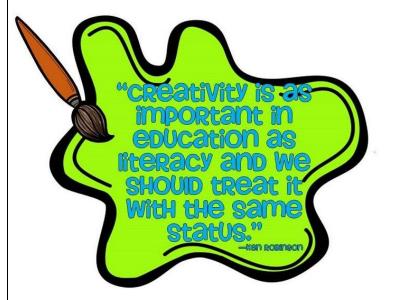






How to support the creativity and innovation of children and young people"

A guide for teachers and others working with children and youth people



WĘGRZYNÓW

2017

How to support the creativity and innovation of children and young people"

A guide for teachers and others working with children and youth people

The program developed in the project *Developing management staff competences* – *we develop the creativity of children and youth,* implemented in the program Erasmus +, co-funded by the European Commission.

Authors of the programme:

Non-Public Youth Educational Centre in Węgrzynów (POLAND).

Board of Education in Kielce (POLAND).

Agios Spyridonas Special School in Larnaca (CYPRUS).

Technical School in Limassol (CYPRUS).

Midberg Leisure Center in Reykjavik (ICELAND).

Institute "F.S. NITTI" in Rome (ITALY).

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Dear Madams and Sirs,

to all those who work with children and young people, especially teachers, educators, trainers, instructors, therapists, we hand on a guidebook *How to support the creativity and innovation of children and young people*.

The guide was developed within the Erasmus + project by six organizations from four partner countries: project leader - Non-public Youth Education Center in Węgrzynów and partners Board of Education in Kielce, Agios Spiridonas Special School in Larnaca, Technical School in Limassol, Institute "F.S. Nitti" in Rome comprising primary school and lower secondary school, and out-of-school center - Midberg Leisure Center in Reykjavik.

The undeniable value of the guide is that, in addition to suggestions on how to work with students to inspire them and develop their creativity, there are 14 ready-to-use scenarios. They are of different lengths, intended for realisation in a longer or shorter period of time. They give detailed instructions on how to work with children and young people, how to use a very effective method of educational project and they describe the course of the lesson step by step.

The scenarios are based on the experience of partner organizations and are addressed to different groups of students, including children and young people with disabilities. They can be used in schools and educational institutions, but also in many other institutions which provide support, develop interests and talents of children and young people. The scenarios allow people working with children and young people to improve their own competences and can be an inspiration for creating new ideas.

Best regards, The authors of the program

I. Basic information about the organizations taking part in the project.

1. The organizations taking part in the project:

1.1. The Non-Public Youth Educational Centre in Węgrzynów (POLAND).

The Non-Public Youth Educational Centre in Węgrzynów is day-and-night educational center for resocialization and rehabilitation, designed for 48 girls aged 13 to 18 who are socially maladjusted. Due to the nature and profile of the institution also students with mild intellectual disability can stay there. It lies in the Świętokrzyskie province, in the picturesque Świętokrzyskie Mountains and it is one of few such places for girls across the country. Rarely this type of facility also serve for rehabilitation purposes and provide support for pupils with disabilities.

The Non-Public Youth Educational Centre in Węgrzynów consists of a primary school and vocational school of the first degree which have the rights of public schools. The facility employs nearly above 40 teachers and specialists and provide both education and educational support, resocialization and rehabilitation actions, bringing tangible results in the form of a change in the attitudes of students, equipping them with social skills necessary in adult life which allow proper functioning in adulthood. The facility employs teachers

of different subjects, educators for educational groups, a psychologist, a pedagogue and a nurse. The work of teachers and specialists is a great challenge. Often the institution is not only the place of education and care, but also it substitutes the family home. The staff is committed to carry out their tasks, to ensure that the role set up in the educational system for this type of facility is fulfilled in the best way. Apart from educational support they give students a wide range of social assistance in cooperation with social help centers around the country. They care about their health and safety, provide above-average health care. The facility fits very well also in the local environment and collaborates in many areas with the local community.

Students from the Centre, for example voluntarily help elderly people in the neighborhood and care for children from a kindergarten located in the neighboring town. The facility cooperates also with other centers, schools, other educational institutions, self-government authorities of various levels and locally acting NGOs. Students participate in many competitions external, winning awards and distinctions.

The Center built its identity, despite its short-term functioning and its positive results in resocialization work, changing attitudes of the students and their social functioning. Thanks to international cooperation the teaching staff has the opportunity to exchange experiences and improve their competences. Facility students can carry out various activities with young people from abroad.

1.2. Board of Education in Kielce (POLAND).

Board of Education in Kielce, which supervises teaching standards in schools and institutions in the Świętokrzyskie province is a unit of joint governmental administration of the province as a singled out organisational entity. Board of Education in Kielce employs a total of 65 inspectors and specialists. Inspectors carry out tasks related to pedagogical supervision, i.e. make external evaluation of schools and educational institutions and test the compliance of their performance with the law. Qualitative assessment of schools and institutions is a fundamental task of the institution. Board inspectors also perform tasks supporting schools and institutions. Specialists working in the Board of Education in Kielce also perform tasks other than pedagogical supervision. The staff is well trained and highly competent, which enables professional performance of tasks. Board of Education actively cooperates with all local government units in the province (102 municipalities and 14 districts), creating regional and local educational policy. It also collaborates with regional universities (10) and a number of non-governmental organizations (including the Volunteer Centre, Centre for Local Democracy), associations and foundations which are the governing bodies of schools and institutions. It is the initiator of many educational projects that promote the value and quality of education, not only in the Świętokrzyskie province, but also throughout the country.

Świętokrzyski School Superintendent covers with his patronage important educational events conducted by academic institutions, cultural associations, schools and educational institutions.

This partnership strengthens institutionally the project and allows the use of partner's expert knowledge in the field of education, to achieve the goals and results of the project.

1.3. Agios Spyridonas Special School in Larnaca (Cyprus).

The school is a public Special School named «Agios Spyridonas» located in a southern littoral town of Cyprus, Larnaca. The town has a population of 62,000 and still manages to maintain a leisurely and relaxed atmosphere. It is the third biggest town in Cyprus and after the Turkish invasion started the operation of Larnaca International Airport.

The school meets the needs of 72 boys and girls, aged between 4 and 21, who mainly have a complex of learning and mobility difficulties as an outcome of their mental disability. The students come from the town and the suburban areas and villages of the district designed by the Ministry of Education. The government pays for their transportation back and forth to school. Most of the students are Cypriots with a very low percentage of immigrants. Most parents are of average income. Some of them are government employees, own their own business or work in the private sector. All the children receive welfare funds due to their disabilities. The school operates under the Ministry of Education and Culture - Department of Primary Education.

The school is committed to the development of each child's abilities individually so that the children can experience life as a worthwhile activity. The staff respect the dignity of each human being and acknowledge their value as an individual, whatever their needs or their abilities to contribute to the society. They also support the continuous development of knowledge, understanding and skills of the children.

The school enjoys an open aspect, football field, playground with outdoor special needs toys (trampoline, wheel chair swings, slides, 4-seat see-saw, merry-go-round, etc), synthetic lawns, and a botanical garden. The building offers a sensory room, a library and resource area, a kitchen and dining area, a sports/ assembly hall and several classrooms with facilities such as interactive boards, personal computers and augmentative and alternative communication devices and other peripherals.

The faculty consists of a Headmaster, a Deputy Head teacher, 10 Special Education teachers, a psychologist, 4 speech pathologists, three occupational therapists, four physiotherapists, three special physical educators, two music therapists, an art/ creativity teacher and two carpentry teaches. There is twenty three other staff employed at the school this year: 18 teacher aids, 3 cleaning personnel, 1 secretary and a janitor.

The school tends to the needs of boys and girls with a wide range of learning disabilities, caused by factors that are either prenatal (genetic factors, genetic diseases, developmental malformation, etc.), perinatal (low birth weight, prematurity, obstetric complications, trauma during labour, asphyxia, etc.), and postnatal (infections, accidents, malnutrition, environmental factors, psychosocial problems, etc). Each class consists of a maximum of 8 students, and an extra effort is made to keep the groups as homogenous as possible.

The school aims to:

- Value everyone irrespective of age, position, race, gender, background or ability. We endeavor to motivate, support and inspire personal, spiritual, emotional and educational growth in a safe and secure environment.
- Consider the uniqueness and individual needs of its students by delivering the greatest possible educational opportunities within a broad, balanced differentiated and relevant curriculum.
- Provide parent consultation and support keeping them fully informed at all stages of education whilst aiming to strengthen parent –teacher partnerships by three assistants, depending on the needs the group.

Some of the fields of Special Education the school has been participating throughout the last ten years in various European Programmes are:

- Alternative and augmentative communication
- Inclusion
- Vocational training
- Multicultural class
- Environmental issues
- Multidisciplinary team work

- Arts (theatre, music, dance, handicraft)
- Sports as a tool for social inclusion.

We have participated in programmes initiating the pictorial and dramatic reproduction of traditional stories via a multisensory approach, i.e. interactive theatrical activities, art and craft workshops. We have also focused on traditions and culture as a theme for visits. In addition, we have created a sensory garden along with the traditional herbs of Cyprus and of our partners. Furthermore, we have exchanged educational and therapeutic strategies among partner schools enhancing our.

1.4. Technical School in Limassol (CYPRUS).

A Technical School in Limassol started operating sixty one years (1956) ago in Limassol. It was the first technical/vocational school in Limassol. At first it was for students from the age of 12-18. Now, it has only students from the ages of 15-18, with a three year curriculum.

There are now three technical schools and Technical School of Limassol is the biggest with 580 students and 102 full time and part time teachers.

There are four departments at the school.

Mechanical Engineering Department

Specialization's in General Engineering and Automotive Engineering.

• Applied Arts Department

Specialization's in Graphic Design and Interior Design

- Department of Wood Work and Furniture Manufacturing
- Department of Secretarial Studies

In school, except the teaching classrooms there are drawing room, computer rooms, labs, workshops and other specialized classrooms. There is a theatre, a library, a canteen, a sports hall and teachers rooms.

The students participate in many schools, out of school and athletic events.

They hold art exhibitions and participate in many local and international competitions. There is also a drama club, an orchestra and a choir.

Technical School is located in the center of Limassol, near the old hospital and the General Police Station. Limassol is the second largest city in Cyprus with a population of more than 150,000 inhabitants. Limassol is a coastal city with many beaches and hotels. The city is well known for its wine festival and the carnival. Limassol is known also for its cultural events and its traditional city center.

1.5. Institute "F.S. NITTI" in Rome (ITALY).

"F.S. Nitti" Institute was born on 1st September 2012, from the unification of "R. Merelli" Primary State School with State Middle School "G. Petrassi", following a Regional Directive. It is a State School which is supervised by the Ministry of Education. The Institute is composed of 3 school complexes: "F.S. Nitti" Middle School, where 22 classes, Presidency and Administrative Offices are, "Ferrante Aporti" and "Mengotti" Primary Schools with 26 classes. The students attending our school are around 1100.

Our School operates in a middle-high cultural background, although varied and challenging. In fact, even if the social substratum is mainly composed of professionals, employees and tertiary sector workers, socio-economic disadvantaged situations such as immigration, unemployment, social and cultural degradation, are quite common, both in the school area and in the close districts where the pupils mainly come from.

The weekly timetable is supplied for 5 days, Monday to Friday.

PRIMARY SCHOOL TIMETABLE: 27 or 40 hours per week, according to families needs.

COMPULSORY SUBJECTS: Italian, Mathematics, Science, History, English, Social Studies, Geography, Music, P.E., Art, R.E./ Alternative Activities. Students attending school for 40 hours, have lunch at school and some lab activities in the afternoon.

MIDDLE SCHOOL TIMETABLE: 30 hours per week.

COMPULSORY SUBJECTS: Italian, English, Spanish or French, Mathematics, Science, Art, Music, Technology, History, Geography, P.E., R.E.

Students with Special Needs (foreigner students, socially deprived or disabled students) are all well integrated in the school activities.

Most of our students reach satisfactory learning levels and have great expectations for their further studies. Actually, the analysis of the high school enrollment data proves that 90% of students pursue their studies in Classical or Scientific High Schools, 7% in Polytechnic Schools, 3% in Professional Institutes. School drop-out is 0%

The School Management takes advantage of all the opportunities offered by the School Autonomy Regulations and the Headmistress has signed a Memorandum of Understanding with some Leisure Time Associations to give families the opportunity to choose among different activities (Music, Foreign Language, Sport lessons) to be carried out at school, after the curriculum classes. All these activities are included in the School POF (the main school document) and competences achieved by the students are certified by the Associations themselves.

1.6. Midberg Leisure Center in Reykjavik (ICELAND).

Leisure centers in Reykjavik city are operated by School- and Leisure division of Reykjavík – SFS (Skóla- og frístundasvið). SFS is meant to create a comprehensive service to children and families in the city and work on creating a continuity in children's work and play through school, leisure and sports. Midberg leisure center is one of five leisure center's in Reykjavík and are they divided by districts.

Midberg Leisure Center is in the district of Breidholt and oversees the leisure program for children and youth in five elementary schools of Breidholt. In those five elementary schools in Breidholt, Midberg operates 6 After School Programs for children 6-9 years old and 4 Youth Centers for youth 10-16 years old. Midberg is also responsible for summer activity programs during the school's summer breaks. Midberg has around 110 full-time and part-time employees.

Midberg's goal is to provide children and youth leisure time filled with content and worth their while. The emphasis is on interesting variations during their leisure time. One of today's requirement is to build up quality and variations during leisure time. Leisure time that include activities, education, arts, sports and leadership values under the direction of the employees.

Midbergs responsibilities are mainly divided into children's activities and youth activities. Under the supervision of the Youth Center Divisional Manager are four Youth Centers. Three that serve to the youth in the five elementary schools in the district but the fourth is serving to youth with disabilities. Under the supervision of the After School Divisional Manager are six After School Programs serving to the 6-9 years old children in the five elementary schools. The After School Programs work together on other projects in the district such as districts festivals and special events that service the neighborhood and the affiliations in the districts.

Midberg Leisure Center guidelines are from The Leisure Centers job directory issued by SFS (School and Leisure Department). SFS guiding light during citizen's leisure time is that all children have the opportunity to participate in activities that have educational goals centered towards their age and development. The emphasis is on participation, learning by doing, democracy and human rights. Special focus is to strengthen and motivate individuals that are disadvantaged due to their social indifference or disability. Prevention is key in all work at the leisure centers and working with attitude and behavior of children towards healthy lifestyle and social interaction.

III. What is Creativity?



- Many of us believe that creativity is a natural gift or as an acquired talent. However, talent has little to do with creativity.
- Creativity is a skill to be learned, practiced, and developed, just like any other. Some
 of us learn more easy, others need more time. To learn how to ride a bicycle takes
 practice. Creativity is no different. The more you make creativity part of your daily
 life, the more it will grow on you.

So what is creativity?

Making the simple complicated is commonplace; making the complicated simple, awesomely simple, that's creativity.

Creativity is the ability to go beyond traditional ideas, rules, patterns, products and to create meaningful new ideas, forms, methods, interpretations, etc. through originality and imagination.

Creativity is also the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others.

In order to be creative, you need to be able to view things from a different perspective. Among other things, you need to be able to generate new possibilities or new alternatives. The ability to generate alternatives or to see things uniquely does not occur by change; it is linked to other, more fundamental qualities of thinking, such as flexibility, tolerance of ambiguity or unpredictability, and the enjoyment of discovering unknown things and knowledge.

According to Samuel Becket, creativity is the experimental laboratory of failing over and over:

"Creativity may look like a noun but it is really a verb, and in specific an action. It could be a process, a thought or a manifestation, an idea or a product, but it is always an action, an energy, a putting one's self forth into the unknown. Creativity is the world of the intrepid explorer, of a 2 year old adult, who never ceases to ask the questions: Why? What if?"

People usually ask: "Can you really teach creativity?" Of course it can be taught. But people won't really learn it until they remember the days when they had it. And that is many years ago, when they were kids They should think back to the time when they were kids. All children are creative. They never think of what others think, or if they make a mistake, they just try, they explore, they fail, till they succeed, if they succeed.



Many youngsters joyfully pull apart watches, kitchen faucets, even car engines until formal schooling teaches them that this kind of behaviour is not the way to go about learning. So, as years pass most of us forget how to be creative. However the good news is that we can still learn how to gain that forgotten knowledge back, if we dedicated on practice and throw back in childhood.

Creativity is one of our primary tools for survival. Hundreds of thousands of years ago, our ancestors had to be adaptable to their changing environments in order to survive. The ones who thought "out of the box" were the ones who escaped getting eaten, which is why they are the ones who are our ancestors.



So how do you make creativity part of your daily life? Here are 20 suggestions-and guess what? You can get started on them right away.

1. Doodle Something: Although we may have been reprimanded in school to "stop doodling and pay attention," it's time to bring back the doodle. Doodling, contrary to popular opinion, does not demonstrate a lack of focus. In fact, doodling can help you stay present and engaged during an activity in which you might otherwise find your mind drifting. Doodling can enhance recall and activate unique neurological pathways. Some companies even encourage doodling during meetings!



2. Start a Sketchbook: Sketching is a great way to preserve memories and make constructive use of time that might otherwise be spent fiddling on a phone. Buy a small, lightweight sketchbook that can easily fit in your bag. Start sketching whenever you have even a few spare minutes, write down your thoughts, or even better combine your sketches with your thoughts.

