M. Akif Ersoy called "Küfe".*
- 2) Have opinions about the poem and the theme of it.
- 3) Create opinions about theme "going to school".

Materials & Resources: Course book, poems.

Activity and Method Description

- Pre-reading questions are asked to warm-up and to arouse sts' attentions at the beginning of the course.
- The poem of M. Akif Ersoy called "Küfe"* (basket) is used and analyzed.
- True/False Exercises are done and comprehension questions are checked.
- Individual: students are guided to write poems on the similar topic.
- Finding different poems on the topic is demanded as homework. Total number of students: 26. The students were briefed on the activity ahead of time.

Assessment

- Assignment: Ask students to find similar poems on the topic (school love).
- Find the ways of writing poems on abstract themes.

Teacher Guide

Act like informant, guide and mentor for production stage.

*"Küfe" - Mehmet Akif Ersoy

Beş on gün oldu ki, mu'tâda inkıyâd ile ben
Sabahleyin çıkıvermiştim evden erkenden
Bizim mahalle de İstanbul'un kenârı demek:
Sokaklarında gezilmez ki yüzme bilmiyerek!
Adım başında derin bir buhayre dalgaları,
Sular karardı mı, artık gelen gelir dayanır.
Bir elde olmalı kandil, bir elde iskandil,
Selâmetin yolu insan için bu, başka değil!

Elimde bir koca değnek, onunla yoklayarak,
Önüm adaysa basıp, yok, denizse atlayarak,
- Ayakta durmaya elbirliğiyle gayret eden,
Lisân-ı hâl ile amma rûkûa niyyet eden -
O sâlhürde, harâb evlerin saçaklarına,
Sığınmış öyle giderken, hemen ayaklarına
Delilimin koca bir şey takıldı... Baktım ki:
Genişçe bir küfe yatmakta, hem epey eski.

Bu bir hamal küfesiymiş... Aceb kimin? Derken;
On üç yaşında kadar bir çocuk gelip öteden,
Gerildi, tekme indirirdi öyle bir küfeye:
Tekerme ker küfe bitâb düştü tâ öteye.
- Benim babam senin altında öldü, sen hâlâ
Kurumla yat sokağın ontasında böyle daha!
O anda karşıki evden bir onta yaşlı kadın
Göründü:
- Oh benim oğlum, gel etme kırmasakın!
Ne istedin küfeden yavrum? Ağzı yok, dili yok,
Baban sekiz sene kullandı... Hem de derdi ki: "Çok
Uğurlu bir küfedir, kalmadım hemen yüksüz..."
Baban gidince demek kaldı âdetâ öksüz!
Onunla besliyeceksin ananla kardeşini.
Bebek misin daha öğrenmedin mi sen işini?"
Dedim ki ben de:
- Ayol dinle annenin sözünü...
Fakat çocuk bana haykırdı ekşitip yüzünü:
- Sakallı, yok mu işin? Git, cehennem ol şuradan!
Ne dırlanıp duruyousun sabahleyin onadan?
Benim içim yanıyon: Dağ kadar babam gitti...
- Baban yerinde adamdan ne istedin şimdi?
Adamcağız sana, bak hâl dilince söylerken...
- Bırak hanım, o çocuktur, kusûra bakmam ben...
Adın nedir senin, oğlum?
- Hasan.
- Hasan, dinle.
Zararlı sen çıkacaksın bütün bu hiddetle.
Benim de yandı içim anlayınca derdini...
Fakat, baban sana ısmarlayıp da gitti sizi.
O, bunca yıl çalışıp alınının teriyle seni
Nasıl büyüttü? Bugün, sen de kendi kardeşini,
Yetim bırakmıyarak besleyip büyütmelisin.
- Küfeyle öyle mi?
- Hay hay! Neden bu sözlâkin?
Kuzum, ayıp mı çalışmak, günah mı yük taşımak?
Ayıp: Dilencilik, işlerken el, yürürken ayak.
- Ne doğru söyledi! Öp oğlum amcanın elini...
- Unuttun öyle mi? Bayramda komşunun gelini:
"Hasan, dayım yatı mekteplerinde zâbittir;
Senin de zihnini açık... Söylemiş olaydık bir..."

Koyardı mektebe... Dur söyleyim" demişti hani?
Okutma sen de hamal yap bu yaşta şimdi beni!
Söz anladım uzun, hem de pek uzun sürecek;
Benimse vardı o gün pek çok işlerim görecek;
Bıraktım onları, saptım yokuşlu bir yoldan,
Ne oldu şimdi aceb, kim bilir, zavallı Hasan?
Bizim çocuk yaramaz, evde dinlenip durmaz;
Geçende Fâtihe çıktık ikindi üstü biraz.
Kömürçüler kapısından girince biz, develer
Kızın merâkını celbetti, dâima da eder:
O yamrı yumru beden, upuzun boyun, o bacak,
O arkasındaki püskül ki kuyruğu olacak!
Hakikaten görecek şey değil mi ya? Derken,
Dönünce arkama, baktım: Beş on adım geriden,
Belinde enlice bir şal, başında âbâni,
Bir onta boylu, güler yüzlü pîr-i nûrânî;
Yanında koskocaman bir küfeyle bir çocuk,
Yavaş yavaş geliyorlar. Fakat tesâdüfe bak:
Çocuk, benim o sabah gördüğüm zavallı yetim...
Şu var ki, yavrucağın hâli eskisinden elim:
Cılız bacaklarının dizden altı çırpıplak...
Bir ince mintanın altında titriyon, donacak!
Ayakta kundura yok, başta var mı fes? Ne gezer!
Düğümlü alnının üstünde sâde bir çember.
Nefes değil o soluklar, kesik kesik feryad;
Nazar değil o bakışlar, dümû-i istimdad.
Bu bir ayaklı sefalet ki yalnayak, baş açık;
On üç yaşında buruşmuş cebin-i safî, yazık!
O anda mekteb-i rüşdiyyeden taburla çıkan
Bir elliden mütecâviz çocuk ki, muntazaman
Geçerken eylediler ihtiyârı vakfe-güzin...
Hasan'la karşılaşırken bu sahne oldu hâzin;
Evet, bu yavruların hepsi, pür sürûd-i şebâb,
Eder dururdu birer âşiyân-ı nûra şitâb.
Birazdan oynayacak hepsi bunların, ne iyi!
Fakat Hasan, babasından kalan o pis küfeyi,
-Ki ezmek istedi görmekle reh-güzârında-
İlelebed çekecek dûş-i ıztırârında!
O, yük değil, kaderin bir cezâsı ma'sûma...
Yazık, günâhı nedir, bilmeyen şu mahkûma!

A day in the Museum of Byzantine Culture

Thomas Zikos

Subject: History

Grade level: 3rd (14-15y)

Overview & Purpose: It is a big challenge when you teach history to manage to bring the students closer to the subject of history through a museum. A museum is a dead place when it is empty of people, and becomes alive when it is full of people, and mainly young people. A museum can teach us when we explore it with respect and patience. Having these thoughts in mind, we often organize a visit to a museum, and we call it "A Museum lesson". This lesson is taught in the museum, where all students participate exploring the museum, asking questions about the artifacts and preparing presentations. It is an alternative way of teaching and learning history through history. All students become explorers, archaeologists, historians. During this visit students find out that history and museums are not about the past only, but at the same time they are relevant to our times and the future.

Teaching Method: As school psychologists says, it is boring for students to stay at the same place all the time, while they are at school. So, an alternative way of education is to make students take education into their own hands, not only listen to the lesson, but also ask questions whenever they like and exchange their thoughts discussing. Students of all grades are going to participate in a lesson that is similar to a game of knowledge exploration, of course, with some help.

Objectives

A very interesting museum in the center of our city is the Museum of Byzantine Culture. Every year a temporary exhibition with a special topic takes place, such as the exhibition of "Byzantium and the Arabs". It was the first time that a state museum in Greece has attempted to present this very important theme, which pertains not only to the two neighboring worlds, the Byzantines and the Arabs, but also to the interesting, distinct relations and interactions stemming from their contact.

Before students go to the museum, they watch a short video about this exhibition, just to have an idea about what they are going to see.

After having learned about the Arabs and their expansion, they read the texts in the textbook and they are prepared to "experience" history, i.e. find out what they have learned. Students are prepared with extensive research on the web, finding images about the places mentioned in their textbook. So, when they see a map in the museum, they are ready to recognize the places.

Activity and Method Description

Students surf the web to find images and more information about the Arabs and their relationship with the Byzantines. The students are divided into groups of four. During our visit to the museum one group takes an interview from an archaeologist, another group takes photos; another group prepares to present an object from the exhibition. When we return to the classroom all groups present their home work to their classmates and we discuss the results and any questions they might have.

Assessment

After all these presentations, our project is assessed through an evaluation sheet.

Food in the Roman Empire

Ignacio Galán Gómez

Subject: History

Grade level: 1 ESO - 7th Grade

Summary: The lesson is designed to be taught in English language and based on how social distinctions were reflected by what was eaten and by whom during the Roman Empire. The aims of the lesson are varied. Students can practise integrated skills, learn new vocabulary, practise pronunciation and grammar. Students have to do different tasks. They practise listening, filling in the gaps, they learn new vocabulary matching the words to their definitions, explaining the meaning of new words. The learners have the possibility to practise speaking while discussing advantages and disadvantages of being a nobleman or a peasant, or comparing Roman eating habits to our eating habits today.

materials.

Overview & Purpose: This lesson is created in order to be taught into the lab, where all students will participate preparing a homemade toothpaste by scratch, using simple pure materials. The predominant idea and the main purpose is to develop an alternative way of learning, which will motivate all students, independently of their knowledge, targeting in exploiting their individual skills.

Teaching Method: The new tendency in education is to find alternative methods to motivate all students to actively participate. In addition, students must learn to communicate and collaborate, research, collect and synthesize information. The proposed teaching method is based in cooperative and inquiry based learning, by exploiting the ICTs. Students are going to develop hands-on activities in a chemistry lab, unfolding their skills beyond a concrete cognitive type lesson.

Objectives/targets

- Improve English vocabulary and know specific names of food.
- Realize the changes in the menu along History.
- Create opinions about social differences.

Materials & Resources: Power Point, web, photocopies.

Activity and Method Description

- Pre-listening activity.
- True/False Exercise.
- Reading and checking new vocabulary.
- Pronunciation and translation.
- Comprehension questions.
- Individual: Students are guided to discover the social differences in the Roman Empire.

Assessment

- To reinforce students' understanding of *past* and *present*. This can be done through using language to describe *past* and *present*, e.g. yesterday, before, a long time ago, now.
- To compare similarities and differences between food from the Roman Empire times (fresh vegetables, little meat, legumes and nuts, no processed food) and today.
- To compare and contrast Roman eating habits to our eating habits today.
- To allow students to gain an understanding of what life would have been like at the time and how customs have changed.

Teacher Guide

Teacher is the guide and mentor during the activity. After conducting research about Roman life in Europe (social, cultural, economic and political features) and the roles and relationships of different groups in society, and answering questions such as, How did one's role in medieval times influence their daily life?, What resources were available to a person living in medieval society? and, How was the power structure organized among various people in medieval society?, the topic about a typical diet of different social groups during the Roman Empire, as well as their typical eating habits and manners is used to discuss the constraints certain classes had during Roman Empire.

Additional Notes

Online resources (The Roman Empire for Kids, History on the Net.com) that provide useful information and activities for students about the Roman Empire were used for the needs of this lesson.

Material used is available to the following link:

<http://www.slideshare.net/matrixm/material-food-in-the-roman-empiresocial-sciencesigfv1>

Activities used are available to the following link:

<http://www.slideshare.net/matrixm/activities-food-in-the-roman-empire>

The Ancient Olympic Games

Ignacio Galán Gómez

Subject: History

Grade level: 1 ESO - 7th Grade

Summary: The aims of the lesson are varied. Students can practise integrated skills, learn new vocabulary, practise pronunciation and grammar. Students have to do different tasks. They practise listening, filling in the gaps, they learn new vocabulary matching the words to their definitions, explaining the meaning of new words. The learners have the possibility to practise speaking while discussing advantages and disadvantages of being a success sport winner and if the award was enough.

Overview & Purpose

By the end of the course the students will be able to:

- Learn healthy habits.
- Understand the different sports in the Ancient Olympic Games.
- Have the interest and awareness of historic social customs.

Teaching Method: Reading, question & answer, giving examples, listening and translation.

Objectives/targets

- Improve English vocabulary and know specific names of sports.
- Realize the changes in the sport along History.
- Create opinions about social customs.

Materials & Resources: Power Point, web, photocopies.

Activity and Method Description

- Pre-listening activity.
- True/False exercise is done.
- Reading and checking new vocabulary.
- Pronunciation and translation.
- Comprehension questions are checked.
- Individual: students are guided to discover the importance of sport in healthy habits.

Assessment

- To reinforce students' understanding of *past* and *present*. This can be done through using language to describe *past* and *present*, e.g. yesterday, before, a long time ago, now.
- To compare similarities and differences between sport from the Ancient Greece times and currently.
- To compare and contrast sport habits to our habits today.
- To allow students to gain an understanding of what life would have been like at the time and how customs have changed.

Teacher Guide

Teacher is the guide and mentor during the activity. After conducting, research about the Ancient Greece (social, cultural, economic and political features) and the roles and relationships of different groups in society, and answering questions such as, What kind of sport do you practice? and How was the power structure organized among various "poleis" in Greek society? The topic about of naked sportsmen.

Additional Notes

Online resources that provided useful information and activities for students about the Ancient Greece included: "The Ancient Greece for Kids" and the "History on the Net.com".

Material used is available to the following link:

<http://www.slideshare.net/matrixm/the-ancient-olympic-games>

Medieval Food

Inés M^a Pérez Gálvez

Subject: History

Grade level: 2 ESO - 8th Grade

Summary: The lesson is based on how social distinctions were reflected by what was eaten and by whom during Middle Ages. The aims of the lesson are varied. Students can practise integrated skills, learn new vocabulary, practise pronunciation and grammar. Students have to do different tasks. They practise listening, filling in the gaps, they learn new vocabulary matching the words to their definitions, explaining the meaning of new words. The learners have the possibility to practise speaking while discussing advantages and disadvantages of being a noblemen or a peasant, or comparing Medieval eating habits to our eating habits today.

Overview & Purpose

By the end of the course the students will be able to:

- Learn healthy habits.
- Understand the social differences in Middle Ages.
- Have the interest and awareness of historic social customs.

Teaching Method: Reading, question & answer, giving examples, listening and translation.

Objectives/targets

- Improve English vocabulary and know specific names of food.
- Realize the changes in the menu along History.
- Create opinions about social differences.

Materials & Resources: Power Point, web, photocopies.

Activity and Method Description

- Pre-listening activity.
- True/False exercise is done.
- Reading and checking new vocabulary.
- Pronunciation and translation.
- Comprehension questions are checked.

Individual: students are guided to discover the social differences in Middle Ages.

Assessment

- To reinforce students' understanding of *past* and *present*. This can be done through using language to describe it.
- To compare similarities and differences between food from medieval times (fresh vegetables, little meat, legumes and nuts, no processed food) and today.
- To compare and contrast Medieval eating habits to our eating habits today.
- To allow students to gain an understanding of what life would have been like at the time and how customs have changed.

Teacher Guide

Teacher is the guide and mentor during the activity. After conducting research about medieval life in Europe (social, cultural, economic and political features) and the roles and relationships of different groups in society, and answering questions such as, How did one's role in medieval times influence their daily life?, What resources were available to a person living in medieval society? and, How was the power structure organized among various people in medieval society?, the topic about a typical diet of different social groups during Middle Ages, as well as their typical eating habits and manners, is used to discuss the constraints certain classes had during Middle Ages.

Additional Notes

Online resources that provided useful information and activities for students about the Ancient Greece included: "Medieval Times: The Middle Ages for Kids", "Medieval-life.net", "History on the Net.com: Medieval Life", "Heston's Medieval Feast".

Material used is available to the following link: <http://www.slideshare.net/matrixm/medieval-food-54352900>

“Our School, My Future” – EU Flags Project

Nikolaos Terpsiadis

Subject: Mathematics

Grade level: 1st (12-13y)

Summary: The aim of this educational activity is to attempt an approach to symmetry that gives the students the ability to perceive the mechanisms of the axis and the point symmetries and structure of the symmetrical shapes. The method used is cooperative, experiential learning with the aid of applications based on a software of dynamic geometry environment. Using descending guidance, the teacher gives the opportunity the students to self-act and get involved in problem solving procedures. Concluding to an open ended problem the students are urged to develop effective solving strategies and acquire qualitative and stable knowledge. The computer based dynamic geometry environment is able to visualize the complicated interactions that constitute the structure of the symmetries and symmetrical shapes. Additionally, the students improve their ICT skills using dynamic geometry software. Symmetry is very important for the development of geometric intuition. The conceptual understanding of the axes and point symmetries and the structures behind symmetry constructions, offers a powerful background, very important for the manipulation of complex situations of the theoretical geometry that they will encounter in the future.