3. Create the Right Environment: The truth is that every single individual can be creative. You simply require the right environment, stimulus, and support. This is why Google goes to great lengths to provide employees with an adult playground. The goal is to create an environment that lets employees feel relaxed and comfortable with vocalizing creative, even wacky, ideas. Businesses that value creativity need to do their best to foster a creative, safe space where unusual ideas are celebrated and where creativity is nurtured.

4. Try Something New: Do what you are under-skilled to do. If you know pretty well what you are doing you are probably bored by now. Facing a tremendous creative challenge makes you go scrambling for solutions. Go swimming in an area/field of work you never tried before.

5. Sign Up for a Class: Creativity flourishes when you push yourself outside of your comfort zone and learn something new. Many communities offer evening adult education classes.

These classes are often very casual, with plenty of beginner offerings. Try painting, pottery, or woodworking. How about learning a new language, picking up a new instrument, or taking a cooking class?

6. Keep Toys on Your Desk: Many creative design companies encourage employees to keep toys or humorous items on their desks, from Legos to origami paper art. Building something physically with your hands, as opposed to typing on a keyboard, can be just the creative jolt you need.

7. Be Wrong: One of Einstein's most famous papers turned out to be completely wrong as far as the science. Some other scientists proved it wrong. But at the end they did found out how quantum mechanics really works. Don't be afraid to be wrong. You probably will be anyway. And people might thank you for it.

8. Pause the Brainstorming and Move Your Body: During long hours of brainstorming, stop and go for a walk. Physically move your body and consider your project problem from different locations. Physical movement has been shown to have a positive affect on creative thinking, just as theatre pros suggest practicing lines in different poses and positions to generate new character approaches. Move before you brainstorm.

9. Don't ask "Why?": Ask "why not?" and you will often be baffled and astonished. There is often no reason not to do something.

10. Collaborate: There is someone out there in the world right now who is thinking about the same things you are. Why don't you put your brains together?

11. Mix Unmixables: If there are two things you like, put them together. Mixing is creating. Start by mixing an animal with a thing (ex. furniture) and create your own creature or new invention. Then, mix ideas, or inventions.

12. Role-play: Role-playing can help you develop new solutions to existing problems by putting yourself in the shoes of a client or a customer. Even if you've already made efforts to enter the client's mind-set, physically role-playing situations with co-workers can generate powerful revelations and project solution. As children, role-playing is how our imaginations thrived, from baking mud pies and playing house to fighting and off baddies exploring the jungles in our own backyards. It's time to bring back the power of play.

13. Allow Randomness: Randomness is free. It's floating around in your brain anyway. Write down your thoughts in the toilet. What do you think about when you have nothing to think about? Think, about a problem before you go to sleep, you will dream about it, and find the best solutions in your dreams. Work or think in places, that you never done it before, you might think that it is useless and mind garbage, but at the end, it could be one of your most creative solutions.

14. Borrow Ideas: There are might be no new ideas, really. But there are new combinations of old ideas. Make connections, the brain works by connecting neurons. The more physical connections the better you know something.

15. Face your Fears: Whatever you are afraid, you fear it for a reason. Self-doubt, hidden potential, whatever the reason is the fear is not helping you. Once you face your fear you will get emotional about it. Be brave, creativity ruffles feathers, even offends people. True

genius can scandalize. Be brave in the face of criticism. Time changes nothing, but you do. Waiting for a better time to create is a dead-end.

16. Do First Think Later: Better done than perfect, get it done now, and you can always repeat it better later. But if you let it sit around because of your perfectionism, it will die. The problem with thinking first is that you'll probably prevent yourself from doing it. So 'do' comes first. Doing is creating.

17. Create by Destroying: Thinking new ideas or adding things to something is not the only way to create. Destruction is creativity in the reverse order. Sometimes you have to destroy something in order to understand or find something new. A bra was created by destroying the corset!

18. Get into your Client's Place: Serve your reader (viewer, user, etc.), whatever you create it's for someone to use. Visualize what they will see when you present it. It will make it easer, not only for them, but also for you.

19. One Man's Trash is your Treasure: Your source of creativity might come from something others think is trivial or even worthless. Free stuff that no one wants may be your creative playground.

20. Imagine that all is Possible: If it's impossible now, it doesn't necessarily mean that it will remain impossible in the future. Don't let perceived impossibility stop you.

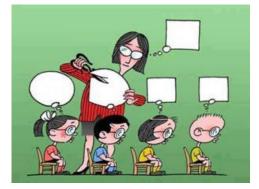
So, is that how you can be creative?

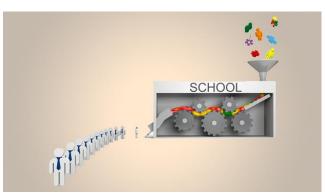
Stop reading now and go create.

Display Structure Structure CREATIVE PEOPLEAre easily bored.
Willing to take risks.
Don't Like Rules.
Don't Like Rules.
Ask "What If?"
Make lots of mistakes.
Collaborate.
Are generous.
Are independent.
Experiment.
Motivate themselves.
Work hard.

Education kills Creativity»

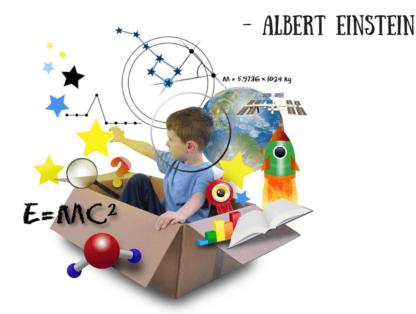
"Sir Ken Robinson", 2008





Imagination

is the highest form of research.



Every child is born with the potential of being creative. Creativity is a crucial aspect of any personality. It helps to analyse things in diverse and uncommon way. Creativity does not just happen; it needs to be cultivated, and the cultivation of creativity in every kid starts from the classroom.

- During the last years there have been a lot of efforts in implementing innovation and creativity in education with new programs like interdisciplinary and modern teaching approaches.
- But new teaching methods and modern methodology are not enough. Teachers have to be educated also, in order to understand and learn how to use these modern teaching methods, in order to adapt innovation and creativity thought in classrooms.
 Co-funded by the Erasmus+ Programme of the European Union

Because, creativity can be promoted or cultivated, here is a list of strategies that can help teachers to promote or cultivate creativity in the classroom. Many professionals believe that creative thinking can be taught as a course, like math or science.

Teacher training in creativity must aim in:

- Obtaining knowledge about creative thinking.
- Embracing creativity as part of learning.
- Encouraging students to use different parts of their brain.
- Using emotional connections.
- Practical exercises in special techniques that emphasize creative thinking and facilitate innovating ideas.
- Self-awareness, new attitudes and releasing the creative abilities of teachers.

CLASSROOM ENVIRONMENT

Classroom environment plays a crucial role in cultivating creativity and confidence in students. Teachers can make classroom environment where each student's voice matters a lot. Here is how teachers can make classroom environment more effective for their students:



- Permit frequent discussion and interaction amid students in the classroom.
- Make time for informal class opportunity for the students.
- Memorize each student's name meanwhile ensure every student knows everyone's name.
- Getting involved with the students in the community is the best way to give push to their creativity.



- Create a colourful environment and use different materials to stimulate their emotions and brain.
- The creation of a continuously changing environment which is open to new ideas.
- Design awards or bulletin boards to showcase different ways of solving a problem, or creative solutions to a real world scenario.
- Breakthrough of the teachers' framework of thinking and its adaptation with the students' way of thinking.
- Promoting solutions of everyday problems based on the students' creative thinking.
- Emphasis on the process, not the result of a problem.
- School time should give the chance to students to find and discover new possible and not possible solutions.
- Allow students to make mistakes and even give unexpected answers.
- Encourage students to investigate and understand by themselves how things/machines work and are made of.

III. Methods of teaching that promote creativity and can be used in education.

- <u>Using the method of brainstorming</u>. It's a technique that helps producing new idea and encourage hesitant students to participate and generate ideas.
- **Dialogues and conservation for everything.** It's a dynamic mean that gives the possibility to the teachers to achieve their goals and the students the chance to put forth their opinions.

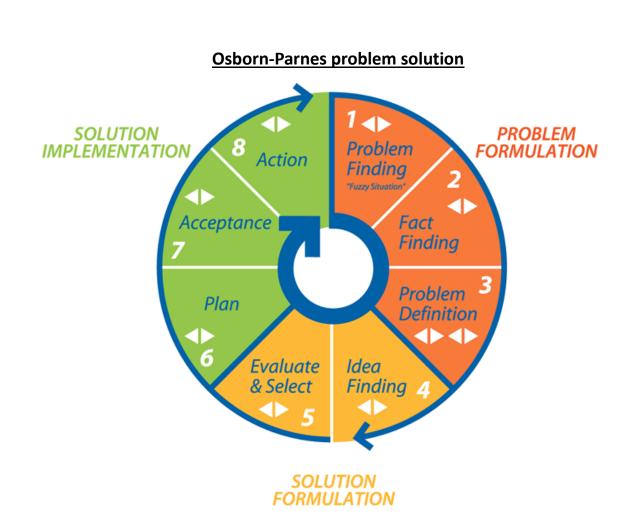


- <u>Thinking of creativity as a skill.</u> Much like resourcefulness and inventiveness it is less a trait and more a proficiency that can be taught. If we see it this way, our job as educators becomes to find ways to encourage its use and break it down into smaller skill sets. Psychologists tend to think of creativity as Big-C and Little C. Big C drives big societal ideas, like the Civil Rights movement or a new literary style. Little C is more of a working model of creativity that solves everyday problems. Both concepts can be included in our classrooms.
- <u>Using a creativity model</u>. The Osborne-Parnes model is the oldest, widely accepted model. It is often used in education and business improvement. Each step involves a divergent thinking pattern to challenge ideas, and then convergent thinking to narrow down exploration. It has six steps:
 - Mess-finding. Identify a goal or objective.
 - Fact-finding. Gathering data.
 - Problem-finding. Clarifying the problem.
 - Idea-finding. Generating ideas.
 - Solution-finding. Strengthening & evaluating ideas.
 - Acceptance-finding. Plan of action for Implementing ideas.
- Using simulations, gaming and play roles in teaching. Starting from the basics, that a classroom must be a place of joy, diversion and happiness, we should adapt the use of games and play roles in order to give the chance to students to develop their

learning capabilities and social skills that will help in discovering new ideas and solutions. It will be helpful to use the following techniques:



- The method of indirectly thinking.
- The procrustean analysis.
- Questions that promote creative thinking.
- The technique 535 (creating groups of 5 students, working together or smaller groups, for 3 minutes to find 5 ideas/solutions to a problem).
- <u>Using divergent and convergent thinking</u>. Standardized tests do a great job
 of measuring convergent thinking that includes analytical thinking or logical answers
 with one correct response. Divergent thinking considers how a learner can use
 different ways to approach a problem. It requires using association and multiplicity
 of thought. We should design assignments that consider both types of thinking
 models.
- The most successful approaches use creative art, media-oriented programs, technology oriented projects or relied on the Osborn-Parnes training program. Programs that incorporated cognitive and emotional functioning were the most successful.



A creative teacher must:

- Adapt easily new methods that promote creativity and give the chance to every student to develop his own creative thinking.
- Not offer ready answers to a problem, he must give useful information that will work as a helping tool for solving problems or finding new ideas.
- Investigate new flexible teaching procedures that will allow him to readapt his teaching methods.
- Use modern teaching methods.
- Utilize cooperation with the students' family environment in order to select useful information for reassessment of the approach methods with the students.
- Use the students' wrong answers for refeeding the procedures and not use them for rejection and grading. Anyway, everybody learns from making mistakes.
- Accept first and adapt the idea, that creativity is an important ability for innovation in every youngster.
- Reward students for thinking of problems in varied ways by recognizing their efforts.
- Keep it going: Continue the thinking beyond the lesson or classroom. Find ways to extend learning opportunities at home or even the community.

A creative student must:

- Learn to detect new ideas and solutions without the help of stimulants.
- Adapt easily new ideas and place every time higher goals.
- Doubt and question every old idea and invent, adapt, experiment, implement everything he/she considers innovating.

Everybody learns by:

- Constracting/making things: Give children something to make from scratch or assemble piece by piece.
- Continuing a story: A child or the teacher starts a story and the rest of the group is called to continue or finish it.
- Making open type questions: Show children a picture with people and ask them to answer to questions like: "What do you think people are doing, what are they discussing?".
- Making questions that can have many answers: Put down a discussion topic about an item, or water and ask them to find unusual uses for it.
- Making questions that stimulate students' imagination. For example, what would have happened if the trees were red, if after a big sea pollution there were no fishes in the sea?
- Dramatizing: Ask students to convert a poem or a painting to a small theatrical show, with them being the actors.
- Role playing: During a lesson (history or literature) we ask students to play the roles of heroes or famous persons, by creating a small story.
- Mimicking: Ask student to mimic animals or people they know.
- Guessing: One student mimics a person, or a phrase and the rest try to guess.
- Building: Induce children to build or make things with clay, paper, recycled or other materials. Show the possibilities of robotics engineering and 3D design and printing.
- Allowing space for creativity: Design some classroom space for exploration, such as a thinking table, a drama stage, a drawing table, or a space for groups to discuss ideas.
- Encouraging curiosity: Consider what is important to students. Student interests are a great place to start on what drives their own thinking tank. Find inspiration from their world.
- Creativity requires to use different parts of our brain: We often bridge connections between seemingly unrelated areas to make new concepts emerge. Allow students to use their strengths to find new ways of approaching a topic or solving a problem. You might be surprised with what they come up with.
- Using emotional connections: Research suggests that the best creativity instruction ties in the emotions of the learner. For instance, if teachers give project to the students related to community problems like domestic violence, can help in sprouting creativity because of the human touch and hence emotional connection in it.

- Active Learning: Active learning includes use of creative stuffs like games, concepts, maps and study materials. Active learning can only be encouraged when student enjoys the learning environment. Here are some ideas through which teachers can cultivate creative thought through active learning.
- Organizing round-table discussion from time to time on interesting topics.
- Permitting students to create some of the questions for their upcoming exam.
- The concept of teaching creativity has been around for quite some time. In recent times, there has been a shift towards the increased acceptance of valuing creativity for all learners. Much of the blame for a lack of creativity, and therefore innovation, can be traced to our traditional educational systems.
- It relies on teaching to the correct answer.
- Most of the practice of creative methods is being done outside the traditional educational institutions and mainly by consulting firms and by persons in companies who have been trained in creative problem solving methods.
- We must understand that creativity is important to students' future in the job market. Paul Collard for Creative Partnerships, considers that 60% of English students will work in jobs that are not yet created. In today's market, students must largely be innovative and create their own jobs. Collard suggests teachers focus on teaching particular skills or set of behaviours, rather than preparing students for specific careers.

Collard also believes that, "Creative skills aren't just about good ideas, they are about having the skills to make good ideas happen." He suggests creative skills should include 5 major areas:

- Imagination
- Being disciplined or self-motivated.
- Flexibility
- Collaboration
- Giving responsibility to students. Have them develop their own projects.
- Summarizing we should accept that every student when he or she graduates must ready to tinker, create, and take initiative. But we shouldn't forget that creative thinking is critical for problem solving in everybody's career.
- Imagine a world where textbooks were replaced with open-ended, thoughtprovoking opportunities to question the world around us. In these classrooms, students would learn how to think, how to find problems, not just plug in numbers to solve them. What if quizzes measured kids' ability to question, not answer?
- Creativity builds confidence. Students take ownership of their own learning. Think of ways where students might design a project. For instance, for the history requirement, I suggested students of both fifth grade classes create an exhibition of their final projects. The students were so proud of their final work and learned

from others presentations. Parents and community members were happy to see students take ownership of their learning.

- Find ways to incorporate and integrate art, music and culture. A recent report prepared for the European commission considered that creativity is a central force that shapes our culture. With the changing times we live in, the report suggested that society is enriched by cultural-based creativity.
- Use a collaborative creative thinking model to solve classroom problems. For instance, read a paragraph and then have groups discuss a list of questions. Collaborative problem solving is catching on quickly. In fact, many business schools have implemented creative thinking models into their curriculum.

IV. Scenarios of activities developing student's creativity.

Non-Public Youth Educational Centre in Węgrzynów (POLAND).

Scenario No. 1

C² - Creative Culture at your fingertips



Topic: C2, or Creative Culture at your fingertips.

Lesson objectives:

- Students understand what culture at the beginning of the 21st century is list its elements / manifestations
- Students perceive and evaluate cultural manifestations in their surroundings
- Students create ideas to improve the situation in the environment undertake and plan collectively cultural initiatives for the school / district / village
- Student s participates in researches in the school, aimed at improving the quality of its functioning
- Students shape the attitude of an active recipient and creator of culture

Methods and forms of work:

- discussion (with the whole group and in teams)
- film
- multimedia presentation
- visual test method photo evaluation
 Co-funded by the Erasmus+ Programme of the European Union

- star of questions
- individual and collective work, teamwork

Teaching materials:

- large sheets of paper (for posters), small sticky notes in two colours, markers, masking tape or plasticine for fixing (for work with the star of questions)
- adhesive price tags
- digital cameras (may be cameras in students' mobile phones)
- computer(s) with Internet access, projector or interactive board, sound system (for watching videos)
- mini- project card

Duration of classes: 4 teaching hours

The course of activities:

WE PRACTISE OUR PERCEPTION AND CREATIVITY

1. The initial phase

WE PRACTISE OUR PERCEPTION AND CREATIVITY

• Join students into pairs (e.g. by drawing cards in different colours or cut into different shapes). Ask pairs to stand opposite to each other at a distance of approx. 1.5 m (in this way students will create two opposite rows). Explain the first stage of the exercise, aimed at awakening perception and creativity:

For a minute look at each other very closely in total silence. Try to remember as many details as possible.

After a minute explain the second stage of the exercise:

Now turn your backs, and make 5 changes in your appearance. You have got three minutes.

When the time is finished tell the students turn around and in loose conversation (approx. 3-5 minutes) try to guess/name changes made by the partner.

Then tell the students, what they will have to do in the last stage:

– As before, turn your back and within 5 minutes make 10 new changes in your appearance.

After 5 minutes, the participants again look at each other in pairs to observe and name these changes.

Talk about the course of the exercise - for example, you can ask .: How did you feel during the first minute of the exercise? What did you think after hearing the command to make 5 changes? And how, when you turned around to guess the changes in the appearance of your classmates? What did you think / did you feel when you heard about the next task? Did you copy your "neighbours" when making changes in your appearance? How many changes did you notice after the first stage, and how many after the second? What , in your opinion, was the purpose of this exercise? What have you learned about yourself? What surprised you in others? etc.

• Summarize the initial stage of the class - ask:

- Who was most creative in making changes?
- Who was most perceptive in spotting changes?
- Can creativity exist without perception?
- What is creativity?
- Where does creativity come from? What is its beginning / source?

- What would our world, our environment, look like if we had compulsory vaccinations for creativity?

• Introduce students to the definition of creativity, e.g.: *Creativity is the art of solving tasks and problems in unusual and effective way*. It doesn't have to be only discoveries, momentous inventions or works of art. *Creativity is the ability to create new ideas for us* - even though millions of people had this idea before us¹.

Implementation stage

DO YOU WANT TO LIVE IN THE WORLD WITHOUT CULTURE?

- Sit in a semicircle invite students to discuss about *Creativity around us reality or utopia?* Note down on two separate posters examples of creative solutions (events, objects, places, art, etc.) given by the students which exist in their environment. As well as the evidence of the lack of creativity.
- Talk about the outcome of the discussions. Which poster contains more examples? Why?
- Complement students' knowledge about new phenomena, characteristic of the culture of the twenty-first century (Appendix 1.²). Explain if necessary unintelligible words³.

Distribute worksheets (Appendix 1). Ask students to fill in individually columns 3, 4 and 5 in the table. After completing this task, talk about the results. Pay attention which fields/

¹ After: <u>http://medycynaipasje.com.pl/a1676/Jak-zwiekszyc-swoja-kreatywnosc-.html/m226</u> Access: 14 November 2016.

² Entries in the Appendix come from a multimedia presentation, promoting the action of the National Cultural Centre under the name "Culture Counts!"

³ Probably students can have problems with a few words. **Performance** – it is a phenomenon of culture / arts difficult to define, including undertakings, actions, happenings, artistic manifestos, etc., It assumes a new quality of contact with the audience, involving, among others: co-participation of viewers, readiness of artists and spectators to improvise, openness to co-creation. Interesting examples of performance: a report from the happening organized by XCIX Upper secondary School in Wrocław and the National Cultural Centre to celebrate the 90th birthday of the poet Tadeusz Rozewicz(happeningu zorganizowanego przez XCIX LO we Wrocławiu oraz Narodowe Centrum Kultury z okazji 90 urodzin poety Tadeusza Różewicza); happening YES FOR RECYCLING (TAK DLA RECYKLINGU) ; action "Playing stairs" (Grajace schody). Design (from Wikipedia) - an ambiguous term used to refer to utilitarian objects, could mean their appearance or design. Design refers not only to products and equipment, but also to a show, for example firework display or water fountains show. Areas of design are: graphic design, product design/industrial design, interior design, multimedia, fashion. Interesting publications: portal SPRYCIARZE.PL – INSPIRATION (SPRYCIARZE.PL – INSPIRACJE), information about the project DESIGNE FOR SCHOOLS (DESIGNE DLA SZKÓŁ) (useful in explaining the concept of arrangement, understood as a way of developing and making a piece of music, but also interior design, space, street, etc.). Other: STOP DOPALACZOM! (Happening w Jarocinie); happening Les Musicals Sacré-Coeur; Oda do radości na placu miejskim; Les Miserables w Złotych Tarasach;; painting happening dedicated to the celebration of the 1050th anniversary of the Baptism of Poland (happening poświęcony obchodom 1050. Rocznicy Chrztu Polski); a hit from the World EXPO 2010 in Shanghai – a cartoon "Polish history" by Tomasz Baginski ("Historia Polski"), musical improvisation at the station in Paris (improvizacja muzyczna):; Loesje in the public space (Loesje Włochy, Loesje Polska).

cultural manifestations are well known to students, and which are a "discovery" for them. Perhaps these are the areas which can become the subject of students' mini-project?

CREATIVE STUDENTS ON THE TRAIL OF CULTURE

• Explain the task to students using the description in Appendix No. 2.

The exercise is based on photo evaluation, used in recent years in schools as a simple and attractive evaluation method that allows students to take the role of researchers, and the school to get valuable information about the students' perception of school events, places, activities. The photo evaluation method was described in the book "Self-Evaluation in European Schools" (John MacBeath, Michael Schratz, Denis Meuret, Lars Jakobsen). The publication, set in the European context, was based on a research project (Socrates), attended by 18 countries. 101 schools worked according to common assumptions, learning how to reliably carry out self-evaluation and how to proceed to improvement actions – to achieve measurable improvement, innovation, change⁴. The photo evaluation method was promoted in Poland during training "Teacher Researcher", implemented within the framework of the system project cofinanced from European funds "Programme to strengthen the effectiveness of the system of pedagogical supervision and evaluation and the quality of school work."

 Students go around the school. Be sure to have discussed with the headmaster and employees the rules of access to school rooms for photographersresearchers.

- Help authors wisely in making multimedia presentation avoid imposing them your "teacher's" point of view of the facts, places, actions. Allow original and creative comments to photos, etc
- Watch prepared presentations. Write down the names of places examples
 of WORLD WITHOUT CULTURE, on the board or on a poster. Ask students to
 choose the place they would like to change first. They can come to an agreement
 through discussion and negotiation, or by voting (e.g. by sticking a price tag next
 to the selected place). When choosing, pay attention that the change is realistic do not block students' ideas, but remember that ideas like: "Construct a new
 gym" is unrealistic to implement in a short time, but students can submit
 applications to e.g. village/municipality/ region authorities.

CREATIVE STUDENTS PLAN

 Suggest students to plan activities to introduce changes in their chosen location they will work with the star of questions method, worksheets from Appendix No. 4 and the findings they will place on a large sheet of paper on which they will redraw the star schema, and then stick selected questions (sticky notes in a selected colour) and the answers (on sticky notes of a different colour). As the "warm-up" offer them "a walk" around interestingly arranged interiors of the Primary School No. 28 in Kielce (Appendix No. 3).

Summary stage

CREATIVE STUDENTS REACH C2

Ask students what ideas for C2 Project they can propose after today's meeting. They can submit ideas individually, or they can first discuss them in pairs and present to the group.
Write down C2 Project topics created by students. If necessary, you can discuss proposals prepared in advance (see below).

• Analyse together with students ' C2 Project Card "(Appendix No. 4). Let the students work for 15-20 minutes on a draft "Card" in relation to their chosen project.

Examples of topics for C2 Project

- Photo-album "Traces of the culture of our school"
- Traces of the culture of our town
- Here the CULTURE COUNTS, and here is the WORLD WITHOUT CULTURE photo evaluation of our town / our estate
- School Festival of Students and Teachers' Talents
- Virtual guide to the games and activities of our parents and grandparents
- Games tournament of three generations
- Fashion yesterday and today a fashion show of three generations
- Music concert of three generations
- Photo-album of our town what the places we know looked like in the past,
- We organize a happening ...
- "Something from nothing" a school contest for the most interesting design project
- Family Gift talk about events important for the history of a town / region / country
- Artists in my village
- A cultural mini-guide to our village/town

Appendix No. 1.

Here are the commentaries to the multimedia presentation posted on the website of the National Cultural Centre social campaign CULTURE COUNTS!

Read the commentaries and write your own remarks In the columns 3, 4 and 5.

		My remarks		
	Commentary	What I don't understand	What surprised me In the commentary? What new have I discovered?	What examples of this type of culture do I know (+) or/and like (©)?
1.	Architecture is perceived as cultural and political symbols and works of art. Historical civilizations are often known for their architectural achievements, they are cultural symbols and important part			

	of the national identity.		
2.	Music is one of the manifestations of human culture. Music has always accompanied man at work, play, rest and rituals/ceremonies. At first, music served practical purposes, helped in teamwork, was a form of communication, and later became part of the collective identity. As time passed it became one of the branches of art.		
3.	The arrangement of urban space is also a form of culture. In what environment we live, it is the quality of our lives.		
4.	Street art is a part of our lives. Today the street is actually a place for the presentation of artists. More and more often artistic forms happen in the city.		
5.	Visual arts, performances, installations - today is the way artists communicate with the audience. Without the work of artists who constantly provide us with a variety of art forms, we lose contact with art, thus slowly losing our sensitivity.		
6.	This car was designed by an artist. Industrial Design is a department of the Academy of Fine Arts. Every year a hundred of graduates of the Academy, working in various industries, transform the shapeless, colorless products into miniature works of art.		
7.	This is also a design product.		
8.	Fashion is culture industry, with an annual turnover of several million dollars. From clothes we can read people's history. It is a reflection of the times we live in.		

9.	Cinema is culture industry with income of millions of dollars. It is also a platform through which new ideas and ways of looking at reality are transmitted to people. To live without free cinema, is to live without freedom of ideas. This is creation of thousands of		
	people employed in the creation of cinema.		

Appendix No. 2.

CREATIVE STUDENTS ON THE TRAIL OF CULTURE

You are going to perform a task during which observation and creativity will definitely be useful.

With digital cameras you will set forth on a journey around school. You will look for and photograph places where "CULTURE COUNTS", and places that are like "WORLD WITHOUT CULTURE". Take advantage of the knowledge acquired at today's meeting about what constitutes culture.

How are you going to work?

1. Form teams of two or four persons.

2. Each team will select at least four places in the school, which all team members consider the place where "CULTURE COUNTS" (and you can see it at first glance!) and at least four places which are like "WORLD WITHOUT CULTURE".

3. The team should agree together how to compose the photo to best express your opinion (e.g. whether to photograph the whole room, or the details, whether to photograph empty rooms or also people present there⁵ etc.).

4. Take pictures according to the rules you agreed on. You have got 30 minutes to do it - after that time you should go back to our classroom.

5. Download photographs on a computer and use them in your multimedia presentation or video. Add a brief commentary to each photo to make it clear what you liked and what you did not like and why. For this stage of the exercise you will have 30 minutes.

6. Present prepared multimedia presentations to other participants.

7. In the future, you can show the effects of your work (presentations or exhibition of your photographs) to your class, other classes, teachers, parents. Or maybe you will invite your friends and colleagues from other classes to do photo evaluation?

8. Your work/presentations will be the basis for discussion about what actions we can take to make the situation in school better, to increase the number of places and projects in school where "CULTURE COUNTS!" ...

Enjoy

⁵ Remember that to photograph people you need their permission! And do not forget that pictures cannot offend or ridicule people who are in it.

Appendix No. 3.

We invite you for a virtual walk around Primary School In Kielce⁶.



This fairytale castle was made with the help of a friend artist of the oldest furniture in our school – an ugly wall unit of the 70s. It is still a "bookshelf" – it retained the function of shelves, drawers, but additionally it pleases the eyes and stimulates imagination, it is also a scenery for class speeches ...

The arrangement of the classroom draws attention to the pictures on the back wall – big and colourful (as the "aquarium") they embellish but also teach (like a mock-up of war battles in the Kielce region in the history classroom or planets in space in the classroom of younger students).





Almost in every classroom there are glass walls between the hall. On them students stick their "works of art" – there are characters from fairy tales, stained glass, commemorative decorations ...

⁶ Pictures: website <u>http://www.sp28-kielce.pl/</u> Acknowledgements to the headmaster Ms. Lidia Witkowska, teachers and students from Primary School No. 28 in Kielce for the permission to use their school materials in our project.



This is the entrance to the pavilion where the youngest students learn. "The tree" was planted here by the students... Years ago in this place an ugly sewage pipe was visible. Students, under the guidance of the art teacher, made paper pulp, covered the pipe and put real tree branches into a painted 'trunk". Today the tree, depending on the season, is decorated with autumn or summer leaves, paper snowflakes, or apple tree flowers...

On the School Genealogical Tree there are photos presenting school history. They were found in old school annals (the newest annals can be seen in an electronic version on the school website), many photos were given by teachers or graduates.





The exhibits that adorn the Polish language classroom – regional chamber, were donated by students, their parents, grandparents, teachers... A mock-up cottage from the Świetokrzyskie region was built free of charge by prisoners from the Detention Centre in Kielce. In such room legends and tales sound magical...



And this is the main entrance to the school. The door of the Secretary's office is always open for students, teachers, parents and guests. On the walls there is a Gallery of Student Works. In the background - couches, a place for resting and waiting for classes.

In this part of the school its motto was also placed: *Together we are building a school* of continuously learning people, in which the impossible becomes possible. **Do you think** the school's design is a proof?

It is ugly here... It is uncomfortably here ... I do not like sitting here ... It could be more beautiful here ... It would be more comfortable if ...

They moved from an idea to action. They created joint projects and then selected the most interesting, created "business plan", sought ways of "making something out of nothing" – it is easy to have a lot of money and buy a lot of expensive things! They wondered who - among the school community (after all, school is a constellation of students, teachers and parents' talents!) can help in the implementation of ideas. If necessary, they sought friends outside the school, asked sponsors for help in the realisation of a dream for a more beautiful, more comfortable school ...

For sure in your school there are also such places which changed beyond recognition, thanks to someone's idea and creativity or just because the culture of the times we live in is different.

During breaks between classes, look for photographs and videos in the school archives. They can show what the school look like in the past. Maybe some members of your family or friends attended your school? - Ask them to show you old photographs.

Maybe you will try to create PHOTO-ALBUM entitled "Traces of the culture of our school?" If you like this idea, invite your colleagues, friends, graduates for cooperation...

I wish you creativity in the search for traces of the culture of the past!

Appendix No. 4.

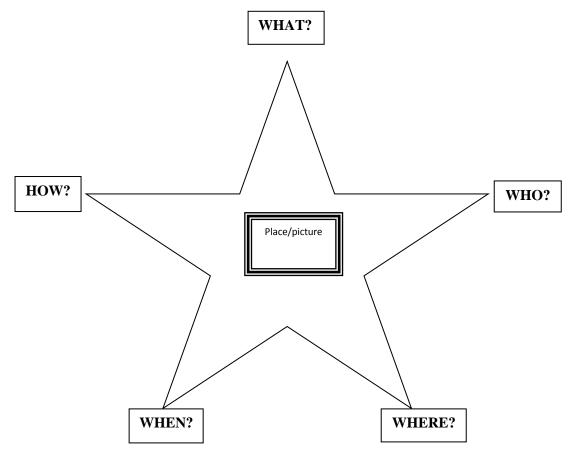
CREATIVE STUDENTS PLAN

This is a task for you.

Select from your photo-gallery a place, which unanimously you want to change most urgently.

Plan actions, using the STAR OF QUESTIONS method - together look for creative solutions to problems:

• first asking questions starting with the indicated word, and then answering these questions.



Example questions:

WHAT FOR?

- ✓ WHAT FOR are we going to make the change?
- ✓ WHAT is this place in school FOR?
- ✓ WHAT FOR will this place be when we change it?
- ✓

WHO?

- ✓ WHO is responsible for this place?
- ✓ WHO will be glad when we change this place?
- ✓ WHO will make a design project?

- ✓ WHO can help us to do it?
- ✓ WHO can help us financially?
- ✓ WHO has got talents that can be useful for our project?
- ✓ WHO will be the leader of our project?
- ✓ WHO will take responsibility for the planned actions?
- ✓ WHO can join our team?
- ✓

WHERE?

- ✓ WHERE should we go to implement the idea?
- ✓ WHERE can we look for inspirations?
- ✓ WHERE will we work on the project?
- ✓ WHERE will we find materials?
- ✓ WHERE will we publish documentation of our works? (e.g. pictures, descriptions, letters to people who can help us, their responses, etc.)
- ✓ _____

WHEN?

- ✓ WHEN will we start actions?
- ✓ WHEN will we tell other students/headmaster/teachers about our actions?
- ✓ WHEN will we finish works?
- /

WHAT?

- ✓ WHAT do we need to make a change?
- ✓ What do we need to think over before we start actions?
- ✓ WHAT do we need to plan?
- ✓ WHAT benefits for the students/teachers/schools the change will bring?
- ✓ WHAT will we tell the headmaster at the first meeting concerning our plans to make a change?
- /

HOW?

- ✓ HOW will we plan actios to implement the project?
- ✓ HOW will we act, in what order?
- ✓ HOW will we justify the need for change (to other students, headmaster, teachers, other people...)?
- ✓ HOW will we get necessary materials?
- ✓ HOW will we get necessary funds?
- ✓

Good luck!

Appendix No. 4.