Overview & Purpose: Developing the concepts of axis symmetry and point symmetry, improve ICT skills, developing cooperation skills, knowledge acquisition about the cooperating EU countries.

Teaching Method: Cooperative, experimental learning using computer based dynamic geometry environment.

Objectives/targets

Cognitive: Recognize and draw shapes that have symmetry axes. Recognize and draw shapes that have center of symmetry. Describe the structure and apply the properties of axis and point symmetry.

Skills: Practice and improve skills on dynamic geometry environment. Develop and apply creative ideas. Develop cooperation skills.

Emotional/moral/ethical: Joyance and feeling of achievement. Develop positive attitude towards mathematics.

Materials & Resources: Dynamic geometry software (Geogebra), applications on symmetry, worksheets, web.

Activity and Method Description

At the previous math lesson...

Introducing with the concepts of axis symmetry and point of symmetry and students practiced on these concepts.

During the math lesson at the ICT class ...

1st part: Students are forming 7 groups, each consisting of 4 students. The students work in use the applications on symmetry* according to the instructions embedded in a dynamic geometry environment. They discuss, trying to forecast the changes on the shapes. Then, they confirm or reject their conjectures using the environment of dynamic geometry of the applications.

2nd part: After they get familiar with the properties and functions of symmetries, the teacher of mathematics deals groups the worksheets. Each group is charged four European countries. The students have to find on the web and download the flags of the countries. Then they have to decide if the flags have axes symmetries and/or centers of symmetry, they will import the images in the environment of dynamic geometry (Geogebra) and they will test their conjectures.

Subsequently, the students must argue if the absence of horizontal or vertical symmetry axes is due to the shape or colors of each flag and they discuss what changes could be made to the flags to gain symmetry axes or/and center of symmetry.

3rd part: The teacher deals groups the second worksheet. The final task is to discuss the symmetries of the European Union flag and to propose new designs for a European Union flag according to different specifications for each group.

* Applications on symmetry are available on my web page: <http://users.sch.gr/anitus/> and are the following:

Axis symmetry: <http://tube.geogebra.org/student/m1036469>

Center of symmetry: <http://tube.geogebra.org/student/m706683>

Symmetrical shapes: <http://tube.geogebra.org/student/m1036829>, <http://tube.geogebra.org/student/m1036859>, <http://tube.geogebra.org/student/m1036859>, <http://tube.geogebra.org/student/m1036895>, <http://tube.geogebra.org/student/m1036907>

The design proposed must have:

- No symmetries at all (1st group).

- A vertical symmetry axis (2nd group).
- A horizontal symmetry axis (3rd group).
- A horizontal and a vertical symmetry axes (4th group).
- A center of symmetry (5th group).
- A center of symmetry and a vertical symmetry axis (6th group).
- A center of symmetry and a horizontal symmetry axis (7th group).
- A center of symmetry and two symmetry axes, a horizontal and a vertical (homework for all groups).

Each group will propose methods and techniques to obtain a drawing according to its specifications.

Assessment

Cognitive: Repeat 2nd part briefly, changing the worksheets to assign different flags to each group. Are the students able to recognize the symmetries? Use evaluation sheet containing with flags of other countries.

Skills: Formative evaluation of the improvement of ICT skills while the students work in the environment of dynamic geometry. Estimate the ability for creative and effective cooperation from the results of parts 2 and 3.

Emotional/moral/ethical: Questionnaire to investigate the improvement of students' views towards the project and mathematics.

Teacher Guide

- Ensure that, the dynamic geometry software (Geogebra) is installed on the computers of the ICT class.
- According to the student's interest and abilities, the activity can be extended using flags of other groups of countries or other categorization (by continents, G8, NATO, OPEC, OECD) and involve in a cross-curricular context other disciplines (history, sociology, economics).

Additional Notes

- The work of the groups will be collected and posted on the website of the school.
- Also, an exhibition with the students' works could be realized and a graffiti can be drawn in a cross-curricular context, in cooperation with the arts teacher. The discipline of geography can also be combined in a cross-curricular context with this activity.

Equations and the Balancing Scale

Nikolaos Terpsiadis

Subject: Mathematics

Grade level: 2st (13-14y)

Summary: The aim of this educational activity is to offer students an opportunity to rediscover and describe the equation solving algorithm. Through a cooperative learning method and using ICT support, the students are initially impelled to acknowledge the necessity of variable and detect its function in algebraic expressions while developing cooperation skills. A major conceptual breakthrough should be done by the students, is the differentiation of the idea that equal sign means the “result of a numerical operation” to the new concept of the “equivalence relation” where there are two equal parts that should remain equal after the algebraic transformations that we will attempt. Based on this criterion, the students are motivated to self-act and formulate the allowed transformations that lead to the steps of the solving equation algorithm. The recommended conceptual vehicle for this task is the balancing scale model. Using a guided rediscovery approach, the students will be able to distinguish between the equation and equality and they will get familiar with the abstract structures, a very important step for their advancement in pure algebraic procedures.

Overview & Purpose: Developing the concepts of variable, algebraic expression, equation. Approaching the algorithmic method of solving equation. Developing cooperation skills.

Teaching Method: Cooperative learning using ICT support. Guided rediscovery approach.

Objectives/targets

Cognitive: Acknowledge the necessity and detect the function of variable in algebraic expressions. Differentiate the meaning and function of the equal sign. Distinguish between the equation and equality. Rediscover and describe the equation solving algorithm.

Skills: Manage algebraic expressions. Solving equations (one variable, first degree). Develop cooperation skills.

Attitudes: Joyance and feeling of achievement. Develop positive attitude towards mathematics.

Materials & Resources: Power Point presentations, worksheets, web.

Activity and Method Description

Prerequisites...

Operations with positive and negative numbers, numeric expressions calculation, simple equations.

During the math lesson in the classroom...

1st part: Students are forming 5 groups, each consisting of 5 students. First we present and discuss a numerical puzzle that emerges the necessity and functionality of variable in solving problem situation. We evolve the translation procedures from the common language in mathematics language. We encourage the groups to create and propose their own numerical puzzle. The groups present their results to the class.

2nd part: We present the use of variables to form an algebraic expression, and how to do algebraic operations with variables. We introduce the procedure empirically assigning real objects to mathematical abstract objects (variables). We rely on the established idea that we can add only similar objects to introduce the similar terms reduction in algebra. Accordingly, we impel the groups to create and solve their own algebraic expressions. The groups present their results to the class.

3rd part: a) Since the students have achieved to manage algebraic expressions and to make the similar terms reduction, we can try to introduce the solving equation algorithm. Firstly we must achieve a breakthrough in the idea that the students have about the equal sign. The idea established in primary education is that equal sign means the “result of a numerical operation”. The new idea is that the equal sign means “an equivalence relation” where there are two equal parts that must remain equal after the algebraic transformations that we will attempt. This is the criterion for the allowable transformations. In order to differentiate the idea for the equal sign and to discover the allowable transformations, we use the model of the balancing scale. In the first step we introduce the representation on the scale of a simple equation, where the unknown is found in the left hand side of the equation. In the second step we introduce the representation on the scale of a more complex equation, where the unknown is found both in the two sides of the equation. In the third step we introduce the representation on the scale of an equation containing parentheses. In all three steps, the groups are called to discover the movements that will lead to the solution and translate them in algebraic transformations, thus in the steps of the solving equation algorithm. They write down their suggestions on the corresponding worksheets 1, 2 and 3. It is possible that each group will propose a different solution. The groups present their suggestions to the class. The different suggestions are compared and evaluated. b) Subsequently, the groups are impelled to create their own equations in both representations (scale and algebraic) on the worksheet 4. Then, they exchange their worksheets. Each group is called to solve the equation created by another group.

* Material used is available on my web page <http://users.sch.gr/anitus/> and on my channel on you tube <https://www.youtube.com/channel/UCnJr-FVubIke97sUhPAUYNA> and is the following: presentation for variables and algebraic operations: http://users.sch.gr/anitus/03_ekpaideytiko_yliko/ekpaideytiko_yliko.htm and the video of the presentation: <https://youtu.be/cCq0T3nvgX4> presentation for the solving equations algorithm: http://users.sch.gr/anitus/03_ekpaideytiko_yliko/ekpaideytiko_yliko.htm and the video of the presentation: https://youtu.be/bB_etW5JcFI worksheet 1: http://users.sch.gr/anitus/03_ekpaideytiko_yliko/equations-scale/Lesson2_worksheet-1.pdf worksheet 2: http://users.sch.gr/anitus/03_ekpaideytiko_yliko/equations-scale/Lesson2_worksheet-2.pdf worksheet 3: http://users.sch.gr/anitus/03_ekpaideytiko_yliko/equations-scale/Lesson2_worksheet-3.pdf

Assessment

Cognitive: Formative evaluation using the numerical puzzles and the algebraic expressions, created by the groups in parts 1 and 2. Formative and summative evaluation using the equations created by the groups in worksheets 1, 2 and 3 in part 3. We estimate if the students are able to differentiate the meaning and function of the equal sign, distinguish between the equation and equality and rediscover and describe the equation solving algorithm.

Skills: Summative evaluation using the results of worksheet 4 to estimate if the students are able to manage algebraic expressions and solve equations. We estimate the ability for creative and effective cooperation from the results of the phase b of parts 1, 2 and 3.

Emotional/moral/ethical: Questionnaire to investigate students' views towards the specific activity and mathematics generally.

Teacher Guide

- Ensure that the required infrastructure is available and functional.
- According to the student's interest and abilities, the activity can be extended with equations of higher difficulty and equations that exceed the solving equation algorithm.

Additional Notes

- Interactive web pages for self-evaluation can be created with the "Hot Potatoes" suite, created by the Victoria University.
- Students can use the uploaded educational material at home.

Inaccessible Points Distance Measurement and Proportional Reasoning – Maths Outside the Classroom

Nikolaos Terpsiadis

Subject: Mathematics

Grade level: 3rd (14-15y)

Summary: The aim of this educational module is to contribute to the acquisition of proportional reasoning, reclaiming episodes from the history of mathematics for educational purposes. The basis of this module is the historical problem of the inaccessible points distance measurement, originates in Thales way to speak about things that we can't observe and the immersion of the concept of proof in the ancient Greek mathematics. We form cooperative experiential activities where students self-act making conjectures and planning solutions on open ended - real world problems. Applications designed in dynamic geometry environment, support the deeper understanding of the mathematical structures that create similar triangles, using an informal approach on geometrical transformations (dilation, reflection and rotation). The math lesson outside the classroom offers students the opportunity to connect mathematics with the real world and helps to improve cooperation skills and students' attitude towards mathematics.

Overview & Purpose: Developing proportional reasoning and the concept of similarity. Developing problem solving strategies. Developing cooperation skills. Improving ICT skills.

Teaching Method: Cooperative, experiential learning using computer based dynamic geometry environment. Problem solving approach. Utilizing mathematics history for didactic purposes.

Objectives/targets

Cognitive: Recognize the similar triangles and formulate criteria for similarity. Export the analogies derived from the similarity of two triangles. Employ geometrical transformations (dilation (resizing), reflection, rotation) to identify similar triangles. Apply proportional reasoning in problem solving procedures.

Skills: Practice and improve ICT skills on dynamic geometry environment. Develop problem solving skills. Develop cooperation skills.

Attitudes: Joyance and feeling of achievement. Develop positive attitude towards mathematics.

Materials & Resources: Dynamic geometry software (Geogebra), interactive applications on similarity and geometrical transformations, Power Point presentation, web, tape measure.

Activity and Method Description

Prerequisites...

Basics on proportional reasoning, analogies. Solving equations, cross rates.

During the math lesson in the classroom...

1st part: Students are forming 5 groups, each consisting of 5 students. First we introduce a presentation about Thales. It contains elements from the history of mathematics and the context of his era, and it concludes in the method that Thales used to measure the height of the pyramid of Cheops. The groups are impelled to deepen in Thales method focusing on the similar triangles and the derived analogies, and asked to describe the triangles similarity in geometrical terms. The groups present their results and the teacher compares and concludes in theorems-rules for triangles similarity.

During the math lesson at the ICT classroom...

2nd part: We connect the method that Thales used to measure the pyramid's height with the historical problem of inaccessible points distance measurement. We ask the groups to make conjectures and write down such problems. The groups exchange problems and each group tries to solve the problem proposed by another group. We additionally propose the problem "how to measure a ship's distance from the coast" (attributed to Thales). The groups are asked to propose strategies to solve the open ended problems applying proportional reasoning and the theorems for similar triangles. The students use the interactive applications* in dynamic geometry environment, designed to help them to understand the structural properties of triangles similarity with the support of geometrical transformations (dilation (resizing), reflection, rotation). Subsequently, the students are asked to determine the kind of transformation or combination of transformations found in the similarities of the problems proposed by the groups at 2nd part, a.

A math lesson outside the classroom...

3rd part: a) In this part, we will apply experientially, in a real-world context, the methods previously detected. The groups are asked to frame and implement plans to measure inaccessible points' distances (horizontal and vertical) in the schoolyard. We suggest problems like the measurement of the height of a tree in the schoolyard, the height of the

school building, the distance between the flag poles of our school and the opposite school or/and other problems depended on and convenient to the conditions of the schoolyard. The groups should firstly discuss and develop a strategy on paper, and then apply it and calculate the inaccessible point's distances. b) The groups present their method and results to the class and discuss possible questions and propose other ideas that could contribute to the solution of each problem.

** Material used is available on my web page * Material used is available on my web page <http://users.sch.gr/anitus/> and on my channel on you tube <https://www.youtube.com/channel/UCnJr-FVublke97sUhpAUYNNA> and is the following...*

Thales and the pyramids (presentation): <http://youtu.be/eTkZuwMKUDE>

Geometrical transformations I, triangles similarity: <http://tube.geogebra.org/material/show/id/1344667> (application on geogebra tube), <http://tube.geogebra.org/m/1344667> (worksheet for students)

Geometrical transformations II, dilation: <http://tube.geogebra.org/material/show/id/1344845> (application on geogebra tube), <http://tube.geogebra.org/m/1344845> (worksheet for students)

Geometrical transformations III, dilation-reflection: <http://tube.geogebra.org/material/show/id/1345649> (application on geogebra tube), <http://tube.geogebra.org/m/1345649> (worksheet for students)

Geometrical transformations IV, dilation-rotation: <http://tube.geogebra.org/material/show/id/1345755> (application on geogebra tube), <http://tube.geogebra.org/m/1345755> (worksheet for students)

Assessment

Cognitive: Formative evaluation is using the results of 1st part, b. Formative and summative evaluation using the results of 2nd part, a. We estimate if the students are able 1) to solve open ended problems using triangles similarity and 2) create such problems, which is an indicator of deeper understanding and handling of proportional reasoning. Formative and summative evaluation using the results of 2nd part, b. We estimate if the students are able to employ geometrical transformations to identify similar triangles. Summative evaluation using the results of 3rd part. We estimate if the students are able to apply proportional reasoning in problem solving procedures.

Skills: Formative evaluation during 2nd part, b. We estimate the ICT skills improvement. Summative evaluation of 3rd part. We estimate if the students have developed problem solving skills.

Emotional/moral/ethical: Questionnaire to investigate students' views towards the specific activity and mathematics generally.

Teacher Guide

- Ensure that the required infrastructure is available and functional.
- Ensure that there are convenient conditions in the schoolyard for the 3rd part.
- Students' works should be collected for evaluation.

Additional Notes

- 2nd part could be extended as students can self-act and create their own applications on similarity in the dynamic geometry environment.
- Students can use the uploaded educational material at home.
- According to the student's interest and abilities, the 3rd part could be differentiated asking the groups to trace incommensurable points and formalize the problems.

Maths and Wellbeing: Healthy Habits and Fractions

Juan Antonio López Pérez

Subject: Mathematics

Grade level: 1 ESO_7th Grade

Summary: After reading literature about the issue and show them the charts related to healthy habits (links below), they will do the exercises, which will be corrected one by one, discussing about the pros and cons of physical exercise and the kind of foods. The first day, we have to make groups of four for the homework "my daily basis". The last day, they will do an average in groups of four and in general (about hours of sport done and calories ingested). After that, we will see if our average student is, or not, healthy enough. What should they do to be? What should we do to avoid the modern plagues?

Overview & Purpose: Connecting maths with healthy habits and daily activities, and emphasize the importance of sports and nutrition in our life.

Objectives/targets

- To raise interest on the topic of health.
- To introduce new vocabulary on the issue and reinforce the one they already have by practicing with it.
- To connect maths (fractions) with the common day usual activities, developing an inner insight of the part of a whole.
- To develop healthy habits.

Materials & Resources: Web for the access the literature.

Activity and Method Description

Activity 1: Mireia Belmonte trains of the whole day. For $\frac{3}{4}$ of this training time, she is swimming. What part of the day does Mireia devotes to swim? How many hours does it represent?

Activity 2: The amount of energy needed to keep your body warm is related to your basal metabolic rate (you burn calories even if you stayed in bed the whole day!). Marc has a BMR of 2100, and he takes some 2800 calories a day. If he wants to keep his weight through exercise... what part of his energetic outlay must be devoted to it? If he wastes 900 calories an hour running... how long must he run to achieve his goal? What part of the day is it?

Activity 3: Children need some 7 hours of physical exercise a week - it is, some one hour a day-. It includes moderate to vigorous intensity activity. We must include 3 days of vigorous - intensity activity a week (running, for instance). It is recommended to do muscle strengthening activity (such as gymnastics) as well as bone strengthening (jumping rope, running...) at least 3 days a week.

- Create a planning to do this amount of exercise a week. Remember you have to have from one to three days a week to rest. What part of the whole amount needed will you do each day?

Activity 4: According to the following nutritional pyramid... What fraction corresponds to the level 1 food? And to the fats/sweets? How close is your diet to this ideal one in the picture?



Homework: My daily basis: Work out the amount of calories you ingest day by day, and the amount you burn. How long do you do exercise a day? How many hours a week? What part of the week do you devote to develop your body by physical activity? Compare with the plan you did in activity 3. How close is it to the one you proposed?

Assessment

- Take into account the active participation of students.
- Exercises done during the class and homework. Special attention to "My daily basis".
- Test about the issue.

Teacher Guide

Introduction about healthy habits. Talk about the first world new plagues: Obesity, diabetes and cholesterol. How to prevent them? Provide charts of healthy exercise and food balance. Minimum of calories need to keep our body warmth so we can keep fit and out of food disorders. After each activity corrected, we must promote a debate about what we think is good for us and what is not (because of lack or excess).

Additional Notes

Pay attention in case of children with food disorders.

Online resources:

http://www.noo.org.uk/NOO_about_obesity/lifestyle

http://www.lne.es/especiales/juegos-olimpicos/2012/08/entrena-mireia-belmonte-dias-n31_30_1031.html

<http://www.swimvortex.com/on-high-in-the-sierra-nevada-the-longest-day-in-the-life-of-mireia-belmonte/>

<http://www.caloriecount.com/tools/calories-burned>

<https://www.fitwatch.com/caloriesburned>

<http://www.bmi-calculator.net/bmr-calculator/harris-benedict-equation/>

<http://www.cdc.gov/physicalactivity/everyone/guidelines/children.html>

http://en.wikipedia.org/wiki/Lifestyle_disease

Sports and Health

Maria José Martín Castro

Subject: Mathematics

Grade level: 2 ESO_8th Grade

Summary: Start the class with a reading related to The Health Benefits of Sport and Physical Activity. Consider this as an introduction where students will be aware of the importance of healthy habits in their lives. Before doing the worksheet about health and sports, students will do exercises about geometry found in the interactive website "Maths is Fun". Exercises about sports included in this activity should be done in class so comments about healthy habits among students will be raised.

Overview & Purpose: To raise interest on the topic of sports and health through math activities.

Objectives/targets

- To raise interest on the topic of sports.
- To reinforce students' vocabulary related to the topic.
- To introduce the new vocabulary.
- To practice the new vocabulary.
- To revise and to practise ways of giving a piece of advice.
- To use fundamental concepts of geometry, including definitions, basic constructions, and tools of geometry.

Activity and Method Description

Introduction reading: The Health Benefits of Sport and Physical Activity (see Annex 2).

Activities: Problems about areas and volumes (see Annex 1).

Assessment

- Review according to: tests, study book, exercise book.
- The teacher gives marks for the students' active participation.
- Homework.
- An exam about the lesson.

Teacher Guide

Teacher is the guide during the activity.

1. Introductory phase:

- reading about the health benefits of sport
- reference to formulas
- perform lesson subject

2. Implementation phase:

- students get photocopy of the exercises and work on them
- after doing exercises, the group discuss the tasks
- teacher asks questions about the topic and writes the answers on the board

Additional Notes

Online resources:

<http://www.attitude.org.in/tennis-court>

http://en.wikipedia.org/wiki/Tennis_court

https://es.wikipedia.org/wiki/Michael_Phelps

<http://www.algebra.com/algebra/homework/Points-lines-and-rays/Points-lines-and-rays.faq.question.336554.html>

http://www.sportanddev.org/en/learnmore/sport_and_health/the_health_benefits_of_sport_and_physical_activity/

<http://www.mathsisfun.com/geometry/plane-geometry.html>

ANNEX 1

INTRODUCTION READING: The Health Benefits of Sport and Physical Activity.

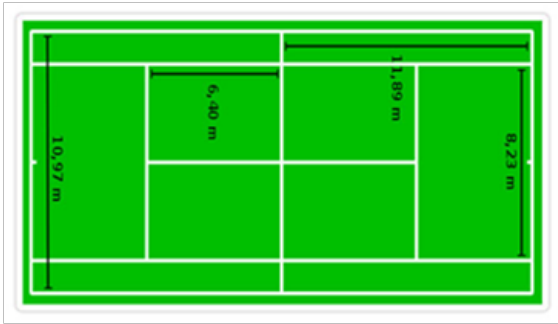
Although research interest on physical activity and health dates back to the 1950s, the breakthrough in the scientific evidence on health benefits of physical activity largely took place during the 1980s and 1990s. There is an overwhelming amount of scientific evidence on the positive effects of sport and physical activity as part of a healthy lifestyle. The positive, direct effects of engaging in regular physical activity are particularly apparent in the prevention of several chronic diseases, including: cardiovascular disease, diabetes, cancer, hypertension, obesity, depression and osteoporosis.

ANNEX 2

ACTIVITIES: Problems about areas and volumes.

1. Tennis is played on a rectangular flat surface, usually of grass or clay. The court is 23.78 meters long, 10.97 meters wide.

a) Find the perimeter of the court & b) find the area of the court:



2. Michael Phelps is the most decorated Olympian of all time. Considering that an Olympic-size swimming pool is approximately 50 m in length, 25 m in width, and 2 m in depth, calculate the volume of water in which he swims when he competes.

3. An Olympic swimming pool has a 0,5 m wide sidewalk around it. How much fencing is needed to enclose the sidewalk and what is the area of the sidewalk?

4. A tennis ball has a radius of 4,2 cm.

a) Calculate its volume & b) calculate its surface.

5. A tennis ball can in the shape of a cylinder holds three tennis balls snugly. If the radius of a tennis ball is 3.5 cm, what percentage of the tennis ball can is occupied by air? Calculate its volume.

Food & Nutrition

María Dolores Castillo Serrano

Subject: Natural Sciences

Grade level: 3 ESO_9th Grade

Summary: 1. Introduction phase: -Reading about food and nutrients. -Perform lesson subject. 2. Implementation phase: -Students get photocopy of the exercises and work. -After doing exercises, the group discuss the tasks. -Teacher asks questions about the topic and writes the answers on the board. 3. Final task: The teacher will provide the students with some links (see LITERATURE) in order the students to go into details about health and nutrition.

Overview & Purpose: Raising interest on the topic of health.

Objectives/targets

- Understanding the differences between feeding and nutrition.
- Describing the Mediterranean diet and explaining why it is so important.
- Categorizing foods into food groups to choose the recommended amount of nutrient-rich foods.
- Preventing illness which are caused by inadequate diet (obesity, anorexia, hypertension and so on).

Materials & Resources: Power Point, web, photocopies.

Activity and Method Description

1. Introduction reading: In this phase students read information about the topic from the reading book and internet (see Annex 1).

- Food and nutrients.
- Food groups.
- Mediterranean diet.
- Adequate and inadequate diets.
- Influence of feeding in health.

2. Activities about nutrients, types of diets, Mediterranean diet and negative consequences of inadequate diets (see Annex 2).

Assessment

- Review according to: tests, study book, exercise book.
- The teacher gives marks for the students' active participation.
- Homework.
- Exam about the lesson.

Teacher Guide

Teacher is the informant, guide and mentor for production stage.

Additional Notes

Online resources:

<http://www.healthyeating.org/Schools/Classroom-Programs/High-School.aspx>

<http://www.healthyeating.org/Healthy-Kids/Kids-Games-Activities.aspx>

<https://sites.google.com/site/webquestfeedingandnutrition/step-1>

http://cgmsfacs.home.comcast.net/~cgmsfacs/wq_nutrition.htm

<http://www.dietsciencenews.com/feature-articles/nutrition-for-kids-activities-webquests/>

ANNEX 1

Read about the nutrients and answer the questions...

MATCH THE FOOD TO THE NUTRIENTS.

ENERGETIC NEEDS.

FUNCTIONAL NEEDS.

STRUCTURAL NEEDS.

NUTRIENTS.

Food provides us with the nutrients necessary for our bodies to grow and carry out vital functions...

Starch. Oil. Honey. Butter.

A BALANCED DIET. THE MAIN NUTRIENTS, SUGARS, LIPIDS, PROTEINS, MINERALS, WATER, VITAMINS, COMPLETE.

What are the proteins made of?

How many of these are there in the body?

Where can we find minerals? Simple sugar. Complex sugar. Saturated fat. Unsaturated fat.

To maintain the activity of all our cells, tissues and organs and do some physical activity.

To build and repair biological structures.

To ensure that metabolic reactions happen effectively, organs function normally and all parts of our body work well together. Eat a variety of different food. Eat several times a day. Eat fresh vegetables. Avoid precooked foods. Include unsaturated fats. Reduce your intake of foods rich in saturated fats and cholesterol. Consume fibre-rich foods every day.

ANNEX 2

THE MEDITERRANEAN DIET

The basic foods in a Mediterranean diet are olive oil, cereals, green vegetables, fish and fruit.

Helps us against circulatory diseases caused by too much cholesterol in the blood,

Helps prevent constipation, colon cancer and obesity.

COMPLETE

Simple sugars have a ... taste, they are ... and they are ... in water. Examples of these are ... which are found in ... and fruit.

Di-saccharides are formed by the combination of two ... and our body separates them in order to use them. Sucrose in ... and ... in milk are examples of these.

Food ... three types of needs in our body. (satisfy)

Our bodies ... energy to do physical activity. (need)

Proteins ... the most important structural nutrients. (be)

Your body ... energy to breathe and to keep your blood flowing. (use)

Respiration ... a combination of chemical reactions. (be)

Make a table with the information about your dietary habits... Analyze your diet...

How healthy is your diet? Do you eat enough fruits and fresh vegetables? Do you consume a variety of different food?

Do you include unsaturated fats in your diet? Do you consume fibre-rich foods every day? Could an inappropriate diet cause healthy problems? Answer the questions...

High-calorie diets can cause ...

Too much cholesterol can cause ... problems.

Too many amino acids can cause problems for the liver and...

You are ready to think about your diet.

Eating well is key to maintaining strength, energy, a healthy immune system and general lung health.

The Digestive System

Juan Manuel Barroso Fernández

Subject: Biology

Grade level: 3 ESO_9th Grade

Summary: 1. Introduction phase: a) Reading about food and nutrients. b) Perform lesson subject. 2. Implementation phase: a) Students get photocopy of the exercises and work. b) After doing exercises, the group discusses the tasks. c) Teacher asks questions about the topic and writes the answers on the board. 3. Final task: The teacher will provide the students with some links (see Literature) in order the students to go into details about the topic.

Overview & Purpose: To raise interest on the process of nutrition and specifically on anatomy and physiology of the digestive system.

Objectives/targets

- To raise interest on the biological process of nutrition.
- To reinforce students' vocabulary related to the topic.
- To introduce and practice the new vocabulary.
- To revise and to practice ways of explaining a process.
- To use fundamental concepts of anatomy and physiology, including definitions, basic processes and the chemical and physical support for these phenomena.

Activity and Method Description

1. Introduction reading: In this phase students read information about the topic from the reading book and internet.
 - Organ Systems related to nutrition.
 - Structure, anatomy and physiology of the Digestive System. The digestive process.
2. Activities about anatomy and physiology of the digestive system.
3. Overview of the topic, using Power Point presentation [<http://www.slideshare.net/matrixm/ppt-the-digestive-system-jmbf>].

Assessment

- Review according to: tests, study book, exercise book.
- The teacher gives marks for the students' active participation.
- Homework.
- Exam about the lesson.

Teacher Guide

Teacher is the guide and mentor for production stage.

Additional Notes

Online resources:

<http://classes.midlandstech.com/carterp/Courses/bio211/chap23/chap23.htm>

<http://www.ahealthyme.com/Imagebank/digestive.swf>

<http://www.biographixmedia.com/stew/sbir/digestive.swf>

<http://hopkins-gi.nts.jhu.edu/images/shared/home/database/DigestiveSystem.swf>

http://www.open2.net/everwonderedfood/interactives/digestive_system.swf

http://www.firstresponder.emszone.com/swf/CH04_Fig14.swf

<http://www.giassoc.org/anatomy1.swf>

http://www.upa.pdx.edu/IMS/currentprojects/TAH_Old%20Backup/Tester/MOD_3_DIGESTION.swf

<http://mistupid.com/health/teeth.swf>

<http://www.tutorvista.com/content/biology/biology-iv/animal-nutrition/digestive-system-animation.php>

Vegetative Organs of Seed Plants: Comparison & Function

Jolanta Kucharsa - Jurek

Subject: Biology

Grade level: Advanced level (12-13y)

Summary: This educational activity refers to an advanced level of students' previous Knowledge. The main aim is to focused on dynamic process of teaching and making a positive teacher-student and student-student atmosphere. Through their cooperation and team work, students will have the opportunity to explore and, finally, acquire new knowledge.

Overview & Purpose: Students will acquire skills of comparison and functions of vegetative organs of seed plants.

Teaching Method: Cooperative, group working, using the microscope, brain storming.

Objectives/targets

Students will learn to/about:

- The similarities and differences in build and function of vegetative organs in plants.
- Skillfully use a microscope.
- Perform an observation of biological material.
- Make scheme of objects and well describe it.
- Skillfully working in group.
- Express an objective group opinion.

Materials & Resources: Microscope, plants, copies o summary tables (the build of root, stem and leaves, internal/ external build etc), web.

Activity and Method Description

During the first part of the lesson (theoretical)...

Students use known theoretical knowledge related with the build of vegetative organs, to check their skills related with the knowledge build vegetative organs. They are describing the scheme of build root, stem and leaves and checking with the model. This activity will allow students to describe the level of difficulty and make clear to the teacher where most of the students are facing difficulties.

During the second part of the lesson (practical)...

Students are working on groups and with the use of microscope, learn to observe, fill and extend the acquire knowledge. At the end of the observation every group announces an objective opinion, regarding the research question that was, previously, assigned by the teacher.

Assessment

Check of the students' response to the tasks/activities, during the whole lesson time and mark their work on the basis of summary tables which they ave to fill in (use different summary table for every research question). At the closure phase of the lesson, teacher (together with all the groups of students) make comments about each groups' objective opinion about the given research question, and -if needed- indicates the correct answers.

Teacher Guide

During the introductory phase: Organizational issues, reminder and reference to the last taught lesson, students' reminder "what are vegetative organs and their functions?". Perform lesson subject.

During the implementation phase: Students get photocopy of the build of vegetative organs of plants and instruction to exercises and start working in double groups. They discuss the tasks assigned to every member of their group. Teacher marks what is necessary and let students find the correct answers. They have to recognize root's system of plants, describe root's building, recognize tissues occurring in primary root's building, describe primary stem's build, select similarities and differences occurring in primary root and stem's build, describe scheme perform morphological leaves' building and recognize/describe tissues occurring in their leave. Students perform microscopic observation of specimen vegetative organs, recognize tissues and do schemes with an indication the amount of recognized elements of construction.

During the summary phase: Students (group and/or individually) fill the tables prepared by teacher on the purposes of verification of knowledge.

Additional Notes

During the application of the teaching activity, i noticed that students, when working in groups, could fix difficult material and actively participated to the lessons procedures. Moreover, they willingly answered questions and were interested in lesson more than usual. A kind teaching atmosphere was created and -beyond the new knowledge they gained- they had an important didactic experience.

To another version of the same teaching activity, during its' first part, i presented part of a film, related to vegetative organs plants that shows the process that, in fact, takes part in nature. At the end of the lesson, students reported that this was very interesting and motivated them to actively involve to all the lessons' activities, despite the subjects extra-difficulty.

The Effect of Catalysts on the Reaction Rate. Inhibitors

Gherghinoiu Georgeta

Subject: Chemistry

Grade level: 12th technological profile (15-16 y)

Summary: The activity refers to a lesson of acquiring new knowledge and reinforcing the previously taught knowledge and it is a part of the learning unit "Notions of Chemical Kinetics". Its duration is 50 minutes into the chemistry lab, where students are working collective and individual.

Conceptual content: Catalysts - the influence of Iron Chloride ($FeCl_3$) solution and manganese oxide (MnO_2) powder on decomposing the hydrogen peroxide reaction, inhibitors (poisons), the practical importance of these reactions.

Teaching Method: Modeling, conversation, lab experiments, guided discovery, using worksheets with experimental activity.