1. Basic information about the project – project student team

Name of school		
Project topic		
Student team	Name and surname Name and surname	Student's signature
Teacher - counsellor	Name and surname of the teacher	Teacher's signature
Questions to which the students are looking for answers in the project		

2. Main project goals and stages of implementation

Project goals	What are the students going to learn? What skills are they going to develop? What attitudes are they going to develop?		
It	Actions	Students responsible	Time limit for completion
.g: development presentation	Action No. 1	Name and surname of the student responsible for the action	Expected date of commencement and termination
e.g: a pre	Action No. 2	Name and surname of the student responsible for the action	Expected date of commencement and termination
The main task, of a multimedi	Action No. 3	Name and surname of the student responsible for the action	Expected date of commencement and termination

3. Resources and people who can help

Action	Sources of information, materials, resources (e.g.: websites)	People who can help
Action No. 1	What the students can make use of?	Who can help?
Action No. 2	What the students can make use of?	Who can help?
Action No. 3	What the students can make use of?	Who can help?

4. Presenting project results

Date of presentation	When are we going to prezent project results?

Place of presentation	E.g.: classroom, school, school website, an exhibition at local authorities premises, etc.
Forms ofpresentation	E.g.: multimedia presentation, role play, poster and short description, blog, video
Team members responsible for	People responsible for particular actions and presentation of project results.
Recipients	E.g.: students, parents, grandparents, teachers, students from another school, local authorities, etc.

Scenario No. 2

S² - **Succulent Storytellers** create stories



Topic: S2 Succulent Strorytellers create sories

Lesson objectives:

- Students understand what storytelling is (learning through story telling)
- Students perceive and evaluate interesting phenomena in their environment, use them to create their own stories
- Students create ideas how to use various props to build their own stories
- Students participate in creating culture
- Students shape an attitude of an inventive and active recipient and creator of culture

Methods and forms of work:

- discussion (with the whole group and in teams)
- film
- storytelling
- individual, group and team work

Teaching materials:

- a set of photoes on a given topic (e.g. shoes)
- Selected portals with pictures, artistic photos
- Sheets of A4 paper
- Markers
- Large sheets of paper (for posters), masking tape or fixing plasticine
- Computer(s) with Internet access, projector or interactive board, sound system (to watch the film)

Duration of classes: 4 teaching hours.

The course of activities:

WE AWAKE OUR CHILDLIKE CREATIVITY

- 1. The initial stage
 - Give students the sheets of A4 paper (one for each). Ask them to go back to the days

of their early childhood and recollect the funniest or strangest word-neologism by which they called actually existing object, phenomenon, person, etc. They should write the word on the sheet.

- Each student comes to the middle of the room, shows and reads his/her word, and the others guess what it means. The author of the word may, in case of difficulties, indicate a solution (e.g. what area of life or what activity the word concerns, whether what it means can be seen etc.) or guessing persons can ask auxiliary questions (e.g. Is that a thing? Is that an action? is it possible to see? etc.). After each presentation talk a moment about what paths of imagination contributed to the creation of a word.
- Summarize the exercise with one of the quotes about imagination, e.g .:
 - ✓ Children's imagination knows no boundaries and just as time passes it ossifies in adult minds ... Joanna Kupniewska

- ✓ Imagination without knowledge can create beautiful things. Knowledge without imagination just perfect things. A. Einstein
- There is nothing better than imagining other world, when we want to forget how much suffering is caused by the one we live in. So I thought at that time. I didn't realise that when we start imagining other worlds, finally we start to change this one. Umberto Eco

The implementation stage:

EVERYTHING IS A STORY – WE CREATE OUR OWN STORIES

- Divide students into teams you can do this using, cut like a puzzle, photographs of places or objects works of human creativity.
- Explain the task:

Each team will receive a set of photographs. Your task is to arrange them in a story - photos should be treated as an illustration of its plot, stages etc. Prepare a poster with pictures (photographs stuck in the order you established) Develop the story by sharing roles (who, how and when will tell the story?). You do not need to use all the photos.

- Give the teams sets of photos (Appendix No. 1), large sheets of paper, glue. Specify the time to complete the task (e.g. 20 minutes).
- Listen to stories of all teams.
- Talk with students about their impressions from this exercise (What were our stories like? What do they have in common? What was different? What styles did the storytellers adopt? What emotions and feelings did the stories evoke in us? What was the strongest point in each of them? What have we learned from this exercise ? What have we understood from this exercise? etc.)

EVERYTHING IS A STORY – STORYTELLING IN THE WORLD

- Tell the students about storytelling. You can use:
 - a film (or parts of the film) *Maurice Tardieu about himself and telling stories*⁷.
 - other information placed on the website of "Brama Grodzka Teatr NN "⁸,
 - text by Joanna Szczecin The common stories of Europe in the electronic journal EDUNEWS.PL⁹,
 - posts from the blog WE LIKE TO TEACH¹⁰
 - Inspirations by Blanka Bobryk from the blog LABIB.PL there is also a tool for creating your own book¹¹.

Summary stage:

WE ARE LOOKING FOR INSPIRATION FOR OUR OWN STORIES

Suggest students to create - individually or in pairs - their own book, which will combine text with the image.

⁷ You can find the film at <u>http://teatrnn.pl/leksykon/node/4230/opowiadanie historii na %C5%9Bwiecie</u> Access: 15 November 2016.

⁸ You can find the film at <u>http://teatrnn.pl/leksykon/node/4230/opowiadanie_historii_na_%C5%9Bwiecie</u> Access: 15 November 2016..

⁹Compare: <u>http://www.edunews.pl/narzedzia-i-projekty/narzedzia-edukacyjne/2341-wspolne-opowiesci-europy</u>

¹⁰ Compare: <u>http://lubimyuczyc.blogspot.com/2016/03/storytelling-opowiadanie-historii.html</u>

¹¹ Compare: <u>https://storybird.com/</u>

Authors can take their own photographs-images or use the images available on the Internet (FLICR¹², GETTYIMAGES¹³, World Press Photo¹⁴).

Remind them what the copyright law is, encourage the use of images available on the principle of free licenses.

 ¹² Compare: <u>https://www.flickr.com/</u>
 ¹³ Compare: <u>http://www.gettyimages.com/</u>
 ¹⁴ Compare: <u>http://www.worldpressphoto.org/</u>

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Appendix No. 1. Tell a story... cards (to cut out)





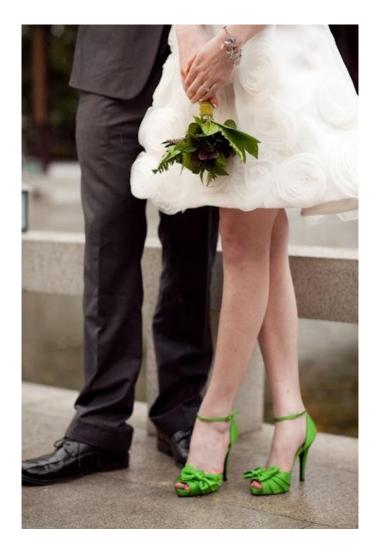






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Scenario No. 3

C³, Creative Class Contract created together with... wild geese



Source graphics: https://pixabay.com/pl/g%C4%99si-kanada-g%C4%99si-

Topic: K3, or Creative Class Contract created together with ... wild geese

Lesson objectives:

- Students understand the rules and standards in force in the class / group
- Students perceive and evaluate their own and their peers' behavior influencing the climate conducive to group learning, development of individuals and building mutual trust and respect
- Students create ideas for creative modifications of rules and standards existing in the class / group
- Students develop their creativity in problem-solving process

Methods and forms of work:

- discussion (with the whole group and in teams), including jigsaw (method of expert groups)
- audio recordings
- making music
- individual, team and collective work,

Teaching materials:

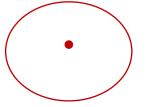
- A set of photos depicting birds and recordings with the sounds of birds (selected blogs and portals, e.g <u>http://ptaki.info/wroclaw.php</u>, <u>http://www.glosyptakow.pl/</u>, <u>http://www.kezk.bio.univ.gda.pl/cw_ornit/mp3.htm</u>, <u>http://www.swietokrzyskipn.org.pl/galeria/glosyptakow/,http://www.birdwatching.pl/, http://slowniklowiecki.pl/</u>
 - Sheets of A4 paper
- markers
- Large sheets of paper (for posters), masking tape or fixing plasticine
- Computer(s) with Internet access, projector or interactive board, sound system
- Cards to split students into groups (bird photos or cards with the names of species of wild geese)
- Appendixes for work in expert groups (worksheets for groups 1-5)

Duration of classes: 4 teaching hours.

The course of activities:

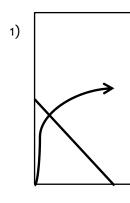
WE AWAKE OUR CREATIVITY

- 1. Initial stage
 - Task 1. Draw the following shape on the board:

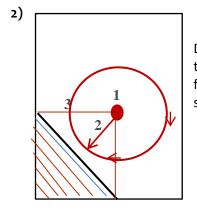


Give each students one sheet of A4 paper and explain the task: It is the view from the air - shows a lake and a Canada goose sitting on the water in the middle. Draw the same picture on your sheets. Attention! Do it with one stroke of the pen, without taking it from the paper!

Make sure that the students were able to complete the task. If necessary, show the creative solution:



Fold in the corner of the sheet.



Draw a dot just above the apex of the folded triangle (1), and then, without taking pen from the paper, "draw" a line on the folded corner (2). Draw further as the arrows show – unfolding the sheet corner when necessary to its original position (3).

Task 2. Aquatic plants are an excellent food for the swans and many other species of anserifornes birds. They also like small duckweed (Lemna minor), growing on the surface of water. Now a riddle: Duckweed is growing on the surface of the pond. Every day, its area becomes twice bigger. If the duckweed will cover the whole pond in 48 days, how many days will it need to cover half of the pond?¹⁵

Task 3. If 5 ornithologists in 5 minutes ring 5 wild geese, how much time will 100 ornithologists need to ring 100 birds?¹⁶

Task 4. We recognise the voices of birds (play – from a nature portal - the voices of selected birds from the anserifornes family, for example: mute swan, whooper swan, bean goose, snow goose, Canadian goose, graylag goose, white-fronted goose, etc. After each audio presentation show a photo of the bird, you can also give some interesting facts about it).

Implementation stage: WHAT CAN WE LEARN FROM THE WILD GEESE? - CREATING A CREATIVE CLASS CONTRACT

- Ask students: What do the birds in puzzles and tasks have in common?
- Divide students into 5 teams you can do this using photographs of selected species of birds cut like a puzzle (e.g. bean goose, snow goose, Canadian goose, greylag goose, white-fronted goose), or cards with the names of these species.
- Explain the task: Each team will receive a worksheet on which you can find interesting information about the behaviour and habits of wild geese and tasks to perform. In the first

¹⁵ Answer.: 47 days. Task on the basis of a similar one included in the test for cognitive reflection developed in 2005 by Shane Frederick from the Yale University. About Cognitive Reflection Test, done also in Poland in 2014., read at: <u>http://www.tnsglobal.pl/archiwumraportow/2014/12/22/test-swiadomego-myslenia-shaneafredericka/; http://naukawpolsce.pap.pl/spoleczenstwo/news,403204,badanie-bez-koncentracji-intuicjapodpowiada-nam-zle-odpowiedzi.html;</u>

http://wyborcza.pl/napamiec/1,139301,17242176,Trzy pytania Sprawdz swoje IQ.html; https://en.wikipedia.org/wiki/Cognitive_Reflection_Test

¹⁶ Answer.: 5 minutes. The source; as above. **Co-funded by the Erasmus+ Programme of the European Union**

stage of the exercise you are a team of experts, who in the next stage will share the knowledge and results of your work with members of other teams. Let each of you prepare therefore for the role, participating now actively in discussion and performing tasks.

• Give appropriate work sheets to all the students in the expert groups (Appendixes 1-5). Specify the time to complete the task (e.g. 20 minutes).

WHAT CAN WE LEARN FROM WILD GEESE AND FROM EACH OTHER?

• Divide students into "mixed" groups with one expert from previous groups (bean goose + snow goose + greylag goose + canadian goose + white-fronted **go**ose).

Each member of the newly formed groups share with other members (within a maximum of 5 minutes), what they learned in the previous stage of work (Tom J. Watson's observation of wild geese) and what the results of the tasks are (including the verse section of the contract, which students write on their worksheets).
The last 5 minutes of work in mixed groups is devoted to exchange - asking additional questions and/or discussion about impressions concerning e.g. common work or information particularly interesting for students.

WRITTEN OR MAYBE SUNG CONTRACT ?

- Students return to their original expert groups.
- Explain the last task: Compose or find a melody to your rhymed class / group contract. Develop a group clip, in which you will present to other groups your creative verbal and musical piece of art! You have 20 minutes to complete the task.
- Groups present their "clips".

Summary stage:

WHAT HAVE WE LEARNED FROM GEESE AND FROM EACH OTHER?

• Show students the "lessons" that Tom J. Watson formulated for his company on the basis of conclusions from the observations:

No	Conclusion from the observation of birds	"Lesson" by Tom J. Watson ¹⁷
1.	Each of the birds in the V formation is waving wings and thereby creates a rising current for the bird flying behind it. Thanks to this, V formation is many times stronger than a single bird. A flock flying in V formation gains as much as 71% of cruising range in comparison to the situation when each bird flies alone!	People who are heading in the same direction and have a sense of community achieve the goal faster and easier because they support each other.
2.	Sometimes it happens that one of the geese leaves the formation. It feels such strong wind resistance then, that as soon as possible it goes back to the formation to take advantage of the rising strength of the bird flying in front of it.	If we are at least as smart as a goose, we will stay in V formation with those who are heading to where we want to get and we will take advantage

¹⁷ On the basis of.: <u>http://slideplayer.pl/slide/803668/</u>

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		of their help. We will also provide	
		assistance	
		to others.	
3.	The position of the leader flying at the head of the	It pays off to perform difficult	
	V formation is exhaustive - this goose faces the	tasks in turns sharing leadership	
	greatest air resistance. When the leading goose is	and responsibility. People, like	
	tired, it takes place at the back of the formation,	geese, depend	
	and a new one moves to the front.	on each other.	
4.	Geese flying at the back of the formation squawk,	We need to make sure that our	
	thus promoting the birds flying in front of the key	shouts from the back rows are an	
	to keep the pace.	encouragement, and not	
		something else.	
5.	Sometimes it happens that one goose gets sick,	If we are at least as smart as	
	is injured or shot. Then several others leave the	geese, we will also support	
	formation with it to help it. They stay together until	each other, both in difficult	
	the goose is able to fly again. Then they join	times, and when we feel the	
	another formation or catch up with their own flock.	strongest.	

- Have your students, under your direction, compare the "lessons", which they formulated in their rhymed contract with the lessons by Tom J. Watson.
- Summarise the class, asking students to participate in the discussion focused around following questions:
 - ✓ What did we understand through exercises performed during the classes?
 - ✓ What was most important for us in these classes?
 - ✓ What was most interesting for us in these classes? The most revealing?
 - ✓ What talents did we discover in ourselves? In our classmates?
 - ✓ etc.
- Finally, encourage students to do alone or in pairs / small groups creative tasks for the next class, e.g .:
 - ✓ What can we learn from ...? Find an interesting fact about a selected animal, which can make us, people, learn something important.
 - ✓ What is this sound? Prepare sound recordings (e.g. of animals, machines, etc.) Organise a class quiz for the title of Class/Group Ear,
 - ✓ Prepare maths / physics exercises based on the phenomena occurring in nature.
 - ✓ Using web portals or books prepare and present riddles / tasks on creative thinking.
 - ✓ etc.

Appendix No. 1.

Task for group 1 (BEAN GOOSE).

1. In the twentieth century, Tom J. Watson, the President and CEO of International Business Machines (IBM) - today one of the biggest computer companies in the world - presented the conclusions from observations of V formation of flying geese and formulated 5 "lessons" which he used in the management of his company. This is the first conclusion from the observations:

Each of the birds in the V formation is waving wings and thereby creates a rising current for the bird flying behind it. Thanks to this, V formation is many times stronger than a single bird. A flock flying in V formation gains as much as 71% of cruising range in comparison to the situation when each bird flies alone!

2. Talk to the group about what we can learn from geese. Write down a conclusion from the discussion.

3. Think if this "lesson" is implemented in everyday life of your class/group. Talk about it, give examples.

4.Create a rhymed rule (2-4 lines), which will constitute one of the principles of your class/group contract.

Appendix No. 2. Task for group 2. (SNOW GOOSE).

1.In the twentieth century, Tom J. Watson, the President and CEO of International Business Machines (IBM) - today one of the biggest computer companies in the world - presented the conclusions from observations of V formation of flying geese and formulated 5 "lessons" which he used in the management of his company. This is the first conclusion from the observations:

Sometimes it happens that one of the geese leaves the formation. It feels such strong wind resistance then, that as soon as possible it goes back to the formation to take advantage of the rising strength of the bird flying in front of it.

2. Talk to the group about what we can learn from geese. Write down a conclusion from the discussion.

.....

3. Think if this "lesson" is implemented in everyday life of your class/group. Talk about it, give examples.

4.Create a rhymed rule (2-4 lines), which will constitute one of the principles of your class/group contract.

Appendix No. 3. Task for group 3. (CANADIAN GOOSE).