Objectives/targets

Formative: 1) Acquiring appropriate chemical vocabulary, 2) developing the observation spirit and the interpretation spirit of experimental observations, 3) proper use of information and the ability to use it.

Skills: 1) Structuring prior knowledge in order to explain the properties of a chemical system, 2) interpretation of phenomena features / systems studied, in order to identify their applications, 3) using investigation in order to obtain scientific explanations, 4) using appropriate scientific terminology so as to describe or explain phenomena and processes.

Derivative competencies: 1) Graphically modeling the equations of the chemical reactions occurring under catalytic conditions, based on the information given by the teacher, 2) interpreting the effect of the catalysts on the rate of reaction, based on experimental observations, 3) identifying the practical applications of the catalytic reactions.

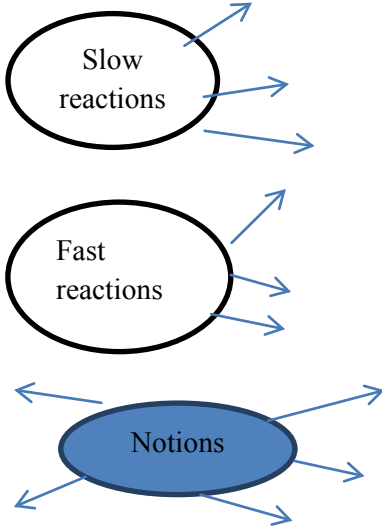
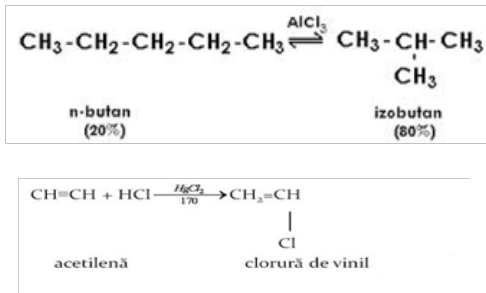
Materials & Resources

Educational means, equipment and teaching materials: Experimental activity worksheet, substances (sol. 3% H_2O_2 , soil. $FeCl_3$, MnO_2 powder) lab glassware and tools, computer, video projector.

Human resources: 12th grade students, a heterogeneous class in which only 3-4 students study thoroughly, while 8-9 students are able to acquire basic knowledge, and the rest of the students have gaps in writing chemical formulas and in making mathematical calculations.

Activity and Method Description

Steps of the lesson	Teachers' activity	Students' activity
1. Organization moment	Checks the attendance and ensures order and discipline in the classroom	Prepare their notebooks and tell their teacher who are the absent students
2. Getting students' attention	Many of the enzymes act on the human body. This action can be a direct one (the enzymes participate at metabolic reactions or at other reactions as biocatalysts) or an indirect one (presents another type of physiological reaction). For this reason, the enzymes produced by micro organisms, by plants or by animals were used in ancient times by humans. On this basis, it was possible to obtain fermentation products (alcoholic beverages, pickles, milk, etc.) as well as digestive and metabolic stimulants. In the human body there are produced every second, thousands of enzymes. Any enzyme deficiency is felt pretty hard by the body. Enzymes are found in honey, egg yolk raw, in fresh raw fruits and vegetables. Fruit enzymes ensure a fast stimulation of the digestion, as the enzymes eliminate pretty fast in the human body. The ferments of the leaves, though having no strong action on humans, show dietary and curative...	Listen to the teacher's explanations and answer teacher's questions

Steps of the lesson	Teachers' activity	Students' activity
	...definite advantages. They gradually release because they are trapped in the fabric of plant fibers. Precisely the fact that the action of these enzymes persists during a long period of time, greens are extremely healthy. Amongst the herbs, there are also species that contain ferments. They were called enzymatic plants.	
3. Reinforcing previous taught knowledge	Draws two circles on the flipchart worksheet, on which he writes down slow and fast chemical reactions, asking students to give examples of such reactions. Also, asks them to write three concepts learned in this chapter. He/she leads students' responses about the concepts on slow and fast chemical reactions	 <p>Complete the scheme, answer the questions and correct the answers of their colleagues</p>
4. Announcing the title of the lesson and its objectives	Announces the title of the lesson and inform students on the lesson's aim, namely to establish the effect of catalysts on the reaction rate, making all the necessary experiments in this respect, knowing how to write properly the equations corresponding to the chemical reactions, determining how to make use of these reactions	Put down the title of the lesson
5. Direct learning	<ul style="list-style-type: none"> • Draws two circles on the flip-chart worksheet, on which he writes down slow and fast chemical reactions, asking students to give examples of such reactions. Also, asks them to write three concepts learned in this chapter. He/she leads students' responses about the concepts on slow and fast chemical reactions • Uses the dialogue to lead her students to resuming the concepts previously taught in the XI th grade at Organic Chemistry subject: butane isomerization reaction, the addition of HCl to acetylene • Asks students what those symbols on the arrows stand for • Presents the experimental activity worksheet and performs the experiment 	 <ul style="list-style-type: none"> • Complete the equations corresponding to the chemical reactions • Answer teacher's questions • Write down the definition of a catalyst

Steps of the lesson	Teachers' activity	Students' activity
	<p>Information: Catalysts are chemical compounds that increase the rate of a chemical reaction, which can be found qualitatively and quantitatively speaking, unchanged at the end of the chemical reaction</p> <p>Conclusion: the hydrogen peroxide decomposes spontaneously, slowly releasing oxygen. FeCl₃ solution, and MnO₂ powder act as a catalyst, speeding the reaction rate. Glass is also a catalyst of this chemical reaction, therefore, it is recommended to use plastic pots when hydrogen peroxide is involved in chemical reactions. Hydrogen peroxide has a disinfecting action in treating wounds, as oxygen is released during the process.</p> <p>Information: the same substance in the presence of different catalysts leads to different chemical reaction products</p> <p>Information: catalysts are chemical compounds that increase the rate of chemical reactions which can be found qualitatively and quantitatively unchanged at the end of the reaction</p> <ul style="list-style-type: none"> • Presents experimental activity worksheet and performs the experiment reaction <p>Conclusion: hydrogen peroxide decomposes spontaneously, slowly releasing oxygen. FeCl₃ solution and MnO₂ powder speed the reaction rate, acting as a catalyst</p> <ul style="list-style-type: none"> • Ask students to complete the equations corresponding to the transformation of ethanol into ethane and into acetaldehyde <p>Conclusion: catalysts act selectively influencing the speed of a certain chemical reaction</p> <p>Information: the chemical compounds that reduce the reaction rate or even prevent a chemical reaction to take place are called inhibitors or poisons. The teacher asks students to complete the addition chemical reactions of hydrogen to acetylene in the presence of Ni and in the presence of poisoned salty Pb</p>	<ul style="list-style-type: none"> • Write down their observations on the experimental worksheet • Write down the equations corresponding to the chemical reactions, helped by their teacher • Correct their mistakes $2\text{H}_2\text{O}_2(\text{l}) \rightarrow 2\text{H}_2\text{O}(\text{l}) + \text{O}_2(\text{g})$ Al_2O_3 $\text{CH}_3\text{-CH}_2\text{-OH} \xrightarrow{300^\circ\text{C}} \text{CH}_2=\text{CH}_2 + \text{H}_2\text{O}$ Cu $\text{CH}_3\text{-CH}_2\text{-OH} \xrightarrow{300^\circ\text{C}} \text{CH}_3\text{-CH}=\text{O} + \text{H}_2$ Ni $\text{CH}\equiv\text{CH} + 2\text{H}_2 \rightarrow \text{CH}_3\text{-CH}_3$ $\text{Pd/Pb}+2$ $\text{CH}\equiv\text{CH} + \text{H}_2 \rightarrow \text{CH}_2=\text{CH}_2$
6. Achieving performance - result	Asks students to solve the problem: what volume of 44.8 L ethane is obtained from acetylene, if the reaction rate is 80%?	<ul style="list-style-type: none"> • Solve the following problem, using the appropriate equation of this chemical reaction • Correct their mistakes 44.8 L x $\text{CH}\equiv\text{CH} + \text{H}_2 = \text{CH}_2 + \text{H}_2 \rightarrow$ $22.4 \text{ L} \quad 22.4 \text{ L}$ $X = 44.8 \text{ L}$ $44.8 \text{ L} \dots 100\%$ $Y \dots 80\%$ $Y = 35.84 \text{ L ethene}$

Steps of the lesson	Teachers' activity	Students' activity
7. Receiving feedback	<ul style="list-style-type: none"> •Asks students to add on the flipchart worksheet the concepts learned during the lesson •Checks to see what concepts the students have understood throughout the lesson and insists on the misunderstood items 	Complete the flipchart worksheet with notions learned during the lesson: the concept of catalyst and the concept of inhibitor
8. Formative assessment test	<ul style="list-style-type: none"> •Shows the formative assessment test: <ul style="list-style-type: none"> -The catalysts ... the reaction rate. (increase/decrease) -The inhibitors ... a chemical reaction -The reaction rate can be expressed by ... molar concentration of a reactive within a certain period of time. (increase/decrease) reaction. •Analyzes the way of solving the test by the students, so as to obtain the necessary information to get an idea about the new pieces of knowledge acquired by the students during that particular class 	<ul style="list-style-type: none"> •Solve the test •Pay attention to their teacher's directions with respect to the test •Fill in the blanks: <ul style="list-style-type: none"> -The catalysts [speed] up the reaction rate. (increase/decrease) -The inhibitors [slow down a] chemical reaction (slow/accelerate) -The reaction rate can be expressed by a [decrease of] the molar concentration of a reactive within a certain period of time. (increase/decrease) •Correct their mistakes
9. Ensuring retention and transfer of information	<ul style="list-style-type: none"> •Evaluates students who participated during the lesson, it praises those who have responded well and encourages those who have not responded correctly •Proposes homework: ex. III/pg.139 from the textbook 	Write down their homework

Assessment

•Systematic observation of students and solving experimental worksheet:

NAME OF THE EXPERIMENT	CHEMICAL SUBSTANCES AND TOOLS	WAY OF WORK	EQUATIONS CORRESPONDING TO THE CHEMICAL REACTIONS	OBSERVATIONS
The effect of the catalysts upon the reaction rate	Sol. H ₂ O ₂ 3% Sol. FeCl ₃ MnO ₂ powder tubes, pipettes, test tube racks, spoons, matchstick	The Pour 2 ml of 3% hydrogen peroxide solution in three test tubes Tube 1 is used for comparison only. In test tube no 2 we add 2-3 mL solution of FeCl ₃ , using a pipette In tube no 3 we add very little manganese dioxide. Introduce a matchstick in every tube, without touching your solution	2H ₂ O ₂ → 2H ₂ O + O ₂	The tubes gas evolution was observed, the most intense gas being produced by the tube containing manganese dioxide

Teacher Guide

Foreseeing the upcoming problems, such as the properly writing chemical reaction equations and the correct name of the reaction products.

Principles of Newtonian Mechanics - Types of Forces

Ștefureac Crina

Subject: Physics

Grade level: 9th (12-13y)

Overview & Purpose: Revision and systematization of knowledge about the principles of Newtonian mechanics and the types of forces. Knowing and understanding of terms and concepts specific to the field of physics, developing the capacity for analysis and problem solving.

Teaching Method: Conversation for fixing-systematization the knowledge, algorithmization, solving exercises.

Forms of activity: Frontal, in order to reinforce knowledge and individual, for solving the proposed problems.

Objectives/targets

Formulate the principles of Newtonian mechanics (O1), define the main types of forces and to write down mathematical relation of computation for these modules and indicating the significance of physical measures involved in the process (O2), recognize and represent graphically the forces acting in a particular case (O3), solve simple problems by applying the principles of mechanics (O4).

Materials & Resources: Text and exercise book, projector (or smart board), web.

Activity and Method Description

Stage/didactic event	Teaching activity		Objective (s)
	Teacher	Student	
Organizational	Checking the attendance, capturing students' attention	Preparing for the lesson	
Presentation	Presents the revision scheme of the concepts taught in the book chapter	Focus on the revision scheme	
Revising - systematizing the concepts previously taught in the section "Principles of Newtonian mechanics. Types of forces"	<ul style="list-style-type: none"> Asks questions from a prepared list* Present some examples at the smart board, using the web 	<ul style="list-style-type: none"> Answer to the questions Write down the equation of the second principle Write on the board and in their notebooks the relations for weight, for the friction force, the tension force, the elastic force. Identify the types of forces acting in concrete situations 	O2, O3
Solving problems with different types of forces	<ul style="list-style-type: none"> Presents the worksheet with problems Nominates the students who will solve the problems on the blackboard, verifies students' work in their notebooks Gives students an individual problem to solve 	<ul style="list-style-type: none"> Propose solutions Come to the board to solve problems Work in their notebooks 	O3, O4
Assessment/closing	<ul style="list-style-type: none"> Appreciates and gives marks to the students Gives homework, individualize when needed 	<ul style="list-style-type: none"> Focus on the revision scheme Note their homework 	O1, O2, O3, O4

Assessment: Question based evaluation (closing stage) and systematic observation of the students (during the whole lesson time).

* Question list: Who was the first to formulate the principles of classic mechanics? What does the 1st principle state? Which the definition of inertia? Which is the measure of inertia of a corps? What does the 2nd principle state? Write the equation of the 2nd principle. What does the 3rd principle state? What kind of forces do you know? Which are the relationships to determine the modules of the forces (provide examples, represent graphically the forces etc).

Homemade or Commercial Toothpastes?

Nikolaos Georgolios

Subject: Chemistry

Grade level: 3rd (14-15y)

Summary: During the latest years there is a tendency of the people to conduct their lives in ways consistent with sustainability, which means respect to the environment resources. These thoughts urged us to make a useful and home-made material, using some other pure materials.

Overview & Purpose: This lesson is created in order to be taught into the lab, where all students will participate preparing a homemade toothpaste by scratch, using simple pure materials. The predominant idea and the main purpose is to develop an alternative way of learning, which will motivate all students, independently of their knowledge, targeting in exploiting their individual skills.

Teaching Method: The new tendency in education is to find alternative methods to motivate all students to actively participate. In addition, students must learn to communicate and collaborate, research, collect and synthesize information. The proposed teaching method is based in cooperative and inquiry based learning, by exploiting the ICTs. Students are going to develop hands-on activities in a chemistry lab, unfolding their skills beyond a concrete cognitive type lesson.

Objectives/targets

The inspiration to prepare homemade toothpaste came from the book-chapter of mixtures, in the chemistry course. The main target is to enforce the better understanding of the properties of a mixture. In this frame, students prepare their own mixture (a toothpaste) by scratch and easily realize how in a mixture the properties of its ingredients are preserved. In addition, they have the opportunity to realize the importance of science in our everyday life.

Materials & Resources: Most of the materials used were driven from everyday life (as baking soda, salt, etc). Extended research in the web was carried out, in order to find out the proper references.

Activity and Method Description

Students are searching in the web to find information about homemade toothpastes. Then, they are divided into groups, assess the data they have collected and try to apply the most suitable producing method. As they discover, baking soda and salt are thoroughly blended with glycerin till a creamy mixture will be produced. Also, other ingredients are added at the end of the procedure. At the end, students concluded that the most successful recipe for their toothpaste consisted of: 45% baking soda, 16% salt (table salt), 29% vegetable glycerin, 8% water, about 2% citric acid, essence oils (all percentages are w/w). The abrasive and whitening properties were tested by cleaning the shell of eggs, which were previously dyed with natural pigments extracted from black tea, onion, red cabbage.

A more detailed description is available to the following link

<http://www.slideshare.net/matrixm/georgolios-homemade-or-commercial-toothpastes>

Assessment

Based on the following students' evaluation sheet

<http://www.slideshare.net/matrixm/chemistry-evaluation-sheet>

Land Relief - The Main Relief Units

Teodorescu Mihaela

Subject: Geography

Grade level: 9th-a (12-13y)

General Competence

- Use correct terminology to explain specific geographic environment using different languages.
- Relation elements and phenomena of reality (nature and society) with their cartographic representation, charts, satellite images or patterns.
- Acquiring skills, abilities, general learning methods and techniques (including ICT) to facilitate the training undertaken.
- Acquiring social skills, interpersonal, inter cultural, civic and business based on geographical study.

Specific Skills

- The use of scientific terminology and to make a specific disciplinary pertinent information.
- The rationale of explanatory approach.
- Working with symbols, signs and conventions.
- Building a structured text or graphics using a cartographic information.
- Use of direct or mediated analysis methods.

Operational Powers

Cognitive

- The main relief units to define land using scientific terminology.
- Classify landforms by certain criteria (genesis, size, height).
- Briefly characterize major relief units land.
- Specify major relief units genesis land.

Formative

- Locate on map relief units worldwide (plains, plateaus, hills, mountains).

Attitudinal

- To develop interest in the knowledge of natural processes and phenomena.

Teaching Method: Strategies: directed , cognitive, heuristics, conversation. Methods: exposure, explanation , comparison, problem solving, working with map.

Rating: Checking oral frontal observation systems.

Materials & Resources: Pictures, schematic drawings, manual, physical map of the world, atlas, web.

Activity and Method Description

Teaching sequences	Teaching activity	
	Teacher	Student
Arrangements - 3 min	Rate absences and create an optimal climate for the hour	Preparing for the lesson
Check previous knowledge - 10 min	<ul style="list-style-type: none">• Ask questions about the contents previously learned:<ul style="list-style-type: none">-What is the internal structure of the Earth?- Specify 2 characteristics of each shell of the Earth-What phenomena occur at the contact of 2 tectonic plates?-What is formed crust?-Mention two examples of each category of rocks	Think , analyze and respond

Teaching sequences	Teaching activity	
	Teacher	Student
<ul style="list-style-type: none"> • Preparing a perceptible - 5 min • Leading teaching, learning - 23 min 	<ul style="list-style-type: none"> -What is any unevenness of the earth's crust? -What is a landforms composed? • Provides knowledge • Defines the landscape • Ask students to identify landforms and classification criteria • Requires students to characterize each land-form based on graphics and text manually • Ask students to give examples of land-forms and locate them on the map 	<ul style="list-style-type: none"> • Try to define relief • Thinking and respond • Pay attention to the teacher and completed in notebooks • Emit opinions • Are careful explanations
Obtaining performance - 2-3 min	<ul style="list-style-type: none"> • Creates a problem • What are the differences between mountains and plains • Provides explanations on the issue date 	<ul style="list-style-type: none"> • Think , analyze and help the teacher gives the correct answer
Ensuring and enhancing retention and transfer of knowledge - 2 -3 min	<ul style="list-style-type: none"> • Ask students to specify the natural causes that have the effect of changing the appearance of major relief • Critical analyzes , ranks notes 	<ul style="list-style-type: none"> • Analyze and respond
Specify the activities that students will carry home -2 min	<ul style="list-style-type: none"> • The prepared scheme lesson "Units main relief they land" http://www.slideshare.net/matrixm/scheme-lesson-geografie • Making applications of manual 	<ul style="list-style-type: none"> • Listen and note

Geography of the continents outside EU - Asia

Teodorescu Mihaela

Subject: Geography (topic: Turkey)

Grade level: 7th-a (11-12y)

General Competence

- Using specific language in presenting and explaining the geographical reality.
- Proper use of proper names and terms in foreign languages.
- Reporting the geographical reality to a cartographic and graphic support.
- The acquisition of skills and working techniques for permanent preparation.

Specific Skills

- Recognition of geographical terms in different texts.
- Identification of names and terms referring to Asian geography in foreign languages.
- Reading the map and the correct use of conventional symbols.
- Applying the knowledge and skills previously acquired.
- Ordering the elements, phenomena and processes using different classification criteria: quantitative, qualitative, chronological and territorial ones.

Derived Competencies

- To correctly locate the physical map of Asia, Turkey's geographical position, the major relief units, the main elements of hydrography and the main cities of this country.
- To compare different elements of the natural environment, the natural resources and the economy that belong to Turkey.
- To fill in the map from the worksheet correctly.

Teaching Method: Strategies: directed, cognitive, heuristics. Methods and procedures: heuristic conversation, discovery, explanation, comparison, map and textbook use, dialogue, worksheets.

Current Evaluation

- Oral assessment (stimulating the participation of students in formulating answers, analysis and appropriate evaluation of responses by granting marks).
- Assessing the practical component (working with maps, using the textbook, using worksheets).

Materials & Resources: Physical map of Asia, textbook, pictures.

Activity and Method Description

Teaching sequences	Teaching activity	
	Teacher	Student
Classroom organization - 1 min	<ul style="list-style-type: none">• Checking the attendance• Arranging the necessary materials for the lesson	Preparing school documents
Oral review of the previously taught knowledge on the topic "China and Japan" - 5 min	<ul style="list-style-type: none">• Locate China and Japan on the physical map, and specify its geographical position in the Asian continent• Characterize the natural environment• Specify and locate on the map the major cities of the countries• Which are the main resources of the countries?	Listen, analyze, think and formulate expected answers, being guided by the teacher

Teaching sequences	Teaching activity	
	Teacher	Student
<ul style="list-style-type: none"> • Aperceptive preparation - 1-2 min • Leading teaching, learning - 23 min 	<ul style="list-style-type: none"> • Asks students to observe the physical map of Asia and asks where Asia Minor Peninsula is located • Tell students what country will be discussed during the lesson and presents the lesson objectives to be achieved • Students receive one worksheet that they have to fill in according to teacher's directions 	<ul style="list-style-type: none"> • Answer the questions addressed to and show on the map the location of Turkey • Pay attention to the worksheet received
Managing the teaching/ learning process - 22 min	<ul style="list-style-type: none"> • Asks students to observe in the textbook the physical map of Turkey and Asia's physical map indicating the geographic position and its neighbors' on the continent • Writes on the board the position of the country • Identifying on the physical map of Asia and also on the maps from the textbook the forms and relief units and the main rivers • We read the paragraph (the point) about the climate , vegetation, fauna and soil and note the main ideas • Based on the textbook maps and statistical data to identify data about population density , and the main cities • Causes the participation of all students and leads them to discuss, to question themselves and to evaluate the response given by other colleagues • Read from the worksheet the document referring to the natural resources and the economic activities of Turkey using also the textbook 	<ul style="list-style-type: none"> • They search it on the map from their textbook and formulate the correct answer, under their teacher's guidance • Fill in the worksheet • Analyze Turkey's maps from the textbook • Locate relief units and specify the main rivers and streams • Read , think and write on the worksheet • Locate, reflect, brainstorm • Explain the facts before them, mention and apply the knowledge learned in other situations • Read and write on the worksheet • Analyzes the text in hand and under the guidance of the teacher, read and complete the worksheet
Reaching feedback - 2min	<ul style="list-style-type: none"> • Explores the geographical diversity of Turkey, given the surface, diversity, topography, and climate and vegetation conditions, of the way of populating the territory • Stimulating student's participation, analyzing their answers and evaluation based on verbal appreciations and marks 	Shall review and summarize the variety of geographical forms according to the teacher's requirements
Ensuring and enhancing retention and transfer of knowledge- 2min	<ul style="list-style-type: none"> • It requires students to discuss the issues/ the applications from the textbook at the end of each lesson • Final evaluation 	Select those pieces of information needed to fill in and correctly formulate responses

Teaching sequences	Teaching activity	
	Teacher	Student
Specification of activities aimed that students will carry out at home on their own - 1 min	<ul style="list-style-type: none"> Filling in the worksheet (if it hasn't been completely carried out in class for objective reasons) with the correct information and related lessons in the textbook and other sources, transcription of the lesson in their notebooks at home or learning it 	Listen and write down
Evaluation	Analyzes critically, praises, ranks	Listen, analyze, think and formulate expected answers, being guided by the teacher

SOCIAL SKILLS

The “Our School, My Future” (OSMF) Game – Find a friend in every station!

Maria Maheridou (Machairidou)

Subject: Physical Education

Grade level: 1st (12-13y)

Summary: This teaching episode refers to a simple, but modified, racing team game. Students’ teams are running through different “Answer Stations”, trying to gather information concerning the European countries which are cooperating in the OSMF Erasmus+ project and put them together to the each teams’ EU map. The teaching is designed to provide the learner opportunities to focus on different attributes along each of the five developmental channels: cognitive, social, emotional, physical, and moral/ethical. It focuses on the acquisition of special knowledge about the EU countries through physical education activities and, at the same time, allows a learner to be an integral part of his/her learning outcomes. The main target is to achieve better understanding and respect to each country’s diversities through a pleasant kinetic team game, in order to enhance the effectiveness of cooperation and each student’s feeling of achievement to the school team and the OSMF Erasmus+ project’s future activities.

Overview & Purpose: Developing social (life) skills, knowledge acquisition about the cooperating EU countries and their culture, understanding and respect people’s diversity and cooperation with all.

Teaching Method: Cooperative learning.

Teaching Style: Style B-the Practice Style (modified)*.

Objectives/targets

Cognitive: Gathering information about, and get familiar with, other EU countries.

Physical: Practice running (tempo/form/ direction).

Emotional/moral/ethical: Joyance and feeling of achievement. Cooperation with no exclusions.

Materials & Resources: Colored boxes, European maps, colored paper, web.

Activity and Method Description

At the end of the previous PE lesson...

Students are forming 4 teams, each consisting of 5-7 players. Every team represents a partner country of the OSMF Erasmus+ project, with the exception of their own country.

PE teacher provides each team with a “Question List”, an EU map and some small colored papers (same for all).

At home (or at the ICT class)...

Students’ teams use the Web to gather special information about the countries they represent in order to find all answers to the “Question List” (e.g. capital city, special food, traditions etc) and they write down each answer in separate colored paper.

During the PE lesson...

PE teacher creates “Answer Stations” in different places of the school working area (gym, backyard etc) and places a different colored box to each of them. The number of the stations/boxes depends of the number of questions at the list. The papers of all team’s written answers are randomly (but equal in amount) shared and putted in to each station’s box.

A starting point is placed and each team decides its play order. The player that will run last keeps the team’s EU map. In the PE sign one player of each team starts to run to the station he/she likes, find the paper with the first right answer about the his/her team’s country, returns to the starting point and give the paper to the player that is responsible for the EU map, in order to be putted to the right place/country of the EU map. As soon as the answer is putted to the map, the second player can start running to the next station etc. The player that is responsible for the map has to run after he/she deliver it to the player that has returned last from a station.

The game stops when a team announces that has gathered and placed all answers about the country it represents.

PE teacher ask the question of the “Question List” and the players has to give the right answer, according to the information (answers) they have placed to their EU map. If all answers are correct, the team wins the first place of the race.

The game continues, in the same way, with the other teams playing. In case that a team has not gathered one (or more) right answer/s from the stations and announce at least one incorrect answer the game stops and there is no winner. The team’s players have to return the paper/s with the incorrect answer/s to any station/box and continue playing till they (or some other team) find all their answers correct.

The game ends when all the teams have completed their EU maps. The winning team is the one that has first gathered and placed correct all answers about the country they represented.

Assessment

Cognitive: Repeat the game with the assignment of different countries to the student teams. Do the students remember information that was gathered by the other teams/countries?

Physical: Are the students able to demonstrate differential running “qualities” in terms of tempo, movement form (forwards, turn, backwards), direction pick?

Emotional/moral/ethical: Which were student’s views about the game? Which were their emotions during it? If any, can they recognize their tactical slips during the cooperation? Can they propose possible actions they should have made in order to effectively cooperate?

Teacher Guide

- Ensure that, when picked, students are putting back to the boxes papers that contains other team’s answers
- According to the student’s abilities, increase the level of difficulty by a) setting some stations with no answers for each team, b) ask the students to use different forms of movement (e.g. jumping, crawling etc) and c) increasing the number and the difficulty of the questions to the “Question List”.

Additional Notes

- The preparation phase can be completed with the cooperation of teachers of ICT and/or Geography.
- After the game, set up the completed EU maps in to the students teaching room.

* *“The Spectrum of Teaching Styles” (Mosston & Ashworth, 2002).*



Volley ball for all

Maria Maheridou (Machairidou)

Subject: Physical Education

Grade level: 2nd (13-14y)

Summary: In this teaching episode students' groups are working at three different "Exercise Stations" (Style B-Practice) that are designed by the PE teacher in order to learn and practice the volleyball pass. In each station, students have to decide and choose their starting personal level of exercises difficulty (Style D- Self Check). Depending on the station, the exercises are given in a single-working or a peer-working form (Style C-Reciprocal).

The teaching is designed to effect learner in each of the five developmental channels: cognitive, social, emotional, physical, and moral/ethical. It focuses on the acquisition of knowledge about the taught skill, the ability to fairly evaluate (self and others) different levels of difficulty and the reinforcement of learner's decision making skills. The main target is to achieve better understanding and acceptance of the difference between peoples' personal ambitions and abilities and to provide all learners equal opportunity to gain the satisfaction of high self achievement.

Overview & Purpose: Developing social (life) skills, knowledge acquisition about the evaluation of different levels of difficulty, reinforcement of the decision making skills, equal exercise opportunity and self achievement, understanding and acceptance of the difference between peoples' personal ambitions and abilities.

Teaching Method: Action (and decision making)-based learning.

Teaching Style: Style D-the Self Check Style (mixed with Style B-Practice and C-Reciprocal)*.

Objectives/targets

Cognitive: Knowing and recognizing (during the exercise) the key-points of the volleyball pass.

Physical: Performing (medium level) and exercise the volleyball pass.

Emotional/moral/ethical: Observation and evaluation of personal performance, based on objective criteria. Selection of the most self-suitable level of difficulty when exercise. Fair evaluation of other student's performance. Self achievement (ambition VS ability).

Materials & Resources: Volley balls, plastic hoops, 3 kinds of exercise cards/sheets.

Activity and Method Description

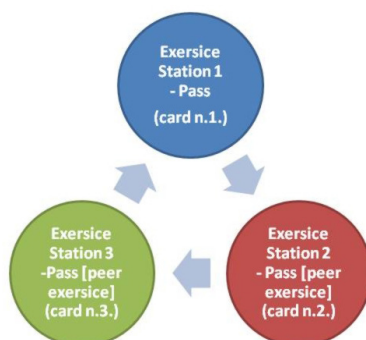
PE teacher creates three "Exercise Stations" in different places of the school working area (gym, backyard etc) and places a cone and the proper exercise cards/sheets to each one of them. In each station a different kind of exercise is practiced. At the first station exercise cards n.1 are placed, at the second n.2 and at the third, n.3. [See: figure 1].

The teacher presents the lesson's subject, demonstrates the exercises in each of the three cards/sheets and recommends the way of their use [See: Exercise cards/sheets]. Moreover, he/she explains student's tasks (decide about the difficulty level, try and adjust the level, perform the exercise, self evaluate, peer-evaluate).

Students are forming equal 3 groups. Each group starts the exercise from a different station and has to complete the exercise at all three. They move to the next station with the teachers signal.

The team's players have to return the paper/s with the incorrect answer/s to any station/box and continue playing till they (or some other team) find all their answers correct.

Figure 1. Exercise stations



Exercise cards/sheets

<http://www.slideshare.net/matrixm/exersise-cardsvolleyball>

Assessment

Cognitive: During and at the end of the lesson... Do the students remember the key-points of the volleyball pass? Can they recognize the right forms of movement and propose the necessary corrections?

Physical: Are the students able to demonstrate the volleyball pass at an acceptable level (medium)?

Emotional/moral/ethical: During and at the end of the lesson...

Are the students able to observe and evaluate their personal and others performance at a fairly way? Can they propose possible corrections in order to enhance theirs and others performances? Are they satisfied of their achievement during the exercise, according their abilities in the volleyball pass?

Teacher Guide

Moving from station to station and...

- Observe each student's performance.
- Give a fair amount of time for their first attempts and then verify that have choose the most suitable level of exercises' difficulty.
- In case of incorrect performing and/or unsuitable difficulty's level choice, ask to re-read the key-points of the skill to the exercise card/sheet and/or adjust the level of difficulty.
- Re-demonstrate the skill when necessary.
- Ensure that all students of each team have completed their exercise in one station before giving the signal to move to the next.

Additional Notes

- Motive the students to search the web and find and watch carefully videos of top athletes performing the skill.
- Notice the importance of being able to objectively evaluate personal and other's abilities.
- Motive students to think about other applications in their everyday life.

* *"The Spectrum of Teaching Styles"* (Mosston & Ashworth, 2002).

I've Got the "Power"

Maria Maheridou (Machairidou)

Subject: Physical Education

Grade level: 3rd (14-15y)

Summary: The teaching episode refers to role-play game that aims to help learners to recognize and understand some forms of bullying to the school environment and its possible long-lasting negative consequences to their school mates. Students' groups are changing roles from "powered" to "un-powered" to the game, in order to get the sense of different feelings. In the final lesson phases, a student-centered discussion is taking place, during which feelings, opinions etc are expressed and conclusions and/or decisions are inferred and/or taken.

The teaching focuses on student investigation and hands-on learning. The teacher's primary role is that of a facilitator, providing guidance and support for students through the learning process. Learners play an active and participatory role in their own learning process.

Overview & Purpose: Developing social (life) skills, preventing bullying at school environment, recognition and understanding its possible long-lasting negative consequences.

Teaching Method: Inquiry-based learning, role play.

Objectives/targets

Emotional: Feel the sense of being "powered" and "non-powered".

Moral/ethical: Get emotionally loaded about bullying issues in school environment.

Materials & Resources: Colored brassards (green, red, blue).

Activity and Method Description

1st lesson phase...

Students are forming 3 equal groups (green, red, blue) and were the different colored brassards.

Step one: The green group has all the "power". Students are comfortably seating on chairs, maybe a bottle of water is served to them etc.

The green groups' students order the red ones to stay still, all together, having their noses to the wall. Moreover, the green group forbids them to speak, look around etc. At the same time, the students of the green group give several, different orders to the blue ones, as well (e.g. jump in one leg, get us more water etc).