1. In the twentieth century, Tom J. Watson, the President and CEO of International Business Machines (IBM) - today one of the biggest computer companies in the world - presented the conclusions from observations of V formation of flying geese and formulated 5 "lessons" which he used in the management of his company. This is the first conclusion from the observations:

The position of the leader flying at the head of the V formation is exhaustive - this goose faces the greatest air resistance. When the leading goose is tired, it takes place at the back of the formation, and a new one moves to the front.

2. Talk to the group about what we can learn from geese. Write down a conclusion from the discussion.

3. Think if this "lesson" is implemented in everyday life of your class/group. Talk about it, give examples.

4.Create a rhymed rule (2-4 lines), which will constitute one of the principles of your class/group contract.

Appendix No. 4. Task for group 4. (GREYLAG GOOSE).

1. In the twentieth century, Tom J. Watson, the President and CEO of International Business Machines (IBM) - today one of the biggest computer companies in the world - presented the conclusions from observations of V formation of flying geese and formulated 5 "lessons" which he used in the management of his company. This is the first conclusion from the observations:

Geese flying at the back of the formation squawk, thus promoting the birds flying in front of the key to keep the pace.

2. Talk to the group about what we can learn from geese. Write down a conclusion from the discussion.

3. Think if this "lesson" is implemented in everyday life of your class/group. Talk about it, give examples.

4.Create a rhymed rule (2-4 lines), which will constitute one of the principles of your class/group contract.

.....

Task for group 5. (WHITE-HEADED GOOSE).

1. In the twentieth century, Tom J. Watson, the President and CEO of International Business Machines (IBM) - today one of the biggest computer companies in the world - presented the

conclusions from observations of V formation of flying geese and formulated 5 "lessons" which he used in the management of his company. This is the first conclusion from the observations:

Sometimes it happens that one goose gets sick, is injured or shot. Then several others leave the formation with it to help it. They stay together until the goose is able to fly again. Then they join another formation or catch up with their own flock.

2. Talk to the group about what we can learn from geese. Write down a conclusion from the discussion.

3. Think if this "lesson" is implemented in everyday life of your class/group. Talk about it, give examples.

4.Create a rhymed rule (2-4 lines), which will constitute one of the principles of your class/group contract.

Agios Spyridonas Special School in Larnaka (Cyprus) Scenario No. 4

Topic: Creativity through cooking for students with Special Needs

Lesson objectives:

- To understand that culture is a part of our heritage and that it is practiced through various cooking activities such as making grape jelly (palouze) and different types of Sucuk or soutzoukos (grape must roll) especially during Autumn when grapes are harvested.
- To create ideas through cooking relevant to the culture in their own country.
- To execute a cultural activity that was done since the time of their ancestors.
- To utilize all their senses through cooking by understand the different flavors and aromas (rose water, vanilla, masticha, cinnamon) that may be used to make different kinds of grape jelly or *soutzoukos*. To enjoy a lesson of tactile learning that is extremely beneficial as it teaches them to be independent
- To create a positive relationship between students and food. Fun with food while creating good eating habits for life
- To learn and practice basic cooking skills as they enhance other traditional disciplines as reading, mathematics, nutrition, art, history.
- To strengthen motor skills through pinching ingredients and mixing them.
- To build up students' self-esteem as they socialize while making foods with others and working as a team.
- To enable students with reading difficulties to use visual guides such as pictorial cards with ingredients and instructions.

Methods and forms of work:

- Discussion (with the whole group and in teams)
- Visual test method using photos
- Multimedia presentation
- Individual and collective work

Teaching materials:

- iPads to take photos
- Computer (s) with internet access, interactive board

- Visual aids- picture schedule with pictorial cards
- Home economics room with kitchen materials (bowl, large cauldron, gas heater, spatula, measuring cup, thread, stand to hang *soutzoukos*).
- Food items: Grape juice, flour, "asproi" soil, flavours such as rose water, vanilla, masticha, cinnamon.

Discuss creativity and explain what it means. Very often during cooking people try different recipes mixing and matching ideas. The items that are going to be made are a result of creativity. Grape jelly (or as it is called in Cyprus "**palouzes**") and *soutzoukos* are the almost the same things made a little differently. We can use our creativity to change things making slightly different flavors each time. Grape jelly or *soutzoukos* can be made using different flavors.

Duration of classes: 4 teaching hours.

Practicing our cultural cooking skills

1. The initial phase : Appendix No. 1.

Discuss with students cultural activities that are carried out especially during special holidays. Ask them what activities they do at home with their parents. Explain that the cultural activity that they will make involves grapes that are harvested during autumn months.

2. The second phase Appendix No. 2.

Join students into pairs or groups. Explain the first stage of the exercise, aimed at increasing creativity during cultural cooking skills. Students look at the items required for making the target food and then turn around. They must then remember all the items required and say them to each other (5 minutes).

After a minute explain the second phase of the exercise. Students are shown picture cards of the cooking lesson in the correct order. The teacher asks the students "Can you label the food". Students label the food items required for cooking. Students label the cooking utensils required for cooking

In simple words the teacher explains each step. She then moves around the cards and then puts them in the correct order asking students to simultaneously put their cards in order. Finally, to check for understanding, the teacher hides her cards and asks the students to independently put their cards in the correct order. (10 minutes)

Using the pictures students model, re-explain or demonstrate each step to each other gaining reinforcement and building self-esteem. They put the pictures in order.

3. The final phase, implementation with actual Cooking. Appendix No. 3.

During the cooking activity the teacher prepares the kitchen placing the ingredients on the table. The teacher then presents the utensils and the students label them.

Use hand over hand assistance to help students to stir, pour and dip as required.

Appendix No. 1

Students' commentary of traditional cooking in their country

			My remarks		
		Commentary	What don't I understand?	What have I learned?	List other examples of traditional cooking
1	L.	Social tradition is a part of our culture. During social events tradition and culture is passed down through the generations			
	2.	Music is a manifestation of human culture. Music has always accompanied people at work, play, rest and during festivities. Refers to traditional songs that are sung during the making of traditional foods.			
ng people" 20 6	3.	Area preparation for cultural activities related to cooking. Using a traditional gas heater during cooking.			
of children and young people" 2017	1.	Cooking is an essential part of our lives. It can be perceived as a work of art important for our cultural identity.			

Appendix No. 2











How to make Grape Jelly

Step on Grapes to remove must

Take the must and place it in a large cauldron and begin to heat it.

Add the soil and stir. Continue to heat and remove the dirt as it comes to the surface.

Add the aroma of your choice and then add the flour and stir.

Stir well.

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Pour into containers.

Grape jelly is ready to eat.

How to make *soutzoukos*.



Pass almonds or walnuts onto thread leaving a loop on top.









Keep stirring the mixture and begin to dip the thread almonds or walnuts into the grape jelly.

Repeat dipping the threaded almonds or walnuts into the grape jelly.

Hang the threaded almonds or walnuts so that they may dry.

Leave it to dry for 5 to 6 hours.

How to support the creativity and innovation of children and young people" | 2017

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Appendix No. 3

PROMOTING STUDENTS CREATIVITY VIA COOKING

You are going to perform a task during which observation and creativity will definitely be useful.

You will use your IPad to take photos of the procedure were you will cook grape jelly and *soutzoukos*. Take advantage of the knowledge acquired at today's meeting about how to cook traditional.

How are you going to work?

- 1. Form groups of 2 to 4 persons
- 2. Each team will make their own flavor of grape jelly and *soutzoukos*.
- 3. Each team will agree together who will cook and who will take photos.
- You have 1 hour for the whole cooking procedure and then 5 hours to let it dry. Remember the order in which you put the photographs in the previous exercise.
- 5. Download the photographs on a computer and use them in your multimedia presentation or video. Add a brief commentary to each photo to make it clear what you liked and what you did not like and why. For this stage you will need 30 minutes.
- 6. Present your multimedia presentation to other participants.
- In the future, you can show the effects of your work to your class, other classes, parents, and teachers.
- 8. Your work /presentation will be the basis for discussion about how you can make different types of *soutzoukos* or grape jelly using the different flavors and aromas.

Remember to get permission to photograph people.

Recipe: How to make Grape jelly or soutzoukos

Ingredients	Cooking utensils
Grapes	Large container to step on grapes
Asproi Soil	large cauldron

Flour	big spatula for stirring
Almonds or walnuts	gas heater
Thread	stand to hang the <i>soutzoukos</i>

Aroma of your choice (rose water, vanilla, masticha, cinnamon).

Procedure:

Grape jelly and *soutzoukos* are traditional Cypriot sweets that we find particularly in the villages where white grapes can be found.

Once grapes are harvested, we begin the procedure to make grape jelly and then *soutzoukos*.

White grapes are placed in a large container so that they may be stepped on and their juice removed. This juice is called "must" or "moustos" as it is called in Cyprus.

Take the "must" and place it in a large cauldron and begin to heat it. Once it begins to boil immediately add special soil called "asproi". Add the asproi slowly because once it begins to boil it will start to flare up. By placing this special soil, we get a cleaner "must" with a darker colour. As the "must" boils, continuously remove the dirty pieces that come to the top of the mixture with a large spoon. Once it is certain that the "must" has been cleaned, the heat is removed and the mixture is strained again and placed in another large cauldron till it cools well.

Following this measure 10 kilos of "must" and 1 kilo of flour and mix well. Add the aroma of your choice. The good mixing of these two items depends on the "must" being cool so that it is moist smooth and easily edible. Begin to heat and stir the mixture well again till the "must" is cooked. Place it in a plate and make sure that it doesn't stick.

The next step is to make *soutzoukos*.

On thick thread pass almonds or walnuts depending on your choice. On the one end of the thread leave a loop so that you may hang the *soutzoukos* to dry. Dip the threads with almonds/ walnuts into the grape jelly mixture as it is still hot and then hang them to dry in a dry place. Repeat this procedure after making the grape jelly the same day or the day after. Make up to 3 dips in the "must." Leave it for 5 to 6 hours till it dries. You may also eat it from the first day.

<u>Summary</u>

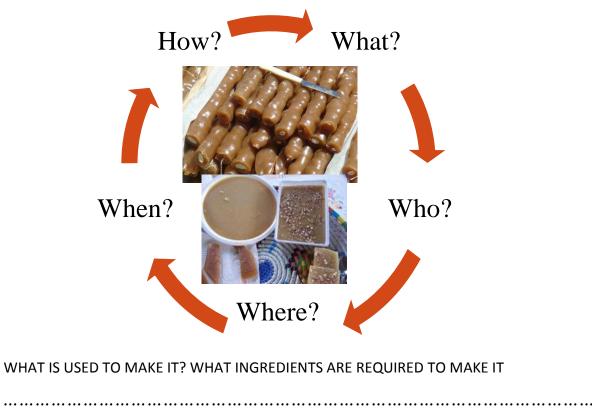
Ask students to propose ideas for a next project. They can submit ideas individually, or they can first discuss them in pairs and present them to the group.

The teacher notes the students' ideas discussing with the students their ideas.

Appendix No. 4

Assessing students understanding

Use the following chart to describe what you have learnt about grape jelly and *soutzoukos*.



	•••••
WHO MAKES IT?	
	•••••
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WHERE IS IT MADE?
M(HEN) IS IT MADE (at what time of the year)?
WHEN IS IT MADE (at what time of the year)?
HOW IS IT MADE
HOW CAN YOU BE CREATIVE WHEN YOU MAKE GRAPE JELLY OR SHOUSHOUKO

Appendix No. 5: PROJECT SHEET

1. Basic Information about the project – project student team

Name of School		
Project topic		
Student Team	Name and surname	Student's signature
Teacher - Counsellor	Name and surname of the teacher	Teacher's Signature
Questions to which the students are looking for answers in the project		<u>.</u>

2. Main Project goals and stages of implementation

Project goals	What are the students going to learn? What skills are they going to develop? What attitudes are they going to develop			
	Actions	Student responsible	Time limit for completion	
	Action No. 1	Name of student responsible for the action.	1	
	Action No. 2	Name of student responsible for the action.	1	
	Action No. 3	Name of student responsible for the action.	1	

3. Resources and people who can help

Action	Sources of Information, websites)	material,	resources	(e.g.	People who can help
Action No 1	How will this be useful?		Who can help?		
Action	How will this be useful?				Who can help?

No 2		
Action No 3	How will this be useful?	Who can help?

4. Presenting project results

Date of presentation	When are we going to present the project results	
Place of presentation	E.g. classroom, school, school website, at an exhibition at local authorities premises etc.	
Form of presentation	E.g. multimedia presentation, role play, poster and short description, blog, video	
Team member responsible for	People responsible for particular actions and presentation of project results.	

Citations:

1.To learn about *soutzoukos* and grape jelly:

http://www.cypriotandproud.com/2013/09/19/soutzoukkos-almonds-dipped-in-sweet-grape-jelly/

2. To find visual recipes www.visualrecipes.com

http://www.kids-cooking-activities.com/

3.To find free lesson plans for teaching cooking : <u>http://www.kids-cooking-activities.com/kids-cooking-lessons.html</u>

https://www.teachervision.com/foods

4. To find curriculum for the cooking class:

Washington State Department of Health cooking class curriculum:

http://www.doh.wa.gov/portals/1/Documents/Pubs/345-NonDOH-LetsCookClassCurriculum.pdf

Scenario No. 5

Topic: Creativity through drama classes: teaching diversity.

Lesson objectives:

- To promote student's self-expression.
- To build student's self-confidence and self esteem.
- To enhance creativity of students.

- To encourage co-operation among students and develop ability to work on their own and with others either in pairs or with the whole group.
- To use drama as an active learning strategy in teaching diversity.
- To improve social and acting skills.
- To prepare students participate in a theatrical performance.
- To improve communication skills.

Methods and forms of work:

- Discussion (working as a whole classroom and in small teams)
- Power point presentation
- Team work/working in cooperation
- Multi- sensory presentation of the theatrical play
- Story telling

Teaching materials:

- Interactive board
- Basket with oranges
- Computer with internet access
- Power Point presentation
- Sound system for watching videos
- Movie at You Tube
- Story book "The Land of different people" by Nicolas Andrikopoulos
- Costumes for the theatrical performance

Duration: A trimester.

TEACHING PROCEDURE

- 1. The initial phase:
- Introducing activities

The teacher explains to the group that there are different greetings, according to various cultures. For example one of the greetings could be the handshake. So, everybody walks around the room, mingling and shaking hands with everyone they meet. They move around greeting each other by saying their names ('Hi, my name is...') making direct eye contact accompanied by the handshake. With a signal the teacher asks them to switch over the way of greeting. This is repeated again, For once more everyone mingles and greets each other

'Hi, my name is...' accompanied by another way of greeting (for example sticking out their tongue, hugging each other etc.)

- Warming up activities
- a. Freeze like this: Students walk around the class room, listening to the music. As soon as the music stops the students have to take a physical position according to the teacher's instructions (for example standing on one leg, hands on head, elbow on knee, etc.).
- b. Work in pairs: Everybody gets into couples holding hands and walks around the class together, listening to music. After a few minutes, the teacher calls out the names of parts of the body. Then everybody stops and the partners of each couple touch the part of the body the teacher has called out (for example toe to toe, knee to knee, heel to heel, elbow to elbow, head to head, etc.). On a signal, they release and walk around the class again. This activity can be repeated in groups of three and four students as the time goes by.

2. Implementation phase:

- Students sit in a semi-circle around the interactive board that shows a picture of an orange (Appendix No 1). Then the teacher asks them to brainstorm the question 'What is an orange like?' Students call out words to describe an orange and the teacher writes down the words on the interactive board (for example round, orange, sweet, etc.).
- Then students are divided into groups of five and ask each group to pick an orange from the basket that is placed on the floor in the middle. Groups are asked to create a story about their orange in ten minutes.
- Afterwards, students sit again in a semi-circle and each group presents to the rest of the group their story.
- Teacher takes oranges back to the basket and each group has to recognize their orange among others. It usually happens that each group will have no problem identifying their own oranges, as the oranges are no longer generic specimens but individuals with characteristics.

(http://arrow.dit.ie/cgi/viewcontent.cgi?article=1014&context=aaconmusbk)

• Teacher summarizes this activity by asking questions (Appendix No 2):

- Students watch a short film about diversity and acceptance (<u>https://www.youtube.com/watch?v=IaW8e9uNDsM</u>)
- Introduce students to term of diversity (for example the concept of diversity encompasses acceptance and respect. lt means understanding that each individual is unique, individual differences. These and recognizing our can be along the dimensions of race, ethnicity, gender, age, physical abilities and religious beliefs). (http://gladstone.uoregon.edu/~asuomca/diversityinit/definition.html).

3. Storytelling phase:

Students sit in a semi-circle. Teacher presents on the interactive board the story "The country with strange people" using a PowerPoint presentation (Appendix No 3). The presentation includes pictures and audio-visuals so as to motivate the students. <u>http://eid-ag-spyridonas-lar.schools.ac.cy/data/uploads/theatriko-ergastiri/story-</u>telling-the-country-w-strange-people.pdf

During the presentation, teacher uses gestures and facial expressions. Additionally, teacher makes use of the language that suits the cognitive level of the students. Also, he speaks fluently, using a clear voice tone and his expressions change spontaneously to suit the moods of the story.

(<u>http://zvavanhuchopper.blogspot.com.cy/2010/10/story-telling-method-of-teaching-in.html</u>).