Step two: After a few minutes the PE teacher stops the action and asks the student's groups to change roles. The "power" goes to the blue group, the green ones are standing still with their noses to the wall and the reds are obeying orders.

Step three: Group's roles are changing again. The "power" goes to the red group, the blue ones are standing still with their noses to the wall and the greens are obeying orders.

2nd lesson phase...

Students are seating squat round the PE teacher who holds a small ball. A discussion starts on by throwing the ball by the teacher to the first student's hands. When having the ball each student starts to talk about what happened to the game, how he/she felt when he/she had (or not) the "power", how he/she would like to react etc. PE teacher ensures that every student has the opportunity to talk and gives a special focus on student's expression of feelings.

3rd lesson phase...

Students continue seating squat and one of them holds the ball and starts to talk. When finished he/she throws the ball to a student of one of the opposite groups. The ball is passing form student to student and the discussion continues the same way before, focusing on more practical issues like: Do something similar happens in our everyday school life? Are relationships in the school environment based on "power" and in what extent? Which are the characteristics of students that are likely to feel isolated from the others? Which are the characteristics of students that are likely to act like the "powered" ones acted during the game? How do they propose to deal with such actions? Who is responsible to deal with it? etc.

PE teacher ensures that every student gets the ball and providing guidance by "feeding" the discussion with key-questions, when necessary.

Assessment

Emotional/moral/ethical: Through the discussion during the 3rd phase of the lesson.

Teacher Guide

- Start the lesson with a statement like “We are going to play a role play-game in which there is no winner” and explain the purposes of the lesson.
- During the 1st lesson phase, set the frame of the acceptable level of “orders” to obey for the needs of the role-play game.
- During the 2nd and 3rd phase, act as facilitator of the lessons’ procedures. Before starting the discussion, explain that it is not always easy to express our views and opinions, and, moreover, to positively deal with school bullying. But, when present, there are some basic actions we can remember and do (the RAR code: Recognize, Avoid to do, Report).

Additional Notes

- The discussions’ conclusions (3rd phase) can be written down and form an “anti-bullying” code.
- Set up the “anti-bullying” code in to the students teaching room.

Team up to create a
BULLY-FREE zone!

We Are all Good at Something!

Gabriela Bojanopol

Subject: School Orientation

Grade level: 9th (14-15y)

Summary: This teaching episode takes place during "Counseling and school orientation" class. The lesson is based on the Child's Right Convention, art.29, which stipulates that the education of the child shall be directed to the development of the child's personality, talents and mental and physical abilities to their fullest potential. Teacher underline that each individual is intelligent in his/her own way and what must we do is to identify our own talents. He mention the role of the school in shaping personalities and helping students find out more about themselves. In accordance with each individual type of intelligence, students can make the right choice in the next professional career. It is important for students to understand the necessity of self-knowledge and self-assessment in career choice.

Overview & Purpose

- To make students' aware of the theory of multiple intelligences.
- To develop students' awareness of their individuality.
- To encourage students to respect diversity.
- To develop students' communication skills for social interaction.

Teaching Method: Direct approach, cooperative learning.

Objectives/targets

Cognitive: Gathering information about the Child's Right Convention, art.29 .

Emotional/moral/ethical: The education of a child shall be directed to "the development of the child's personality, talents and mental and physical abilities to their fullest potential". Get emotionally loaded about bullying issues in school environment.

Materials & Resources: Child's Right Convention, art.29, worksheet 1 with "The 9 intelligences of multiple intelligences theory", web.

Activity and Method Description

The lesson is consisted by 4 main Activities (1-4).

Download the Activities' file from the following link <http://www.slideshare.net/matrixm/activitiesfile>

Find Multiple Intelligences Test to the following link http://www.businessballs.com/howardgardnermultipleintelligences.htm#multiple_intelligences_tests

Assessment

Cognitive: Students recognize and describe the types of intelligence.

Emotional/moral/ethical: In accordance with each individual type of intelligence, students can make the right choice in the next professional career. It is important for students to understand the necessity of self-knowledge and self-assessment in career choice.

Teacher Guide

- Photocopy the student pages for all and prepare the computer room for the students before taking the test.
- Hand out the photocopies to the students before taking the test. Teacher can choose to have the whole lesson in the computer room or he can ask students to take the test by themselves.
- Discuss Activity 1 in plenary (3 min). Allow some time for the student to read the information and discuss it in plenary (activity 2). Talk about the diversity of intelligences, underline that each individual is intelligent in his/her own way (10 min). For Activity 3, the students need to use the Computer Room (17 min). Activity 4 is taking place in plenary (10 min).

Additional Notes

CRC, Art. 29 1. State Parties agree that the education of the child shall be directed to: a) The development of the child's personality, talents and mental and physical abilities to their fullest potential.

<http://web.cortland.edu/andersmd/learning/MI%20Table.htm>

<http://www.mitest.com/omitest.htm>

Sport Culture & National Awareness

Hatice Utaş

(with the help of PE teachers)

Subject: Physical Education

Grade level: 11th (16-17y)

Summary: No to the violence in Sport: Students are demanded to get some materials (newspapers, posters..etc) about the topic beforehand. They are told why people do sports and what the ethical rules of sports are. Quotes and sayings are reviewed about the topic. A discussion is organized between two groups of students on the topic of 'being fair or winning? Fair-play examples are given. Videos of important/successful sportsmen can be presented.

Overview & Purpose: By the end of the course the students will be able to learn Sport culture and National Awareness.

Teaching Method: Giving information, question & answer, demonstration, command, exercise, discussion play.

Objectives/targets: By the end of the course the students will be able to learn the concept of virtuousness in sport.

Materials & Resources: Sport-suits, books, CDs.

Activity and Method Description

- Discussion about the topic.
- Two discussion groups organized.
- Quotes & sayings & slogans to be found.
- Videos to be watched.

Assessment: Writing a paragraph on "what can be done to be fair while doing sports"?

Teacher Guide: Act like informant, guide and mentor.

Gardening and Colors

Joaquín Peña-Toro Moreno

Subject: Arts & Crafts

Grade level: 2 ESO_7th Grade

Summary: In order to prevent Early School Leaving, we promote an atmosphere of cooperative working involving our students in a two years program linked with gardening.

Overview & Purpose

- Developing social l(life) skills.
- Developing art skills.
- Knowledge acquisition about the cooperating EU countries and their culture.

Teaching Method: Cooperative learning.

Teaching Style: Practice style.

Materials & Resources: European maps, web, paper, photos, drawing tools (colour pencils and felt pens), clay, flower pots, acrylic painting, flowers, soil and water, wire, cane, tin (for watering).

Objectives/targets

Cognitive: Gathering information about, and getting familiar with other EU countries.

Artistic: Design a garden, modeling clay, design geometric shapes, applying acrylic painting.

Emotional/moral: To reinforce the feeling of being part of a community. Cooperation without exclusion.

Materials & Resources: Sport-suits, books, CDs.

Activity and Method Description

Presentation...

Art teacher shows the class a Power Point document in order to sensitize our students about vertical gardens and link that actual practice with their own heritage: "traditional Córdoba's patios".

At home (or at the ICT class)...

Students use the web to gather information about European Union present member countries and Turkey Flags: colour, proportions, shields. They choose a country to paint.



During the Art lesson...

Art teacher shares out a patio photo to each student and ask them to design a vertical garden.

Students design a Vertical Garden including our 28+1 EU flags. They must choose a space distribution for our flower pots.



We visit a pottery workshop to understand how a flower pot is done. Students have experiment using clay.



Painting Flower pots...

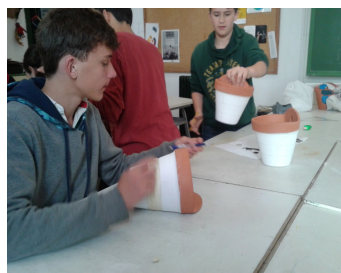
1. Apply a priming size that gives a white base for painting.



2. Art teacher help students to design flags on our flower pots; that involves some difficulties by applying flat geometry to a slant surface: parallel lines, perpendicular lines, shields...



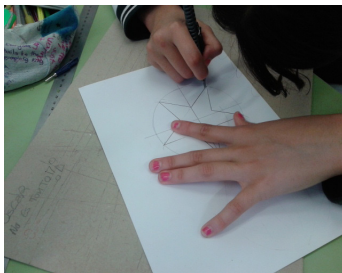
3. Using masking tape, we define and isolate different colour fields.



4. Applying our color knowledge, we mix up colour to get the right hue.



5. Stars drawing: using our knowledge in geometric drawing, we design a five pointed star and cut out a stencil.



6. On top of a blue background, first we apply a white painting coat; then, a yellow one over the white base.



7. Shields and special flags: we study each particular case.



Assessment:

Cognitive: Could you remember name and flags of our 28+1 UE countries?

Artistic: Did you discover new materials and painting tools? Can you translate into a new material your colour knowledge?

Emotional /moral: Did you need help from others to complete your work? Do you feel proud of being part of a community (your school, your city, your country, our EU)

Teacher Guide

- According to the students' abilities, distribute flag design to avoid a feeling of inability in less skillful students.
- Ensure that students work correctly and finish their activity keeping a clean workshop.

Additional Notes

- The preparation phase can be completed with the cooperation of teachers of ICT and/or Geography.
- After the activity, set up EU maps in the students' classroom.

FOREIGNER LANGUAGE & ICT SKILLS

A Day at the Smithsonian Museum of Natural History

Efthimios Mavrogeorgiadis

Subject: English Language

Grade level: B1 (CEFR)

Summary: Extensive reading involves reading a large amount of texts with a focus on meaning. Skim and scan reading are also important though often overlooked skills that should be conquered by any student that studies a foreign language. This activity is expected to make this usually boring task of reading for gist more attractive to teenage students who are especially keen on science or history. Acting as a giant book, the virtual tour of the Smithsonian Museum of Natural History offers a variety of rooms to visit, different exhibits to admire, and texts to read. After demonstrating to students how to navigate the virtual tour, teachers give them tasks to complete, much like they do when they visit a museum on an ordinary field trip. In this case, the tasks aim to encourage students to look for general information (skimming) that guides them to the area of the museum where they need to scan the display windows and the associated exhibit plaques for specific information. The information they collect is then used in a word game where they pick and mix letters to come to the final answer that allows them to win the "treasure hunt" (which could be anything from a good grade to a large piece of chocolate bar). The activity can be linked to other language-learning tasks such as talking about the past, learning animal vocabulary, etc. or used in an interdisciplinary context (CLIL) to promote subject as well as language learning.

Overview & Purpose: Students are asked to visit the virtual Smithsonian Museum of Natural History to learn about life in the past and practice extensive, skim, and scan reading.

Teaching Method: Student centered, cooperative learning.

Objectives/targets

- Extensive reading.
- Skim reading for general ideas.
- Scan reading for details.
- Practice speed reading.
- Learn vocabulary associated with a natural museum.
- The activity could be linked to practicing Simple Past.

Materials & Resources: ICT room, computers, website of the Smithsonian Museum of Natural History, worksheet.

Activity and Method Description

- Students are divided in groups and are asked to elect a group leader that will organize their work.
- Teacher uses the interactive board or a projector to display the virtual tour of the Smithsonian Museum of Natural History and explains how students can navigate it.
- Students are handed the attached worksheet and encouraged to follow the instructions.
- Students discuss the worksheet and share the workload assigned.
- Students visit the virtual tour of the Smithsonian Museum of Natural History and perform the tasks needed to complete the treasure hunt.
- Fastest team wins the hunt.

Assessment

- The worksheets can be collected and results evaluated.
- Students can be asked to work in groups to present their favorite museum room and the exhibits they saw in it.
- Students can be asked to write a short report on the Smithsonian Museum of Natural History.
- A vocabulary quiz based on the worksheet can be done in class or on line.

Teacher Guide

- Students will probably come across a lot of unknown words they might want explained. The teacher should not focus on vocabulary as part and parcel of extensive, skim, and scan reading is to guess the meaning of unknown words and learn to extract meaning.

- The activity might require more time than what is normally available at school. It could be modified to make it fit a normal school hour or students could be allowed to continue the activity at home and e-mail or post the result on a forum thread to claim the prize.
- The teacher should familiarize him/herself with the virtual tour of the Smithsonian Museum of Natural History to be able to answer student questions and drop hints to students if they find the task too difficult to complete.

Making Passive Voice Fun

Efthimios Mavrogeorgiadis

Subject: English Language

Grade level: B1 (CEFR)

Summary: Passive voice has traditionally been taught with a focus on formation and syntactic rules. This lesson plan brings passive voice usage to student attention. Bringing together a variety of methodologies (association by observation, pantomime, and pair work), students are introduced into the three main uses of passive voice. 1) Describing a process using passive voice comes out naturally from students once they realize that the agent is irrelevant or that mentioning him/her is repetitive. Watching a video while performing the task allows the students to identify with the observer's role and learn by doing rather than simply carry out a drill. Furthermore, the cooking video used allows students to remember vocabulary learnt in previous lessons. 2) Pantomime is used to present prohibitions in passive voice. Prohibitions are usually associated with negative memories or emotions in student minds. Bringing kinesthetic learning into play allows students to relax and absorb language more effectively. At the same time, students have the opportunity to express themselves artistically and become aware of how they communicate with their peers using body language. 3) Scientific language where passive voice is used to express abstract ideas is something that teenagers find difficult to associate with even in their mother tongue, let alone a foreign language. However, since they are familiar with geography from school and as passive forms are often used to talk about geographic features or information pertaining to a specific country, completing a geography quiz catches student attention. Moreover, introducing a competitive framework in a pair-work setting, keeps the activity under control, allows the students to concentrate on the task at hand, and motivates them to outdo their partners.

Overview & Purpose: Passive voice has always been a difficult subject to teach. The activities proposed in this lesson plan aim to teach passive voice while making it seem attractive and easy to grasp.

Teaching Method: Student centered, Inquiry-based learning.

Objectives/targets

- To teach simple passive voice forms
- To help students learn how passive voice is used
- To introduce the use of gerund as a subject
- To remind students of cooking vocabulary they have already learnt.

Materials & Resources: Worksheet A & B, presentation file, interactive board or projector.

Activity and Method Description

- Worksheet A is distributed to half the students in the class and Worksheet B to the rest.
- The basic rules of forming Present Simple Passive are explained to the students.
- The teacher points out that one of the uses of passive voice is to help us focus on the action rather than the agent and describe procedures.
- Students are asked to watch the "Quick and easy breakfast recipe for kids and teens" [<https://www.youtube.com/watch?v=IE50VzCkVLk>] and convert the corresponding task in their worksheet into passive voice.
- When the students have completed the task, they check their answers with the help of the presentation file.
- The use of gerund as subject together with the standard expressions "is not allowed", "is forbidden", "is prohibited", and "is not permitted" is explained to the students as they appear on public signs.
- The teacher tells the students that they are going to play a pantomime game. Students are called to the white-board and shown a school rule that they are not allowed to break (e.g. no talking in class). Then, they go on to perform a pantomime act pretending that they are breaking the rule. The rest of the class need to guess what is going on and use one of the expressions above to tell the student what the rule is (e.g. talking in class is not allowed).
- The teacher explains to students that passive voice is often found in textbooks.
- Students are asked to form pairs (matching a student A to a student B) and complete the Geography Quiz. Once they are both finished, they ask their partner the questions they have formed and note down the answers.
- When the students have completed the task, they check the questions and their answers with the help of the presentation file.

Assessment

- The worksheets can be collected and results evaluated.
- A quiz based on the worksheet can be done in class or on line.

Teacher Guide

- This lesson plan is meant to teach passive voice usage mainly. So, there is no need to get into details about the position of the different elements (subject, agent) in the sentence unless there is a special difficulty related to the students' L1 that renders this necessary.
- Students should be given the time to practice their listening and observation skills while watching the "Quick and easy breakfast recipe for kids and teens" video. To do that, the instructions given in the worksheet can be shuffled and students will have to put them in the correct order before converting them to passive voice.
- To consolidate learning, students can be asked to use passive voice to write down another on-line recipe video, write their own posters of classroom rules, or create their own geography quiz as homework.

Life, the Universe and Everything

Efthimios Mavrogeorgiadis

Subject: English Language

Grade level: B2 (CEFR)

Summary: As a dual-focused educational approach, Content and Language Integrated Learning (CLIL) might be difficult to handle and much more demanding on teacher and students alike. However, the rewards for the students are broader and more satisfying than simply studying language out of its natural context. Moving alongside the basic CLIL principles, this lesson plan tries to combine cognitive engagement and lower-order thinking with language learning and social interaction among the students. A simple experiment is also included to encourage problem solving initiatives and higher-order processing skills. Knowledge is presented in a factual manner with on-line and in-class activities that aim to conceptualize it. Multimodality is used extensively as the same concepts are presented in textual, visual, and aural form while students also give them a spatial dimension with the experiment performed.

Overview & Purpose: This topic and accompanying activities offer teachers and students the opportunity to get acquainted with the Big Bang theory and mankind's place in it.

Teaching Method: Student centered, cooperative learning, inquiry-based learning, Content and Language Integrated Learning (CLIL).

Materials & Resources: Teacher's website, worksheets, presentation files, interactive board or projector, ICT room, computers, balloons, markers, measuring tapes.

Objectives/targets

- To increase students' knowledge of subject content.
- To develop students' knowledge of the origin of the Universe.
- To develop all four language skills within a content-based context.
- To allow students to become aware of their place in the universe.
- To help students develop arguments about their purpose in life.

Activity and Method Description

•Brainstorming: The teacher asks the questions below and writes the students' ideas on the white-board.

- Why is it important for us to learn about the origins of the universe?
- What do scientists believe today about the origins of the universe?

• The students are asked to watch the video entitled "Introduction to the Big Bang" (https://www.youtube.com/watch?v=dMBqa5BdN_8) on the projection screen and identify similarities to the answers they gave in the preceding brainstorming session.

• The students are asked to form pairs and watch the video again on www.toe.gr. This time they need to take a closer look and complete the first activity of the accompanying worksheet.

• The students answers are checked in plenary session. The teacher writes all astronomical objects mentioned by the students on the white-board.

• The teacher asks the students if they know who came up with the Big Bang theory.

• Students are then invited to watch the video entitled "Hubble's Revolution" (<https://www.youtube.com/watch?v=vsL-JNCjAK0>).

- What's the name of the person who came up with the Big Bang theory? (Edwin Hubble).

• Students are divided in groups of four and asked to watch the video again, study the "Background Information" of the "Big Bang Balloon" worksheet, and answer the questions in Activity 1.

• The students are asked to return to a plenary session where they compare their answers.

• Students are told that they will perform an experiment to confirm Hubble's findings.

• The instructions given in the "Big Bang Balloon" worksheet are read and explained.

• Students are given the needed materials and form groups of four again to perform the experiment and answer the questions on the "Big Bang Balloon" worksheet.

- Once students have completed the experiment, they return to plenary session to compare their results.
- Do the dots farther from “home” move “faster” than the ones closer?
- What is the “Big Crunch”?
- What would we observe if the “Big Crunch” occurred?
- The teacher asks the students to guess how big the universe is (diameter: 93 billion light years).
- The teacher goes on to explain what a light year is:
 - Light in the vacuum travels at a constant speed, i.e. 299,792,458 m/sec.
 - Because distances in space are unimaginably huge, we estimate distances using the distance traveled by the light in one year as a basic unit of measurement.
 - Students are asked to calculate how many meters a light year is.
 - $365.25 \text{ days} * 24 \text{ hours} * 60 \text{ min} * 60 \text{ secs} = 31,557,600 \text{ secs}$
 - $31,557,600 \text{ secs} * 299,792,458 \text{ m/sec} = 9,460,730,472,580,800 \text{ m}$.
 - In how many years would a car traveling at 100 km/h cover a light year?
 - $94,607,304,725,808 \text{ hours} = 10,792,528,488 \text{ years}$
 - What is a light month? A light day? A light hour? A light minute? A light second?
- The students are asked to form pairs and do the “Macrocosm-Microcosm” quiz on www.toe.gr. It is pointed out that they should try to guess any answers they don’t know and repeat the quiz until they get all answers correct.
- When the students have finished with the quiz, they are asked to do the second activity of the accompanying worksheet.
- The students are asked to return to a plenary session where they compare their answers, watch “The Observable Universe” video (<https://www.youtube.com/watch?v=HiN6Ag5-DrU>), and comment on what they see (video paused at key points). The students should be encouraged to use the vocabulary and definitions learnt to explain what they see.
- The students are asked to update the answer they gave in question 6 of Activity 1 bearing in mind what they have learnt in Activity 2.
 - What do you think came first in the universe?
 - What came next?
 - What kind of structure was the last to appear?
- The students are asked to read “The Answer to Life, the Universe and Everything” excerpt from the Hitchhiker’s Guide to the Galaxy and watch the accompanying video.
 - Discuss in groups: “What is the ultimate question you would ask Deep Thought?”

Assessment

- The worksheets can be collected and results evaluated.
- A quiz based on the worksheets can be done in class or on line.
- Students can be asked to add subtitles or narration to a “Big Bang video” that is available online [e.g. “A Brief Timeline of EVERYTHING” (https://www.youtube.com/watch?v=l_Om5TNJVmE), “The Observable Universe” (<https://www.youtube.com/watch?v=HiN6Ag5-DrU>) etc].

Teacher Guide

- This lesson plan is meant to stretch across 3-4 teaching hours. As new concepts are introduced, students should be given time to understand and absorb them.
- The teacher should familiarize him/herself very well with the concepts taught and the latest developments in astronomy to be able to answer student questions that arise for the material taught.
- The teacher should support the students with their learning endeavor at all times and offer technical support when needed.
- Depending on their background, younger students might find some concepts difficult to grasp. More activities might be needed in class or at home to facilitate learning.

Articles (Zero/The)

Hatice Utaş

Subject: English Language

Grade level: 9th (14-15y)

Summary: Presentation - a) Motivation: Draw the pictures of geographical shapes on the board. Ask students to tell the names of them. Write the names on the board. Ask them if they have seen any of them previously, b) presenting the book: Firstly, give the unknown words in the unit. Then, ask them the meaning of the title of the unit. Help them with the following sentences to let them translate them. Practice - Give the students the rules of definite/zero article giving at least one example for each. Ex: The Himalayas – Mount Everest, The Mediterranean – Lake Van, The Nile – Palm Beach. Production - Tell class to give examples in their own country. Listening: Ask students to listen to the recording about a holiday and fill in the blanks with geographical names (in the book).

Teaching Method: Translation, repetition drill, pair work, fill ins, spontaneous pattern practice, dictation, substitution drill, chart pattern practice, reading out loud etc.

Objectives/targets

By the end of the course the students will be able to:

- Use *zero* indefinite articles with geographical names in a sentence together.
- Have the ability to use *X/the* with geographical names.

Materials & Resources: Course-book, workbook, supplementary materials, interactive board (optional), vocabulary box, colorful chalks.

Activity and Method Description

- The activity related to the pictures in the course book.
- Pre-reading questions are asked to warm-up and to arouse sts' attentions at the beginning of the course.
- True/False Exercises are done and comprehension questions are checked.
- Book closed. Asking fast and insistence questions for each student. Especially, comprehension questions.
- Individual: Asking the questions.
- Reproduction: The exercises at the workbook are solved. Filling the blanks.
- Musical: Intonation and the rhythm of the English language, Repetition drill is done continuously here.

Assessment

- Assignment: Ask students to complete the exercises in their workbooks (homework).
- Evaluation: Guided writing - ask students to write a paragraph about a dream holiday on an island they wish. They are to add as many geographical shapes as in their writing.

Teacher Guide

Act like informant, guide and mentor during the production stage.

“Viva la Vida” by Coldplay

Iwona Kciuk

Subject: English Language

Grade level: Elementary (15-16 y)

Summary: The lesson is based on the song “Viva la Vida” by Coldplay. Students like working with songs. It creates friendly atmosphere and lets them feel relaxed. Learning with a song is not only enjoyable but also very effective. The aims of the lesson are varied. Students can practice integrated skills, learn new vocabulary, practice pronunciation and grammar. Students have to do different tasks. They practice listening, filling in the gaps and putting the verses in the correct order. They learn new vocabulary through different kinds of exercises like matching the words to their definitions, making collocations with the phrases from the song, explaining the meaning of new words, underlining the most suitable words. The learners have the possibility to practice speaking while discussing advantages and disadvantages of being a king, explaining the meaning of the song and discussing other matters of the song. The next skill that is being developed during the lesson is reading. Students read for details filling in the grid in exercise 10. Lyrics of the song are used as a base for explaining and teaching grammar. Students usually hate grammar but doing it with a song is much more pleasant and effective. The structures are memorized automatically and they are remembered longer. Learning grammar is funny in this way and students are not bored. Students practice two structures: *used to* and *would*, they find out what is the difference between them. At the end of the lesson students are able to create their own sentences with *used to/would*.

Overview & Purpose: “Viva la Vida” song by Coldplay will be used as a tool for improving new skills and expanding vocabulary. On the basis of the song students will practice integrated skills: listening, reading, speaking, writing. Students will discuss the meaning of the song, expand vocabulary and review grammars structures *used to* and *would*.

Teaching Method: Cooperative learning, asking oral questions by teacher answered orally by students, class discussion conducted by teacher, lecture.

Objectives/targets

Students will be able to:

- Improve integration skills: listening for general meaning, listening for detailed information, reading for general information, speaking - expressing opinion, writing about past experiences.
- Learn *used to* and *would* structures being exposed to input related to this topic.
- Compare *used to* and *would* by using their previous and current knowledge, exemplify these structures by using them in the activity, listen to these structures thanks to the song.
- Develop community-building through pair and group work.
- Incorporate many levels of possible participation so that all students can meaningfully and comfortably participate in class.

Materials & Resources: Computer, web, audio software, projector and projector screen, copies of the handouts and lyrics of the song.

Activity and Method Description

Songs can be a useful tool when teaching ESL because they give students the opportunity to learn in enjoyable and effective way. A song “Viva la Vida” was used here for listening comprehension, reading comprehension, building vocabulary, practice speaking and learning grammar.

The lesson includes several tasks based on different methods. In the pre-phase, students in pairs work on clarifying vocabulary. Then they work individually filling in the gaps in the text and finding the correct order of the song lines. The method of asking oral questions and giving answers is used here for checking students’ answers in listening and reading tasks and explaining the meaning of new vocabulary. A method of class discussion is aimed at giving opinion on attributes of the King. It is used also for explaining and building vocabulary. The method of cooperative learning was used for discussion on advantages and disadvantages of being a king. To explain the differences in using the structure *used to* and *would* the best method is a lecture. Then the students can practice them doing writing exercises and comparing the answers in pairs.

Assessment

Learning success will be achieved when each student is involved in the lesson doing the tasks. Learning goals will be assessed through, observations, independently performed worksheets, oral discussion, question-and-answer sessions.

Teacher Guide

- 1) State the following: Today's class will focus on a song. Explain the meaning of the expression. It means "live your life".
- 2) Distribute handout with the tasks to do.
- 3) Tell students to write 3 personal features typical for a king at 3 peaks of a crown (exercise 1). Elicit the answers (individual work).
- 4) Instruct students to match the words and phrases from I column with the definitions from II column. Ask students to compare the answers in pairs (exercise 2).
- 5) Announce that the students will listen to the song and their task will be filling in the gaps and then putting the lines in the correct order (exercise 3,4). Elicit the answers (individual work).
- 6) Tell the students to fill in the collocations from exercise 5 and then underline the words connected with being a king (exercise 6) (individual work).
- 7) Ask the following questions:
 - Which of these adjectives best describe the king: powerful, mighty, unhappy, wicked, cruel (exercise 7).
 - Who is the text about? (exercise 8).
- 8) Announce that the students will be separated into small groups. Tell them to work in groups, discuss what are the advantages and disadvantages of being a king and prepare a short oral presentation summarizing the results of discussion.
- 9) Tell the students to put the sentences in the proper place in the grid (exercise 9).
- 10) Sing a song with all the students. Pay attention to proper pronunciation.
- 11) Explain the students what is the difference between the structure *used to* and *would*. Tell them to use *would* instead of *used to* when possible in exercise 10.
- 12) Ask students to imagine that they were kings in the past and write what they used to do.

Additional Notes

The You Tube link for the song "Viva la Vida" by Coldplay (official) is:

<https://www.youtube.com/watch?v=9ldOuVuas1c>

You can find the handout for the lesson to the following link:

<http://www.slideshare.net/matrixm/handoutenglish-lesson>

Will

Hatice Utaş

Subject: English Language

Grade level: 9th (14-15y)

Summary: Presentation - a) Motivation: Teacher randomly chooses students and tells his/her predictions as a "fortune teller". He makes the students listen the sentences carefully and try to identify new structures they hear, b) giving the rule "teacher gives the rules of using *will*". Practice - Giving examples using *will*. Students make examples. Guided writing. Production - Tell class to give examples about their own future life and the future world. Listening the song "My Lady D. Arbenville"* and underline the sentences in *will*.

Teaching Method: Translation, repetition drill, pair work, role-play.

Objectives/targets: By the end of the course the students will be able to *make their own sentences in future tense (will)*.

Materials & Resources: CDs, interactive board (optional).

Activity and Method Description

- Warm-up activity: Role-play.
- Explanation: Giving rule.
- Listening: Song "My Lady D. Arbenville"*.

Assessment

- Assignment: Ask students to write a paragraph about their predictions about future.
- Evaluation: Writing sentences using *will*.

Teacher Guide

Act like informant, guide and mentor during the production stage. Act like a "fortune teller" too!

* "Lady D'Arbenville" lyrics - Cat Stevens

My Lady d'Arbenville, why do you sleep so still?

I'll wake you tomorrow

And you will be my fill, yes, you will be my fill.

My Lady d'Arbenville why does it grieve me so?

But your heart seems so silent.

Why do you breathe so low, why do you breathe so low,

My Lady d'Arbenville why do you sleep so still?

I'll wake you tomorrow

And you will be my fill, yes, you will be my fill.

My Lady d'Arbenville, you look so cold tonight.

Your lips feel like winter,

Your skin has turned to white, your skin has turned to white.

My Lady d'Arbenville, why do you sleep so still?

I'll wake you tomorrow

And you will be my fill, yes, you will be my fill.

La la la la la

My Lady d' Arbenville why does it grieve me so?

But your heart seems so silent.

Why do you breathe so low, why do you breathe so low,

I loved you my lady, though in your grave you lie,

I'll always be with you

This rose will never die, this rose will never die.

I loved you my lady, though in your grave you lie,

I'll always be with you

This rose will never die, this rose will never die.

La la la la la

Health is better than wealth!

Prodan Oana

Subject: English Language

Grade level: 10th-intermediate (15-16y)

Overview & Purpose

- Introducing new lexical items related to health.
- Expressing a piece of advice.

Assumed knowledge: Students might know few facts about certain aches and their corresponding physicians.

Objectives/targets

- To raise interest on the topic of health.
- To reinforce students' English vocabulary related to the topic.
- To introduce the new vocabulary.
- To practice the new vocabulary.
- To revise and to practice ways of giving a piece of advice.

Materials & Resources: Textbook, posters, blackboard.

Activity and Method Description

Total teaching time: 50 min.

Activities...

Warming up (5 min)

Aim: To raise interest on the topic of health.

Procedure: The teacher greets the students, checks the attendance. Then, she asks students "How are you feeling today?" so as to introduce the new topic. "How about you, do you feel well?", hoping to elicit the answer "No, not really, I have got a toothache". The teacher says "In this case you should see a dentist". The teacher puts down the title of the lesson.

Interaction: Teacher - Students.

Lead in (10 min)

Aim: To reinforce and to improve students' vocabulary related to the topic.

Procedure: The teacher shows students some pictures representing a woman holding her hands to her head, a boy with his palm to his cheek, a doctor examining a baby and a thermometer. The teacher asks students to say if there is any connection among those images and to guess what the matter with those people in each case is. The teacher writes their answer on the blackboard.

Interaction: Teacher - Students.

Explanation (10 min)

Aim: Introducing the new vocabulary related to health.

Procedure: The teacher writes down a table with 2 columns. In the first column she writes different types of physicians and in the second column the affections they deal with.

Interaction: Teacher - Students.

Role-play (10 min)

Aim: To revise and to practice ways of giving a piece of advice.

Procedure: The teacher tells the students that they are going to play a game called "Guess who's speaking". The teacher divides the class in 2 teams. Then gives students from team A some handouts with some lines, such as "your blood pressure is high", "you should get some rest", "I feel exhausted". The members of team B have to guess whose lines are those: the doctor's or the patient's.

Interaction: Student - Students.

Assessing students' activity (5 min)

Procedure: The teacher gives marks for the students' active participation and assigns homework. Imagine you work for the Red Cross and that you happen to witness an accident with many injured people one day. You have to advise them what they should or shouldn't do in this case.

Teacher Guide

- Start the lesson with a statement like “We are going to play a role play-game in which there is no winner” and explain the purposes of the lesson.
- During the 1st lesson phase, set the frame of the acceptable level of “orders” to obey for the needs of the role-play game.
- During the 2nd and 3rd phase, act as facilitator of the lessons’ procedures. Before starting the discussion, explain that it is not always easy to express our views and opinions, and, moreover, to positively deal with school bullying. But, when present, there are some basic actions we can remember and do (the RAR code: Recognize, Avoid to do, Report).