4. Theatrical performance:

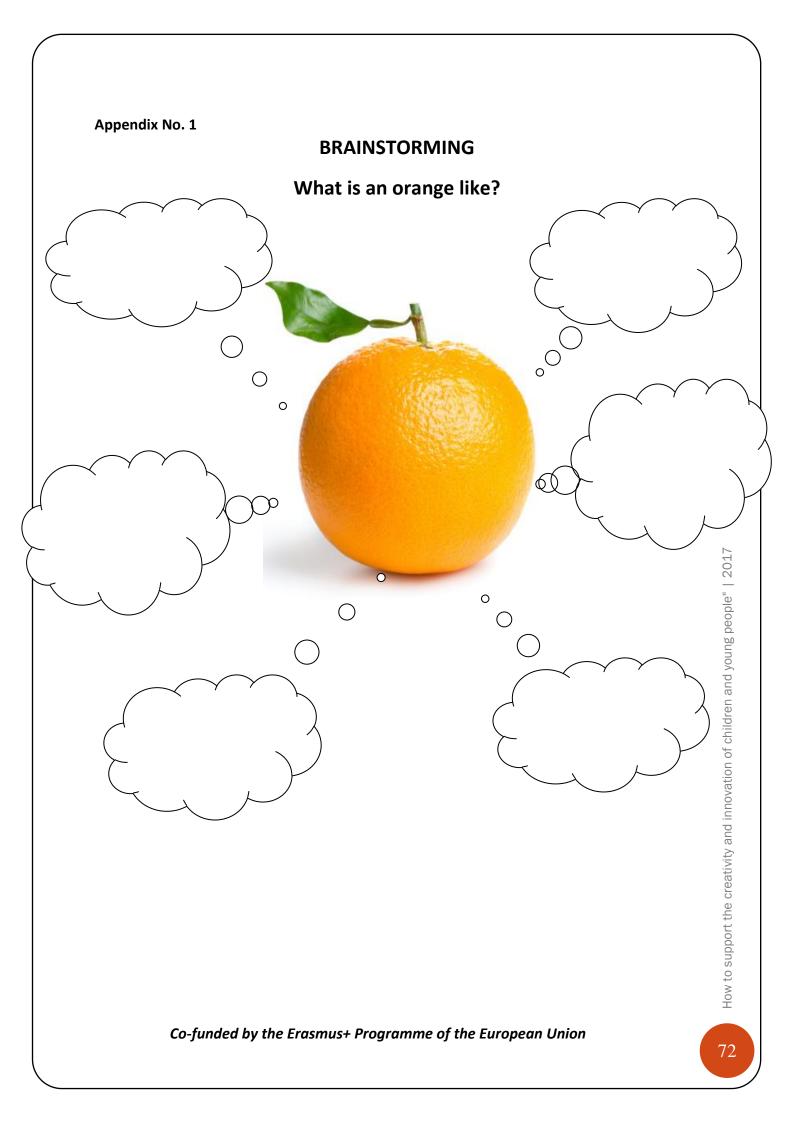
At this final phase the students take part in a theatrical performance. Then they are asked to adopt a role. In that way they can easily step into the story, dealing with issues regarding diversity and acceptance.

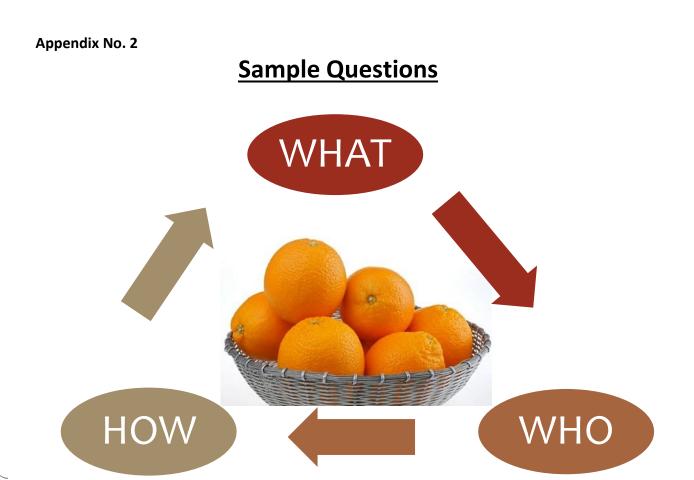
Once the story is presented, the students sit in a circle and they discuss with their teacher about the main characters of the performance (**Appendix No 4**). Throughout the discussion, the roles of the performance are distributed to the students according to their preferences, age, talents and abilities. As soon as the roles are distributed, costumes and props are given to the students so as to give more depth to the role.

Next, the teacher carries out the role of the narrator. The students are asked to act according to the narration.

Several rehearsals are scheduled so as the students become ready to act properly in the theatrical performance, which was meant to be watched by primary school students in the district of Larnaca (Appendix No.5)

https://www.youtube.com/watch?v=z96mFJrFh1A&t=99s





WHAT?

- What made you recognize your own orange?
- What aspects can make a human being unique?
- What makes human beings unique?
- What changes should be made in the society to accept diversity?
- What is the procedure to make the change?

WHO?

- Who can be considered different? In what ways?
- Who can help us make the change?
- Who can be a part of the change?

HOW?

- How will we act? What is the correct order for our actions?
- How will we justify the need for the change?
- How will we make the change procedure?

Appendix No. 3

The country with strange people

(Summary of the story)

Once upon a time there was a "White Land" where there lived "White people" and where there lived a good and kind man named "Porfirios. Porfirios was red and he was called different Porfirios. Porfirios lived happily with his white friends and his life was wonderful and peaceful....

One day there was a new ruler who hated different people and therefore Porfirios was forced to leave his land and everything that he loved. He was faced with many troubles. One problem came after another. After a long adventure he found himself in "Redstan" where everyone was red like himself. Here he was faced with hostility not because he was different but because he was a stranger. Even in this land he wasn't wanted. So they called the police to arrest him. He was put in prison with many other different coloured people from other lands.

One day it was decided to send all the different colored people back to their lands. Once he arrived to "White land," Porfirios decided to paint himself white so that he would not be different from everyone else. But it started to rain and the paint was washed off. Now everyone recognized him and walked away from him. He began to run away to hide so that he couldn't be seen. Suddenly he saw the ruler of "White land" engaging in bad business with a criminal. He began to struggle with him, managing to uncover the ruler who was then arrested and put in prison. Porfirios was declared a hero and named the savior of "White Land".

Appendix No. 4

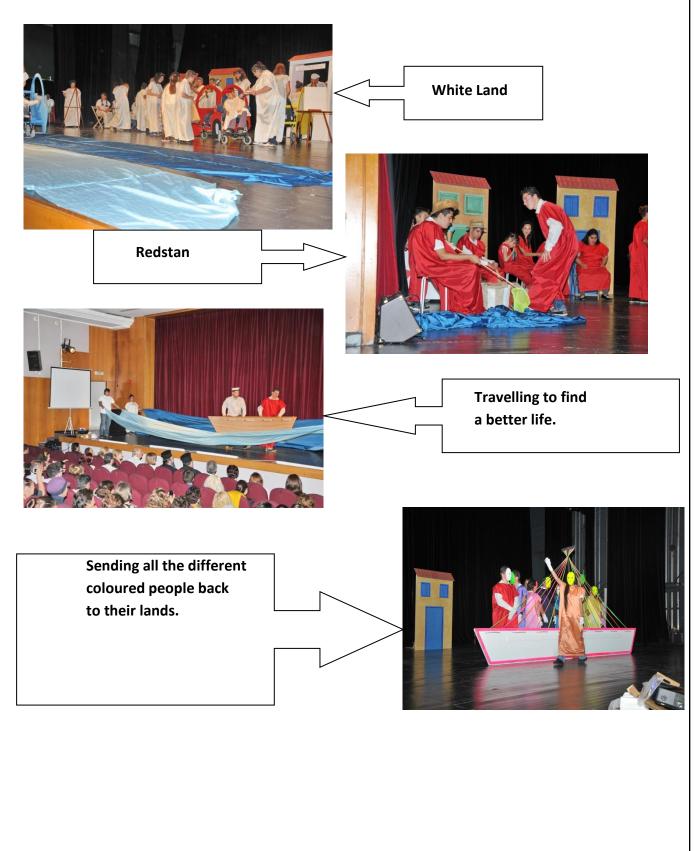
MAIN CHARACTERS OF THE THEATRICAL PERFORMANCE

- Porfirios (red man)
- White People
- Mayor of White Land
- Captain
- Red People
- Different coloured people
- Police men
- Criminals

How to support the creativity and innovation of children and young people" | 2017

Appendix No.5

Pictures from the Theatrical Performance



Scenario No. 6

According to Guilford (1950), "creative thinking occurs when a problem solver invents or discovers a novel solution to a problem". According to Mayer (1995), insight is in the process of moving from not knowing how to solve a problem to knowing how to solve a problem." Creative thinking and insight is generated when people are given non routine problems to which they have to find solutions. Routine problems do not generate creative thinking because people know how to solve them. The results of the Guildford study (1950) show that students must learn a collection of general strategies to improve creative problems. Learning to solve one kind of problem rarely supports solving other types of problems.

In this project, we gave students new problems that were relevant to their daily lives and instructed them to find solutions. According to Dostál (2015) a problem arises when a person has a "specific aim but he/she does not know how to achieve it". The person is aware of the problem and tries to solve it. The individual must be willing to deal with the situation. This is very important in the educational field because the problems that are given to the students should be ones that the students accept willingly and are motivated to solve. Furthermore, it does not mean that students who understand the problem will be willing to solve it. Students must also have the means to solve the problems. Therefore, students must be given the means and the motivation to solve a problem. Students must use their creativity to think of a solution to the problem. Students in this project were instructed to help make their town a better place for them to live in. Their target was to solve problems in their town with specific solutions.

Furthermore, according to Dostál, it is important to excite students by giving them motivation to solve the problems and making the problem meaningful to them. Situations must be created in which the student are excited and induced to solve the problem. The teacher has to lead the pupil to the experience of wanting to be active. A problem always contains a conflict or difficulty which has to be overcome during the solution process. It is important for the problem to be one that the students have the abilities to solve. Creativity comes in thinking of ways to solve problems.

Topic: <u>Larnaca our Town</u>. <u>Improving OUR Town – Larnaca</u> <u>in a creative Way</u>

First Meeting

Lesson objectives:

1. The students will learn about their town.

2. The students will photograph what they like and what they don't like about their town in a creative way.

3. The students will coexist with students of another school and will be integrated with them.

4. The students will enjoy their outdoor activity.

5. Take initiative to make money transactions.

6. All together students from the general school and students from the special school will improve the town that they will live in together for the future.

Teaching materials:

- 1. Their mobile telephones to take photos
- 2. Map of the town
- 3. Camera
- 4. Pocket money

Teaching procedure:

The students from both schools meet at a central place of the town (St. Lazarus Church).
 Students make a big circle so that they may be put into 5 groups of 8 students in each group. The teacher asks all the students that are born during specific months of the year to group together. For example, all the students that are born from January 1st till March 31st make one group.



3. Each group has a teacher to guide them through the activity and take them a specific area of the town. The teacher holds the map of the area that they will have to explore. Students

are instructed to creatively take photos of buildings/ areas / items that they see and like or they don't like. For example, a group of students take photos of a new building that has been renovated that they like. Simultaneously, they discovered and explored old craftsmanship or occupations /occupations that existed in our town but are not practiced anymore.



They photographed decrepit buildings ready to fall down, roads full of garbage e.t.c .





4. Students must return to the starting point in one hour. During this time they must also find one place which is suitable for their group to enjoy their town and each other. Such as drinking a coffee at a cafeteria, or a seeing /enjoying a specific sightseeing point.

At this point they may use their money transaction skills in order to buy something. Also their integration with other students is highlighted at this point.



5. Upon returning to the starting point, each students must say a feeling (one word) to describe the whole event.



5. The next meeting assignment was for each team to collect all the photos and create a short video of our town.

Second Meeting:

Lesson objectives:

1. The students will creatively present videos of what they photographed to each other.

- 2. Students of the special school will work together and be integrated with students from the general school.
- 3. Students will creatively propose solutions for improving our town and especially the sites they visited.

Teaching materials:

- 1. Photos
- 2. Computers
- 3. Projector and white board
- 4. PowerPoint and movie maker programs
- 5. Large A1 cardboard paper
- 6. Coloured pencils/ markers
- 7. Pencils / erasers
- 8. Box with theatrical material and costumes for role play

Teaching procedure:

1. The students are instructed to use the photos, documents, feelings, and the experience that they gained from this activity to produce a video so that they may express what they experienced in a creative way. Each group presents their video to the rest of the students. n this way everyone learned what the other groups experienced and learned.



2. The students are separated into the groups that they were in the first meeting for a role play activity. In this role play activity a student pretends to be a mayor whilst the other students represent what they have prepared.

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The students are told that they have 45 minutes to prepare a 5 minute meeting with the Mayor, where they have to select their own creative way (role play, make a poster, or card) for a 5 minute meeting with the Mayor. The goal is to convince him to find ways to improve our town. A group of students who love Parkour ask the mayor to build a Parkour park so as that they can have an organized area to spend their free time. Accordig to Wikipedia "Parkour is a training discipline using movement that developed from military obstacle course training." The goal is to move from one place to another in complex way without assistive means in the fastest and most efficient way. Parkour is creative because it is about mix matching, running, climbing swinging, vaulting jumping, rolling, quadrupedal movement to get from one place to another.



ornaca 08/12/20





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Role play

4. In a realistic way students will actually have a meeting with the mayor and the town municipal councilors to present their opinions. They are told to be creative and to think

of their own convincing way to present to the mayor how he can improve the town.

References:

- <u>https://en.wikipedia.org/wiki/Parkour</u>
- Dow, G.T., & Mayer, R. E. (2004). Teaching Students to solve insight problems: evidence for domain specificity in creativity training. Creativity Research Journal. Vol. 16, No4, 389-402.
- Jiří Dostál*. Theory of Problem Solving (2015). Social and Behavioral Sciences 174, 2798-2805
- Guilford, J.P. (1950). Creativity. American Psychologist, 5, 444-454
- Mayer (1995). The search for insight: Grappling with Gestalt psychology's unanswered questions

A' Technical School in Limassol (Cyprus) - Department of Applied Arts - Interior Design.

Scenario No. 7

Topic: The interior layout of a living room.

Purpose of the project: The interaction of cultures through the design function

Due to the diversity of cultures that coexist in many classes in our school students are invited to experience the different culture elements in space that people use through their choices for the design of an everyday living area.

Students have already been through the required knowledge of the scale handling of design in drawings and are very keen on using technological means such as the AutoCAD and the technical design with various materials and media such as pencil, watercolor, pen, collage, shading techniques, techniques performance materials and three-dimensional perspective presentation techniques.

Duration of project: 20 teaching periods (45' each)

Lesson objectives: The student should:

- meet and get to know the diversity in cultural habits of his/her classmates
- develop interaction among peers
- get the opportunity of finding ways designing layout interior with combining different cultural approaches
- recommend layout drafts of a living area
- apply interior design proposals to scale plan using color and shading

Teaching methods and forms of work:

- discussion
- research
- brainstorming
- collaborative learning
- multimedia presentation

Teaching tools and materials:

- digital camera
- computer and printer
- designing tools (scale ruler, triangles, compass etc)
- sketchbook
- tracing paper
- mounting board
- fabric samples, wallpaper samples
- drawing pencils, color pencils, black pens
- scissors, glue

Course stages:

Stage 1: the questionnaire.

Students having different nationalities are divided into groups of two and complete questionnaire relating to culture, living habits and cultural choices of interior living space and grow. The questions that concern them revolve around the following:

- What do you particularly like doing while being in the living room of your house?

- What images do you like to have when you are relaxing in the space of your living room?

- What distinguishes a sitting area in a house in your own country in comparison with the one that you live here?

- Which colors, shapes, textures encountered in a living space do you think represent your country of origin the best?

- State smells, images, and sounds that remind you your origin country

Their answers and activities are being put down and compared through discussion.

Stage 2: research/brainstorming.

The students then exchange information through photographic material of their inspiring elements having being used in their own culture (through books, internet etc) and continue their research having questions concerning:

- The basic layout of a living space

- The choice of materials, colors, shapes and textures in a living area

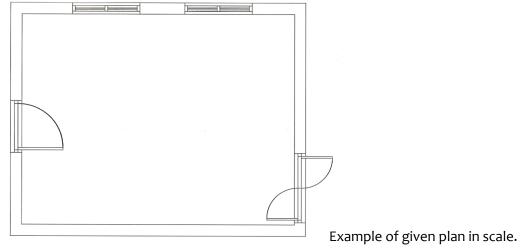
- The relationship of all the above elements determining the style of the design proposal Using the method of brainstorming each couple in the class records as many different ideas as possible about the different approaches of their design theme and discusses them with their teacher.



Example of brainstorming charts.

Stage 3: visiting the site.

The students are all given the plan (scale 1:20) of an existing living room placed near their school area. With the companion of their teacher students get the opportunity to go for a walk and visit the site in order to get a real view of the living room to be. During their visit they take pictures of the space, take notes on measurements, information about the lighting of the space and the way it is connected with other rooms.



While on site the students in couples discuss their information and take time to exchange ideas through quick sketches and drawings in their sketchbooks. They then get to decide the decorative style they are following according to the research they have competed. The teacher foreshadows the chance of combining the two different decorative styles of designing the living room into one, therefore, having a mixed result in cultural elements.

Stage 4: creating the idea.