Additional Notes

You can find the hangout for the lesson to the following link:

<http://www.slideshare.net/matrixm/handoutenglishhealth>

“More Ways to Learn English- Malta is More”

Iwona Kciuk

Subject: English Language

Grade level: Elementary (15-16 y)

Summary: The lesson is based on the TV commercial “More ways to learn English-Malta is More”. Television commercials can provide a treasure trove of language learning opportunities. The materials are easily accessible and many times are free to use in classes. They also provide an avenue to exploring culture and values. A number of studies suggest that students who are exposed to commercials augment their motivation to learn. Students like TV adverts so using them as a lesson material creates friendly atmosphere and lets them feel relaxed. Learning in this way is enjoyable and very effective. The aims of the lesson are varied. Students can practice speaking and writing, they can learn new vocabulary and practice grammar. Students usually hate grammar but using a commercial as a tool for memorizing the structures makes it more interesting and enjoyable. The structures are memorized automatically and they are remembered longer. Learning grammar is funny in this way and students are not bored. Students learn new vocabulary through different kinds of exercises like: matching the proper words, making collocations with the phrases from the advert, explaining the meaning of new words, choosing the most suitable words. The learners have the possibility to practice speaking using *present continuous tense* and modal verb *can*. Students are given a group -task to do at home. It is a school commercial that should be recorded with a mobile.

Overview & Purpose: “A TV commercial “More Ways to Learn English-Malta is More” Is used as a starting point for teaching grammar and vocabulary. On the basis of the advert students can practice speaking and writing. Students can also expand vocabulary and review grammars structures – *can*, *present continuous tense*. Students will learn some basic information about Malta. This commercial also enables teachers to explore the cultural values.

Teaching Method: Cooperative learning, asking oral questions by teacher answered orally by students, visual instruction.

Objectives/targets

• *Students will be able to improve speaking and writing:*

Using the present continuous tense to talk about the actions that are happening at the moment of speaking.
Using *can* to describe what people can do in Malta.

• *Students will expand vocabulary:*

Adjectives used to describe the island.
Verbs used to describe activities.
Nouns to describe what people are wearing.

• *Students will:*

Revise *can* and *present continuous* structures being exposed to input related to this topic.
Develop community-building through pair work and group work.
Incorporate many levels of possible participation so that all students can meaningfully and comfortably participate in class.

Materials & Resources: TV commercial “ More ways to learn English- Malta is More”, handout.

Activity and Method Description

The tool used in this lesson was a commercial. Using commercial expand students’ interest span, majority of them are keen on TV adverts, they are very catchy and designed to be entertaining. Using commercials in language class has some more advantages. They are short, they usually last for 30/50 seconds and thanks to it they are easy to select and prepare.

The lesson includes several tasks based on different methods. In the pre-viewing phase students are asked some questions to warm up and to get some cultural background. Then they speak individually. The method of asking oral questions and giving answers is used here to practice a structure of present continuous tense, modal verb *can*. It is also used also for explaining and building vocabulary. The method of cooperative learning was used for discussion on adjectives suitable for describing activities watched in a video and then for matching them with the suitable nouns. Cooperative learning is also used for making a school commercial.

Assessment

Learning success will be achieved when each student is involved in the lesson doing the tasks. Learning goals will be assessed through, observations, independently performed worksheets, oral discussion, question-and-answer sessions.

Teacher Guide

Pre-viewing activities...

- 1) State the following: Today's class will focus on a TV commercial "More ways to learn English-Malta is more".
- 2) Ask the questions "do you like commercials" and "why/why not?" and write on the board "I like/don't like the commercials because they are....funny/interesting/boring/ annoying etc". Students can use the structure to express their own opinion.
- 3) Ask students to explain the meaning of the sentence "More ways to learn English-Malta is more".
- 4) Ask some questions referring to Malta, like:
 - Where Malta is situated? (In Europe, south of Sicily).
 - Which sea surrounds the country? (Mediterranean Sea).
 - Which are national languages of Malta? (Maltese and English).

-Viewing activities...

- 1) Give each student a task to focus on while they watch the commercial. After watching it, ask students to compare answers (individual work).
- 2) Tell the students that there are many ways of learning English and that the commercial shows what people can do on Malta to improve speaking skills.
- 3) Ask the students to watch the commercial and think all the ways that are mentioned in the advert.
- 4) Distribute handout with the tasks to do.
- 5) Ask the students to say what people can do to learn English in Malta. Students should tick the correct answers in the handout (exercise 1). Elicit the answers.
- 6) Ask the students to say what the people are wearing. Then ask them to see the advert once again and tick the appropriate Bowes (exercise 2). Elicit the answers.
- 7) Quickly revise with the students the present continuous tense and then stop the commercial several times asking what the people are doing at the moment. Elicit the answers, for example: they are swimming in the pool, they are sailing etc.
- 8) Instruct students to write in pairs as many sentences describing people's activities as possible. Play the advert to make it easier.

Post-viewing activities...

- 1) Tell the students to work in groups to tick what adjectives can be used to describe activities show in the advert. Then students can write them on the white-board.
- 2) (Students work in pairs): Ask them to think about the nouns that can be matched with the adjectives. Nouns must refer to the commercial. For example: impressive views, luxurious hotels etc. Elicit the answers. Students write the answers in their notebooks. Homework.
- 3) Announce that the students will be separated into small groups to make a commercial promoting their school. Advert will be used to raise awareness and promote the place they learn at. The task is to record a 2-min commercial with a mobile. Students can record narration or add subtitles. The commercials will be presented at the next lesson.

Additional Notes

The You Tube link for the TV commercial " More ways to learn English- Malta is More" is:

<https://www.youtube.com/watch?v=chH1vufO-ME>

You can find the handout for the lesson to the following link:

<http://www.slideshare.net/matrixm/handoutmalta>

“Vor- und Nachteile des Lebens auf dem Lande und in der Stadt”

Aleksandra Żabka-Przeradzka

Subject: German Language

Grade level: Basic (II LOa, II LOb)

Summary: The lesson is based on the text and video relating the topic of advantages and disadvantages of living in the city and in the countryside. The objectives of the lesson, namely: methods and forms of work are varied. Students work in pairs, groups, individually, as well as collaborate with the teacher. The teacher's task is to introduce a variety of activating methods by which all students will engage in the lesson. These methods include discussion, brainstorming, self learning, communication method, as well as an practice method. During the lesson, students develop all four language skills: speaking, reading, listening and writing. Acquire new vocabulary, learn previously unknown grammatical structures. Learn new conjunctions: *Sondern, oder, aber und* and *obwohl*, as well as irregular verb *möchte*. They do all sorts of exercises. At the beginning will develop the ability to speak, in which students give in German public life objects occurring in rural and urban areas, as well as inform the teacher using the German language, where currently live (in the countryside or in the city). Next developed ability will be reading with understanding which involves the skillful selecting of messages based on which students will write arguments constructed by them. Text concerning the pros and cons of living in the countryside and the city is base to expand vocabulary and grammar learning. Students will have a dictionary in the course of their lessons. They have the opportunity to train their speaking skills in the course of their discussion on the chosen topic. Another point of lessons will take several grammar exercises associated with new known structures. In conclusion lessons, designed to systematize the new known vocabulary as well as grammar, students watch a short film based on which, they practice another ability which is a listening.

Overview & Purpose: The basis of the lesson is to analyze the text and a short film about the pros and cons of living in the countryside and the city. Thanks to them, students develop language skills: listening, speaking, reading and writing. They learn a lot of grammatical structures, and develop vocabulary related to the topic of the lesson.

Teaching Method: Brainstorming, practice, self learning, communication, discussion.

Objectives/targets

Student:

- Is able to name the objects of public life which are in rural areas and in the city.
- Can name pros and cons of living in the countryside and the city.
- Knows how to use conjunctions (*und, oder, aber, obwohl, denn*) in sentence.
- Is familiar with the use and variety of irregular verb *möchte*.
- Develop skills such as listening comprehension and reading comprehension.
- Develop ability to work in a group.
- Develops skills of expressing a personal opinion.
- Improves the ability to speak and understand the German language.
- Can use knowledge and apply it in new situations.

Materials & Resources: Computer, dictionary, CD, notebook, worksheets with tasks and texts, projector, screen.

Activity and Method Description

The basis of the lesson is the text describing the pros and cons of living in the countryside and the city. On the basis of the text, teacher uses activating methods, aiming to involve all students in the lesson. One of them is *brainstorming*, which is a basic technique that helps to think creatively, especially in the group. Worth of recommending, especially in the school, because it helps to overcome the excessive criticism of their own and other people's ideas, which often accompanies the students and not only them. Another important method is *discussion* based on a text. It can activate and inspire students to participate in discussions in the classroom. During discussion students:

- Develop the ability to present a long speech on the topic.
- Gain skills in presenting own opinions.
- Create the proper level of discussion and ability to listen to others.
- Carry out a summary of the material discussed in the classroom.

A communication method plays a very important role, as well. During the lesson most of the time we devote to develop speaking skills. We encourage students to spontaneous and creative use of language. We talk about issues that directly affect the people in the group, we express our opinions and emotions. As for the practice method, it seeks to improve students to participate in a real creative tasks. The basis of the method is an exercise that is a kind repeated execution of some actions to develop skill acquisition and obtain the highest efficiency in mental and practical activities.

Assessment

Methods of evaluation:

a) The control methods of student achievement

Observation - The teacher systematically goes around the classroom and controls the work of students. After the task was done you have ask a question: Were you capable to do everything on this stage of lesson? Students' knowledge will be evaluated at the end of the course. At this stage you have to repeat carried out operations together with your students.

b) Evaluation of the course development with the comment

- Classes proceed as intended.

- Extremely extensive involvement of the students in the class.

The teacher obtains information about the accuracy of the chosen content and teaching methods to the needs and expectations of students. It also allows you to determine the effects of the learning process; determine what knowledge and skills students have, what experience accompanied them. He/she checks whether students have mastered the basic knowledge of the lessons and evaluates it. The teachers goal will be achieved when each student will be involved in the lesson at the same time extending his knowledge of vocabulary and practice use of grammar.

Teacher Guide

Introduction...

1) Inform students about the purposes of the lesson.

2) Brainstorming involving listing the public life objects found in the countryside and the city.

Presentation...

1) Formulate a question introducing the topic: Wo Wohnst du (auf dem Land/in der Stadt)? (where do you live in the countryside or in the city?). Students give a brief response referring the current place of residence.

2) Another element of the lesson is clarifying the application, as well as the meaning of the verb *möchte*. Students transform it, write an example, as well as grammatical rule.

3) The division of the linguistic group into 4 groups. The first group will deal with searching arguments that speak for life in the city, the second group - against life in the city and the third group will find arguments in favor of life in the countryside. The fourth group - against life in the countryside. Students rely on the text received from the teacher. After collecting the arguments followed by their presentation.

Another point of lesson is discussion about using conjunctions (*und, oder, aber, sondern, obwohl, denn*) in the sentence. Students on the example sentences randomly guess the meaning of these conjunctions, and create own grammatical rule on the application of these conjunctions.

4) They also perform a simple exercise involving grammatical conjunction proper fit.

Systematization...

1) In order to systematize the knowledge students were matched in pairs in which they must write a simple dialogue with this where a person would like to live and why.

Summary, assignments, explanation...

1) Students watch a short video showing the pros and cons of living in the countryside and the city. Then inform their teacher about the pros and cons of what they were able to recognize.

2) Explanation of homework by the teacher. Students receive a table to be filled and paste it into a notebook.

3) Summary of the lesson (people who showed interest and willingness to cooperate can be awarded with mark or +).

How Do I Preserve My web-Anonymity?

Tommy Białobłocki

Subject: Information Technology (ICT)

Grade level: High School (junior & senior)

Summary: You may not realize it, but every time you open up your laptop or switch on your phone, you are at the heart of one of the greatest battles now taking place in our midst - what shape will the Internet take in the future, and what role will anonymity play in deciding it? Last year, the revelations of US security contractor Edward Snowden, suggested for the first time the extent to which governments were collecting and analyzing our communications over the Internet. Scientists are growing increasingly concerned about the way such information could be used to predict our behavior and from that, be used as a form of control.

Overview & Purpose: How do websites collect your personal information, and what can you do about it? Students explore the concept of privacy in their everyday lives, and as it relates to using the Internet.

Teaching Method: Lecture, exploration and practice.

Objectives/targets

Students will be able to:

- Explore the concept of privacy in both a real-world setting and on-line.
- Understand how and why companies collect information about visitors to their websites.
- Learn and use on-line privacy terms.
- Learn that websites are required to post privacy policies.

Materials & Resources: Computer, paper, pen, copy the *What's Private?* student handout (one for each student).

Activity and Method Description

Students examine a scenario in which a research company collects information about them. They reflect on concerns they might have, and they learn about the kinds of information websites collect. They learn that sites are required to post their privacy policies and that kids should check those policies on the sites they visit.

Assessment

- Practice quizzes.
- Games, simulations, and other interactive exercises.
- Practice written assignments.
- Peer reviews.
- True-false questions.

Teacher Guide

Part 1

TELL your class the following story:

"Our principal has hired a research company to collect information that will help us make the school better for you. Several observers will watch students and record where each of you goes, how many times you go there, and how long you stay there, including to the water fountain, your locker, the bathroom, the cafeteria, and to visit another student. You will be identified only by a number. At the end of the day, the research company will put all the data together and write a report for the principal".

ENCOURAGE students to think about what you just told them. Have them jot down any questions or concerns they have, or think other students might have. Then have them share their thoughts with the class.

GUIDE students to consider the following questions:

- Who else might see the information?
- Can people's identification numbers be linked to their name by the principal?
- Do you think any of the information should remain private?
- Do you think you will be allowed to review the data collected about you?
- Are you satisfied with the explanation that the information is needed "to make the school better," or do you want to know more about how the information will be used?

EXPLAIN that the story you told is not true; no one will be collecting information about them in the school. However, this is the kind of information that many websites collect whenever you visit them. Companies can learn all kinds of things about you, based on where you go and what you do when you're on-line.

DEFINE the Key Vocabulary term anonymous. Explain to students that most people think no one knows who they are or what they do when they are on-line. Believing they are anonymous is why people sometimes do things on-line that they would not do face to face. However, it's nearly impossible to be completely anonymous on-line.

Part 2: What's Private?

ARRANGE students in pairs and DISTRIBUTE the *What's Private?* student handout, one for each pair of students.

REVIEW the Key Vocabulary terms cookies, third party, and privacy options. These terms are discussed in more detail on the student handout.

ASSIGN each pair of students one of the following websites, or choose other sites that your class uses. If your class has access to a limited number of computers, you may assign two or more pairs to work at the same computer and look at the same sites; each pair should complete its own handout, which refers to the following:

- How Stuff Works?
- Google, Wikipedia, Hulu, Facebook.

EXPLAIN to students that every website has a privacy policy. They can usually find this by looking at the small print at the bottom of the home page and finding the words "Privacy" or "Privacy Policy."

ASK students to go to their assigned websites and find the privacy policy. On their handouts, have them check off the words that they find on the site and answer the questions about personal information and privacy options.

INVITE pairs of students to share what they found out about the kinds of information their sites collect, and how the sites use the information. Does their site collect personal information? Does it use cookies, or does it give out data to third parties? Does it give them a choice of privacy options? This information is generally included in the privacy policy, though not always. Then ask students what they think about their site's privacy policy. Remind them to think back to the real-world and how this topic relates to their school.

ASK: Do you mind that the site collects information about you? Why (or why not)? Students may say that they don't mind, but they want to know the site is doing it, or that they don't like strangers having personal information about them.

ASK: Does it make a difference what kind of information your site collects about you? Make sure students understand the difference between sites that collect personal information such as names, addresses, and email, and sites that collect other information about things they do on the Internet, but keep the identities of their visitors anonymous.

ASK: What do you get in return for the information? Is the exchange worth it to you? Students should understand that what they receive is free access to the website. In some cases, sites sell the data to make money, which supports the site. However, not every site does this, and some sites find other ways to support themselves.



Part 3

You can use these questions to assess your students' understanding of the lesson objectives. You may want to ask students to reflect in writing on one of the questions, using a journal or an on-line blog/wiki.

ASK: What is a cookie? A third party? A privacy policy? Privacy options? See Key Vocabulary.

ASK: Why do website owners want information about their visitors? They use the information to decide how to change the site, to decide how much to charge advertisers, and to customize a site for each visitor to encourage them to use the site more or, for commercial sites, to buy more. Without your knowledge, some sites may also share your information with others in exchange for more information about you or in exchange for money.

ASK: Why is anonymity an important feature of the Internet? If websites know students' personal information, like their names and addresses, they can use the data or sell the information to third parties.

REMIND students that they can always check a web site's privacy policy to find out what that site might do with their personal information. If they don't feel comfortable with the policy, they can leave the site.

Extension activity: Have students research and define the term "aggregate data". Ask them to explain how aggregate data can be collected even when a web site's visitors remain anonymous. Encourage them to explain how aggregate data might be useful to companies that buy information from websites. How would it help them place ads or sell products on the Internet? (Students should understand that the data helps companies figure out what visitors' interests are so that they can place ads or sell products that users might like).

At-Home activity: Have students work with a parent or adult family member to go to a favorite site that they use at home, and have them analyze the site's privacy policy. Ask them to summarize the privacy policy and list any concerns or questions it raises.

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