Upon returning to school teams still work in pairs, studying different alternatives of space seating arrangement options, depending on the activities that have already decided that we will take place there. They answer questions like:

- Which decorative style will help the cultural elements of both our origins to highlight?
- Which are the common and which are the different design elements of space that appear on information and how will they be presented in the final layout of our living room? How we can use them?
- How will we give mutual emphasis on both cultures in our decorative proposal?
- How do we feel about this combination?

Stage 5: the final proposal.

Students work together on drafts and drawings on tracing paper organizing the layout of the living room floor plan. With the consent of the teacher tutor they choose the one draft that meets the objectives of the project and work methodically and collaboratively for their final proposal and presentation. The final design proposal should include the following issues:

- rendered floor plan layout in scale 1:20
- rendered cross section in scale 1:20
- two freehand perspective drawings, giving the sense and the atmosphere of the space's final idea, rendered
- sample board, color samples



Examples of plan final proposals and sample board

Stage 6: presenting the project.

Students complete their project work by posting their drawing, sketches and samples on special presentation boards. Each couple decides on the way they will present their design proposal in front of the rest of the class. The teacher spends equal time for each pair's presentation and at the end of each presentation allows other students to have questions and remarks on each design proposal encouraging a group discussion. The students give evaluation marks for each project, based on the objectives given forehand.

An assessment takes place with the teacher and other colleagues of the department and feedback is given where needed.

The following table is given to the students upon the beginning of the project and runs throughout the whole research and design phases in order to give the pupils the creative spirit and the comprehensive picture that derives from the different decorative styles that appear in the living room proposals. This helps the creative possess to be completed through clear information and accurate guidelines.

Stages	What is it?	How is it	Who does	Where is it	When is it due?
of		achieved?	what?	done?	
work					
Stage 1	Questionnaire	Questions on different cultural habits of everyday life in a living room	Each student asks in written form whatever he/she might think is necessary to get to know his/her	In the classroom, outdoors of school, at home. Anywhere they feel free to express	At very early stages of work. The idea is based on bonding the pairs early enough, giving
			partner	themselves	them the opportunity to interact
Stage 2	Research/ brainstorming	Photos and written statements of special elements through brainstorming indicate style of country of origin	The pairs collect information needed for expression purposes through own cultural type of rituals	In the classroom during workshops	Just after completing the questionnaire, having been introduced to the difference of each other's pair
Stage 3	Visiting the site	The teacher accompanies the students to the site showing them the real space to be created	Pupils take pictures and make drafts of space layout solutions	On the site bearing in mind the lighting of the space and the dimensions between relative elements	The visit takes place when the pairs have already come close to understanding each other's different background
Stage 4	Creating the idea	Different alternatives come to light through sketches in sketchbooks	The students compare their ideas and decide on a mutual way of laying out the living room	The work takes place during the visit on the site as well as when returning to workshops at school	Different ideas are put together after the site visit according to the styling results founded on research
Stage 5	The final proposal	With the help of the teacher the pairs decide on one solution that meets the lesson objectives	Both students of each team work in collaboration	At class workshops	the site visit according to the styling results founded on research At set date the teacher defines from the start of the project At set date the teacher defines from the start of the project
Stage 6	Presenting the project	All final drawings to scale are set up on a special mounting board	Both students of each team work in collaboration	At class workshops	At set date the teacher defines from the start of the project

Scenario No. 8

Topic: The making of a storyboard.

Purpose of the project: The interaction of students in making a story on design

Students are asked to provide solutions on a design problem based on interior proposals. They are about to meet their client and make a research on his/her profile as to introduce a design solution for his/her requests on designing his/her space. To achieve this goal the students must work on a serious of points on a sequel that takes them from start to finish through the making of a story.

Students have already been through the required knowledge of all aspects of drawing and rendering techniques and are very keen on using various technological tools such as the AutoCAD and Sketch up programs. They are also very familiar with the use of materials such as pencil, watercolor, pen, collage, shading techniques, techniques performance materials and three-dimensional perspective presentation techniques.

Duration of project: 16 teaching periods (45' each)

Lesson objectives: The student should:

- name and comprehend the meaning of a storyboard
- get familiar with terms of research over an interview
- suggest solution on specific interior layout according to clients' scenarios
- apply interior design drawing proposals in perspective view using color and shading

Teaching methods and forms of work:

- discussion
- brainstorming
- research
- collaborative learning
- multimedia presentation

Teaching tools and materials:

- digital camera, notepad for interviewing a client
- computer and printer
- designing tools (scale ruler, triangles, compass etc)
- sketchbook
- tracing paper
- mounting board
- fabric samples, wallpaper samples

- drawing pencils, color pencils, black pens
- scissors, glue

Course stages:

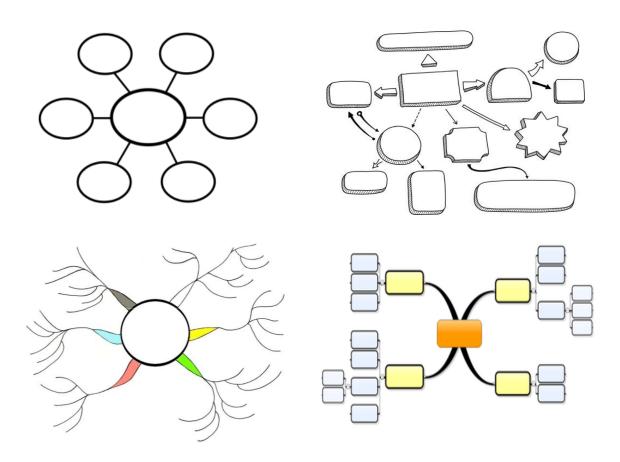
Stage 1: the challenge:

Students are divided into pairs and are given an envelope full of 10 single cutout pictures that make up a story. The icons make up a fairytale and are drawn by a well-known Cypriot artist whose work is familiar to most citizens over two decades. They are asked to glue down the correct sequence of the pictures in order to have a story with a clear beginning, middle and ending that makes full sense.

The stories are presented to the whole group and students get to answer the following questions: (all answers are written on board as brainstorming)

- What do you think the subject is?
- What can we name of the board you have just assembled?
- How can this so called storyboard be achieved?
- Why do you think this is helpful?

By the end of the first period the students have got familiar with the meaning of a storyboard and made notes from the board in order to have a guide when asked to make their own storyboards later. The notes can be formed in mind maps as shown below:



Stage 2: the interview:

A few members of the stuff are kindly asked to participate in this project having to play the role of a client for the students. They can give true or false answers but have in mind to reveal a character that can easily exists in real life. The whole team of the class is made out of fifteen students, therefore, small groups of three pupils have to interview each client and take notes on their questions made before, which will help them build up the final solution on their layout requests. Each student is allowed to give four questions and take as many notes as he/she can as a research on their client's needs and likes. Some of the questions that can be expressed are:

- How would you describe your personal status in life?
- What is your profession?
- What are your needs when being at home after work?
- Do you live alone/have family/children?
- How many hours per day do you spend at home?
- Do you often have friends over?
- What are your hobbies?
- What are your favorite colors/themes/tastes/hearings etc.?
- When being at home do you enjoy cooking/watching movies/reading/listening to music/exercising?

All answers of each group are being put down and compared through discussion. An example of the interview summary can be noted down on a table like the following:

My questions	Client's answers	My remarks		
uestion 1:				
uestion 2:				
uestion 3:				
uestion 4:				
ore information:				
ore information:				

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Each student has, by this point, a general scenario of who his/her client is, which makes the beginning of the whole making of a design storyboard. An introduction to the purpose of the project is explained by the tutor and an example of the basic sequence of the storyboard work is shown to class.



Stage 3: the research:

After having a complete image of who the client of each group is, the students are given a whole day to visit the interior design market place. They take the scenario with them, their cameras and sketchbooks and search for approximately 8-12 elements of interior design that believe represent their client's profile and way of living. They can work collaboratively in pairs in this search if they wish to, but have to complete their own individual research by the end of the day. They can use digital photography after having permission by each store, sketching and noting in pads, as to come back the next meeting having a very clear opinion on what they will do forwardly. They can include anything they think is necessary to have a place in their client's space, as long as they explain the reason for it, which would be noted down next to each photo. The search can be focused on furniture, textiles, wall coverings and home accessories that complete the client's tastes. A sample of the item pictures they can combine together in their research is shown below:



The next step is for the students to print and present the photos in their sketchbook as part of their research and take notes as where, why and how each item is going to be used in space. They make quick sketches of the proposals as to be well convincing when asked. They have an interim presentation on the research results and consult their tutor on how to continue afterwards. The interim session consists of a few questions that have to be answered by each student, like the following:

- Is your research satisfying enough as to build up a story for your client?
- Do you think you have enough material to cover all aspects of interior layout through the apartment according to your client's needs and likes?
- Make some rough sketches of your upcoming ideas as to show the client you're in the correct designing lane.

Your interim work will be presented during the final presentation as the basis to your thoughts and creative ideas.

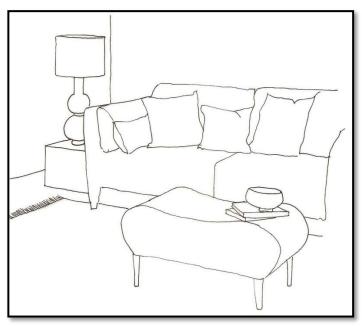
Stage 3: visiting the site:

The students are then taken to visit an existing apartment placed near their school area. They are also given the plan of it in scale 1:50. With the companion of their teacher students get the opportunity to get to the site in order to get a real view of the living area they are going to assemble as a living space for their client. During their visit they take pictures of the space, take notes on measurements, information about the lighting of the space and the way the rooms are connected together.

While on site the students get in couples discuss their information and take time to exchange ideas through quick sketches and drawings in their sketchbooks.

Stage 4: the layout:

After returning to school students have now individual time to work on their own proposals. They have 6-8 periods to work on final perspective drawings, create the image they support through sketches, rendered drawings, sample boards and notes on site photographs and market material photographs. They use the time given to end up with one layout that can be proposed to their client. The perspective drawings can look like the following sample:

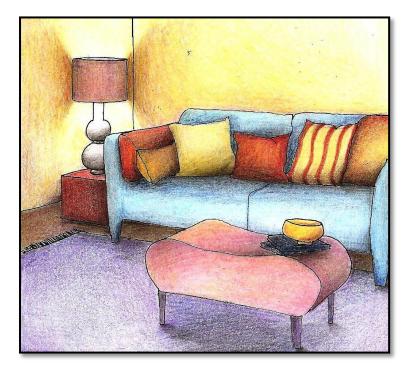


As they work the tutor has time to discuss individually with each student on their creative process and make remarks on how to avoid mistakes and make the project show as true as can be. When the whole idea is finalized each student takes some time to prepare their storyboard by combining all the gathered information in the correct order as to create a story on design. They can use mounting boards for the base of the storyboard and attach everything they collected (the brainstorming, the interview,

the scenario, the photos taken on the market, the site photos, the sketches, the sample boards and the final rendered drawings) as to make full sense.

Stage 5: the final presentation:

On the last day of the time given for this project a panel of critics is set and each student gets the opportunity to present his/her proposal to the rest of the students and tutors. They have 15 minutes each for explaining their design route through the stages of work, their thoughts at each stage and their purpose as to fulfill their clients' needs. After completing their description they are open to questions and remarks from the panel and stand up for their design. As a final proposition their perspective drawings should look like the sample that follows and be accompanied with the rest of the design information.



Marks are given from:

- the tutor
- the client and
- the students

and the average mark is considered to be the project's evaluation.

The finished panels of the storyboards are then being put on the wall as for the whole group to have time and easy access to see the creative process of their colleagues.

Midbreg Leisure Center in Reykjavik (Iceland)

Scenario No. 9

Topic: Art and creativity.



Increasing creativity by experiencing and learning about art in different forms.

Lesson objectives:

- Students learn about different artists that use different styles and forms.
- Students get the opportunity to make their own art through different media and experience art and creativity through the aritst's work.
- Students participate in field trips and experience art in their own area.
- Students use sharpen their creative thinking through constructive criticism.

Methods and forms of work:

- Class and group discussions
- Presentations

- Individual work
- Team work
- Painting
- Sculpting

Teaching materials:

- Regular sheets of paper for discussions and group presentations
- Paper suitable for painting depending on media, can be guache or acrylics
- Paint brushes
- Glue for collage
- Containers for water
- Clay suitable for sculpting
- Projector for presentation
- Handouts
- Map of the area for the field trip
- Camera

Duration of classes: 5 teaching hours.

The course of classess and activities.

1. Lesson one; Introducing artists:

We learn about two different artist, short bio and information and pictures of their work. Try to choose two artists from different eras and/or that use different art form or styles. In this case we are referring to painters or multimedia artists. Divide students into groups of 4-5 depending on the size of the class. Give presentation about the artists and show their artwork – handouts optional Give the students 15 minutes to discuss the artists and what they think about their artwork? Is it strange? Fun? Is it art or not? Can they also be artists? Students write down a shirt presentation about their findings.

Artist 1 - Miró:

The artist Miro's full name was **Joan Miró í Ferrá** and he was from Spain. Born in Barcelona 20. April 1893 and died December 25. 1983. He was a painter, sculptor and ceramist. In Barcelona you can find a museum that is dedicated to his work. His style is mostly considered in Surrealistic but often there are also recreations from his youth and his pride as a Catalonian. Miró studied art at the Cercle Artístic de Sant Lluc art school and held his first art show in 1918 that was not a success as his works were very modern for that era. He moved to Paris to be closer to the art community and at that time he developed a different style. In 1924 Miró joined a group calling them selves the "Surrealist group". His art from that era is often called

Miró's "Dream work" but they were far from being traditional. 1928 Miró painted The Dutch Interiors but it is considered to be the end of the Dream works. Miró was married to Pilar Juncosa Iglesias and together they had one daughter.

Miro was one of the most famous artist in the 20th century. Is art had an enormous impact on the art world and especially for those who adopted the surrealistic style. ¹⁸



Joan Miró

"Snob Evening at Princess"

"The Smile of the Flamboyant Wings"

Artist 2 – Andy Warhol:

Andy Warhol was an American artist born August 6, 1928 and died February 22, 1987. He was an artist that is mostly known for his art called pop art and relates to his celebrity culture and advertising and his work was very popular in the 1960's. He used many types of media in his art such as drawing, painting, print making, silk screening, sculpture, film and music. His studio was a well known gathering for Hollywood celebrities, playwrights and drag queens to name a few. Warhol also managed a rock band, founded a magazine and was the author of books. He is also known as a gay man that lived openly as such before and is credited with coining the expression "15 minutes of fame".

The Andy Warhol Museum is in his native city, Pittsburgh, Pennsylvania and holds an extensive premanent collection of his art and is the largest museum in the US dedicated to a single artist.

Warhol began exhibiting his work during the 1950s in New York and his first West Coast exhibition was in LA in 1962 and that marked his debut of pop art. ¹⁹

10 00



Andy Warhol

"Marilyn Diptych"

"Campbell's Soup Cans"

¹⁸ <u>https://is.wikipedia.org/wiki/Joan Mir%C3%B3</u>

¹⁹ https://en.wikipedia.org/wiki/Andy Warhol

Co-funded by the Erasmus+ Programme of the European Union

When introducing the artist select at least 10-15 pictures of the artist's work to show the class. Select the bio in accordance with the age of the students. This bio is made for children 7-9 years old. Ideas of questions for students after the introductions:

- 1. What do you see?
- 2. What's going on in this artwork?
- 3. Do you have any ideas about how the artist made this?
- 4. How would you describe this artwork to someone who has never seen it?
- 5. If you could add something to this artwork, what would you like to add?
- 6. What would you title this piece?

2. Lesson two; Experiencing the artist inside us.

Miro is the topic today.

Each group that was working together delivers a short presentation about their findings about Miro and his work.

Cast slides with the art work, reminding what Miro's art looks like. Students create their own "Miro" artwork, individually.



Example of artwork from students inspired by Miró.

3. Lesson three; Experiencing the artist inside us.

Andy Warhol is our topic today

Each group delivers their short presentation about their opinion and findings about Andy Warhol.

Cast slides with the art work, reminding what Andy Warhol's work looks like. Groups work together creating collage/painting inspired by Warhol's work.

4. Lesson four; Field trip – experiencing art in our own environment.

Field trip in your neighborhood or and area of your choice where there is artwork and sculptures in open areas, squares and etc.

Make sure the trip is not too long and that the art in the area is art of your choice. In this class we are getting an introduction about sculptures. Hand every student a map where they can see the location of the sculptures. They need to discuss the best (shortest) way to get to point 1, 2, etc. and at the end back to school. By each sculpture/artwork give a short lecture about the artist and have students take pictures (if cameras are and option) or sketch what they see and experience in that piece of artwork.



Map of Breiðholt with 4 sculptures by three different artist

Sculpture #1. *Ferningur 1* by Hallsteinn Sigurðsson. *Hallsteinn Sigurðsson* – born 1945 is an Icelandic sculpture and there are numerous works of his around the city. He started using clay and made sculptures from cements but his later works are more out of iron and aluminum. Hallstein uses abstract forms and often works with geometrical lines. In this work you can see that the artist is using three dimensional "boxes" of different lengths and width. The sculpture rises on a large platform that looks like a part of the sculpture.



Sculpture #2. Mynd by Sigurður Guðmundsson

Sigurður Guðmundsson – is one of the most prestigious artists of his generation. He was born in 1942 and studied in the Icelandic Art College and then went on to study in Holland where he finished a degree in art. He works and lives in China and Holland. His sculptures can be found in open spaces in Scandinavia and Central Europe.

When inquired where he got the idea for this sculpture he response is "There is no idea behind the sculpture – I try not to work with any ideas".

Sculpture #3. **Fýkur yfir hæðir** by Ásmundur Sveinsson This sculpture is typical of the simple form that Ásmundur seeked to work with in the thirties. The details are deleted from the sculpture until there is only enough left to deliver the message of the sculpture to the viewer.

Sculpture #4. *Móðir mín í kví kví* by Ásmundur Sveinsson The sculpture is based on an Icelandic folks tale about a servant that had become pregnant and taken her newborn out and left it there. She then later wanted to attend a party that was taking place for the people in the area but had no clothes to wear since she was a simple servant. She was beggering about this when she heard someone whisper:

"Móðir mín í kví, kví, kvíddú ekki því, því; ég skal ljá þér duluna mína að dansa í, að dansa í."

Translation: My mother do not worrie I will lend you my clothes to wear for dancing.









She got so taken back by this that she lost her mind for ever.

Ásmundur Sveinsson – born in 1893 and died in 1982 at the age of 89. He started his education at the age of 22 and studied in Denmark and then moved to Sweden and from there to Paris, France. Ásmundur is one of the pioneers in art sculptures in Iceland. After moving to Iceland he build to buildings where he lived and work. These buildings are museums today. Ásmundur was inspired by Icelandic tales and myths and the forms of nature.²⁰

5. Lesson five. Using the field trip to develope your on sculpture.

Students view their photographs and/or sketches from the field trip to try and make their own sculptures.

Use a clay of your choice taking into consideration the students age and skills. Paint the sculptures when dry if desired.

Scenario No. 10

Topic: Culture and creativity



Using creative measures to learn about our culture and others.

²⁰ <u>http://listasafnreykjavikur.is/sites/default/files/fraedsla/namsefni_utilistaverk_i_breidholti.pdf</u> Co-funded by the Erasmus+ Programme of the European Union Countries around the world are getting more multi-cultural and using creative projects is a fun and interesting way to learn about our own cultural backgrounds and others around and in the children's classes. At the same time you increase creative thinking for students and engage parents cooperation with thier children, culture and classes. Projects should be adapted depending on the age of the students we are working with. These projects and ideas are thought for 6-9 years olds.

Before starting classes make a handout with the students and multiply for students to take home so they can discuss with their parents about their ancestors, holidays and family/home holidays and habits. Also translate some widely used phrases like; Good morning, good night, my name is and so on.

Students bring their handouts back with them to classes for support during their projects. Example of handout at the end of project.

Lesson objectives:

- For students to learn more about their own culture and cultural background. At the same time learn about their classmates using creative projects and to broaden their minds and increase creative vision.
- Students learn about their family background and the background of their classmates with the creation of a family tree. Where are our ancestors from?
- Students learn about nationality of each other end create projects using their national flag.
- Students learn about each others holidays and habits, make poster boards and calendars with information and frases from different languages.
- Students learn about food and dining habits of each other. Make recipes and if possible bake toether and taste cakes/cookies from different cultures.

Methods and forms of work:

- Handouts to take to parents
- Parental assistance students discuss the project at home for information
- Class and group discussions
- Presentations
- Individual work
- Team work
- Painting
- Baking and/or cooking

Teaching materials:

- Regular sheets of paper for discussions and group presentations and for recipe "book".
- Paper suitable for painting depending on media, can be gouache or acrylics

- Paint brushes
- Glue for collage
- Containers for water
- Large carton for presentation and team work
- Handouts
- Calendar by month
- Map of the world
- Hama perler beads if desired
- Food and/or baking supplies

Duration of classes: 7 teaching hours.

The course of classess and activities.

1. Lesson one; Family tree.

Find different creative ways to represent your family tree and go back as far as possible with students ancestors. Start with individual work, each students makes their own family tree with names of siblings, parents, grandparents etc. and where they are from. Also it is fun to add the family pet or favorite animal to the family tree. To do this print out different animal figurines for students to select from and have the students color the figurine and write down the name of the pet. After students finish their own family tree students work together on making a large poster with all the family trees.



Examples of famaily trees.

2. Lesson two; Where are we from?

Use a world map to look at countries around the world. Discuss where everyone comes from and find the flags of the world. Each student draws the outlines of his/her hands and draws and colors in their flag of flags. Also have the children use another medium to make their flag (for example Hama perler beads as seen below)

and make a poster board with all the flags. If students are not multi cultural choose together flags to represent each continent and discuss the cultural differences.



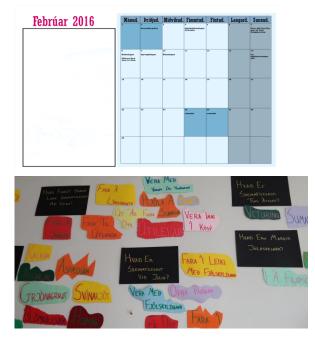
Examples from children on how we can make our flags.

3. Lesson three; What holidays do we celebrate?

Print out a monthly calendar in a decent size A4 for example for each month. Go over each month and write down all holidays and special days that are celebrated in our country (that we live in). Then add all the holidays that we celebrate with our family and friends. Discuss the holidays, what we know about them, we they are celebrated and what we do.

Have students write down what their favorite thing is concerning the holidays that they celebrate. Food, drinks, pastime, family gatherings etc. Students can for example write down on different colored paper and make a collage on a poster board.

If the students are old enough have them write down things like "Good morning", "Good Night", "How are you", etc. in their native language.



Examples of calendars and a poster board "with our likes and favorites".

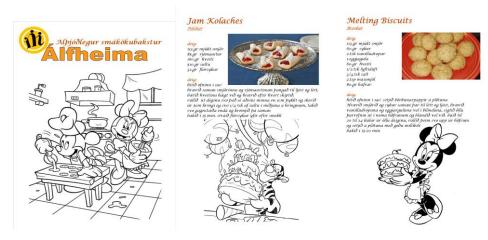
4. Lesson four - six; Lets make our favorite recipe.

Select one favorite baking or cooking recipe from to represent each country in the class. Have students vote for the most interesting recipe that they want to bake or cook. Depending on how many cultures are in the class there could be more than 3 baking/cooking classes.

5. Class five; Design and make our cook "book".

Collect all the recipes that were made during baking/cooking classes. Divide students into groups. Divide the recipes between the groups for students to write down each recipe and illustrate. Do not forget to make a cover page.

When all the recipes are finished, collect them together to copy, bind or staple together and handout a copy to each student.



Example of a cook book, here we see Jam Kolaches from Poland and Melting biscuits from Brittain.

Example of handout:

1. Family tree

		Sibling	Sibling	My name	Sibling	Sibling	Pets		
		Mother				Father			
	Grand father	Grand mother				Grand mother	Grand Father		
Great grandmother	Great grandfather	Great grandmother	Great grandfather			Great grandfather	Great grandmother	Great grandfather	Great grandmother

If students know the names and birth of relatives further back than great grandparents ask them to add it on extra sheet of paper or make enough columns and lines for more.

- 2. Country of origin (write down that are applicable).
- 3. Flag of country
- 4. Holidays which holidays do we celebrate in our country of origin? Write down name and dates.
- 5. What do we do on holidays we celebrate? Food, pastime, family, friends etc?
- 6. Write down few selective phrases or sentences in your language.
- 7. Favorite cake/cookie/food. Write down recipe for the class.

Please note; everybody is working together on this project so that everybody that is native in the country also need to finish this questionnaire.

Scenario No. 11

Topic: Breiðholt Got Talent



Increasing creativity through participation – Learning by doing.

This project is based on the popular tv show Brittain Got Talent. ²¹²² The project has been running annually for several years in Breidholt and has developed every year with increasing participation of students with the guidance of the teachers. Students participate in every aspect of the event, everything from choosing teams to lead the project, making ads, assist as technicians and so on. The event is getting bigger by the year in the sense of more/bigger sound and light effects. For the last three years the event has also been running for the younger students (6-9 years old) where their participation is solely based on the students showcasing their talent.

Using the arts or creative approaches when working with children and young people can often increase the range the activities, open up engagement in new ways of expression and

²² http://www.itv.com/britainsgottalent

²¹ https://en.wikipedia.org/wiki/Britain's Got Talent

enthusiasm and encourage children and young people to participate in ways that are exciting, fun and inclusive to all ages and abilities. ²³

Class objectives:

Create a democratic platform for students to show their talents whether as a competitor, presenter or technician. It is important for students to experience that they can create a stylish and successful event. This event is an interesting and fun way to exhibit ways for future event management.

- You can find that everyone has some sort of a "creative" talent, it is just a matter on how to exploit it "finding it" and activate it.
- Each and every student gets a role or task in the event.
- Teaching students to take initiative.
- Giving students an insight to the world of technology.
- Promote creativity in the neighborhood/school/surroundings.
- Encouraging innovation, teaching students stage performance.
- Encouraging student's independence.
- Teaching students to work together through learning by doing.

Methods and forms of work:

- Class and group discussions
- Students get the opportunity to choose a project by their interests.

Teaching materials:

- Regular sheets of paper for discussions and group presentations
- Projector for presentation
- Handouts
- Camera
- Lights and sounds
- Mixer
- Sound system
- Lightbox

Duration of classes: 5 teaching hours.

The course of classess and activities. Classes are thought as a extra curricular activities or as optional courses.

1. Lesson one; Democratic meeting and planning.

Start with a democratic meeting for everyone who are attending the course. Go over goals, project management and marketing of the event. How will we advertise the event? Plan to use all social media in addition to distributing flyers around the

²³ <u>http://www.participationworks.org.uk/topics/arts-creativity/</u>

neighborhood.

It is important for the teachers to work one on one approach with the students that is really important in order to reach the contestants.

Then decide the posts for everyone involved, who is going to film the event, be the photographer, arrange the stage (and stagehand), take care of lights and sound and so on. Choose the date of competition (event), the presenters and the promotion material (advertising). Is there a theme on the stage, and if so what?

Determine who will be the judges for the talent. It could be fun to get teachers and someone from outside the school. Try have three judges to keep to the original form.

2. Class two; techincal and detail planning of the event.

- Find technicians to oversee the event and assist the students.
- Work with the project managers, brainstorm over the entire process-and how it will be,
- The stage, what will it look like?
- Advertising, make the ad and decide where and when to distribute.
- When can rehearsal be done for the talent?
- Light design (which equipment should be used and how).
- Sound design (which equipment should be used and how).
- Review the video (intro, advertising, promotion),
- Camera plot at the competition itself (which machinery should be used and how

3. Lesson three; The talent.

- Students rehearse under the guidance of teachers.
- Assist students to improve or customize their acts.
- Assist students to improve their stage presence.

4. Lesson four; Technical preparation.

- Installation of lights, sound and broadcasting equipment,
- Safety of surroundings.
- Plan technicians flow, timing of how and where.
- Microphone technique, how to make use of the Projector.
- Review all issues regarding sound and light, so to best capture the atmosphere of the talents and their performance.
- Sound check for the music.
- Go over the check list and arrange them in order so that the event and the competition goes smoothly and is interesting and fun for the viewer.
- Go over voting plan for the judges.
- Awards and acknowledgments for the participators in the talent show.

Co-funded by the Erasmus+ Programme of the European Union

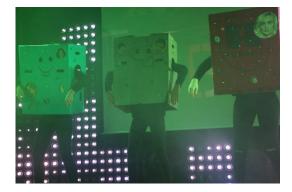
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5. Lesson five; Students and techers collaboration.

- The role of teachers in the competition. Who will manage the elections, counting the votes?
- Who will help the contestants before they go to the stage?
- Who will help the presenters?
- Who will help the technicians, etc.?
- Brainstorming about what could go wrong and what can be done to prevent it.

6. Lesson six; The event.

- The event itself should be in the curriculum as part of the classes.





7. Lesson seven; Follow up.

- Everybody gets together at the follow up to go over what went well and what could go better for the next competition.
- Make sure there is someone to write down everything for references.



"F.S. NITTI" in Rome (Italy)

Scenario No. 12

Topic: C2 Creative culture - Smart Objects

INTRODUCTION

The workshop aims to reflect on "critical and creative" smart objects. After a brief introduction in which we are going to describe the pedagogical foundations that support the "learning opportunities" proposed by the teacher and mentor, the participants will be involved in the virtual design of smart objects to solve real problems and in the manufacture of prototypes with "technological" recycled things.

This workshop is about Educational Robotics and Coding, but before starting to talk about that, we must think of how students build their knowledge. It's easy.

If you decide to introduce Robotics and Coding in teaching and learning, you must reflect on the way in which knowledge is built by your students, in particular, the "*Constructivism*" of Jean Piaget and "*Construtionism*" of Saymur Papert.

What is Constructivism?

What is Constructionism?

Piaget said that students, or better children, make their knowledge by themselves thanks to our help in creating good and "comfortable" situations in which they can discover, think, make, do, CREATE new things.

Papert also said that if you make something with your hand, at the same time you make something with your brain and this kind of learning is useful to fix the knowledge in your mind.

If you make operations in real situations, at the same time you make operations with your mind, and these operations fix the knowledge strongly inside your brain. This is the first thing.

The second thing is that if you want to create your knowledge fully, you must be in a GROUP, with your friends, with other people. You must collaborate and share ideas with your school mates.

So the operations in your mind become better, more than they would have been if you were alone.

The third thing is being engaged with PLAYING and games. If you play with your friends and have fun in doing something, you learn more. If you are happy, your knowledge is created in your mind in an easier way. If you believe in this, you can start with Robotics and Coding. If not, students will understand that you are doing something as a homework assignment

but you don't have the right passion, you aren't putting any feelings into what you are doing with them.

Lesson objectives:

Methods and forms of work:

- Discussion (with the whole group and in teams)
- Interviews
- Researches on jobs, materials and instruments
- Pair and group work, teamwork
- Multimedia presentation
- Visual test method: ebook photo album

Teaching materials:

- Stationery material: sheets of paper, markers, stickers, highlighters, plasticine....
- digital cameras (may be cameras in students' mobile phones)
- computer(s) with Internet access, projector or interactive board, sound system
- Electronics things: batteries, a fans, starters, leds
- Any kind of recycled material: wooden, plastic, card or metal objects (or part of it), such as boxes, bottles, straws, tops, caps, corks, old rags, aluminum foil....

Duration of Classes: 1.h30 min for each exercise.

Activities:

1. Initial stage:

FIRST ACTIVITY - SMART OBJECTS

What are smart objects? Why are they called "smart"? You can watch this video: https://www.youtube.com/watch?v=AEXF33EgH0w https://www.youtube.com/watch?v=ukpDC0wxy7Y

EXERCISES 1 - Write down a list of 10 smart objectsWhy are they smart? Are they really smart?Draw one of them?Tell me 2 of the objects you have found and tell me why they are smart.

EXERCISES 2 - Make one of the 10 things, doing something smart but different from what it is usually used for, using your imagination. Why did you choose this new action? Which problem can it solve?

EXERCISES 3 - Invent a smart object to solve one of your problems... and I know, you almost have a problem...

Why did we introduce the smart objects, what do they have in common with Robotics and Coding?

We are going to discover this point.

First of all, they are objects useful to solve problems, but ... who makes them?

2. Implementation stage:

SECOND ACTIVITY - WE ARE ENGINEERS

Who is an engineer?

He/She is a person who can find a solution to a problem, when you have nothing to solve it (to use one's wit) just like Robinson Crusoe in the desert Island. So you must use your brain, you must use your hands and your creativity.

I'm talking about engineers like Leonardo, not the modern ones, who use computers to solve their problems. Before, we have to start from Scratch program and then go to the top of science and technology.

You must improve your ability... for a short time you will pretend to be an engineer.

Why do engineers create something? What can you find at the beginning of his/her work? What moves him/her to project an object?.... Of course, a problem.

A project comes to life and starts from an idea... yes, but the idea comes after a problem that has to be solved.

WORKING

- I'll give you:
- 3 long pieces
- 3 short pieces
- 3 wheels
- 3 gears
- A lot of connectors
- 1. CREATE A GROUP AND NAME IT
- 2. ESPLAIN YOUR PROBLEM
- 3. PROJECT A SOLUTION WITH AN OBJECT
- 4. MAKE IT
- 5. NAME IT
- 6. ESPLAIN TO OTHER GROUPS HOW IT WORKS

What was your problem? I'm the worst in the world at cooking... I can burn a pan or

a pot, I can spoil the tasty meals that my mother in law cooks for us, ... I don't like to cook, by the way. So my favorite engineer is the one who invented the "Cooking robot". So now you can start working ...

3. Summary stage:

THIRD ACTIVITY: ROBOTICS

I would like you to understand that Robotics is made up of three elements: Robotics makes you think about:

- 1. Mechanics.
- 2. Electronics.

3. Coding.

There are the 3 steps you have to think about when you have to solve a problem, nowadays. Mechanic is what we have done right now.

Electronics gives you the energy to make an object move.

But it's not enough, you can make your creation smarter.

Smart things:

1. have a microchip

- 2. can communicate together
- 3. can be programmed.

If you have spared a short amount of time to work, you can improve your project only with an electronic system. I will give you these:

- 1. a battery
- 2. a fan (Where was it before now? What is this? What is its function?)
- 3. a starter (Where did I find it?)

4. a led.

Now you can improve your object with movement. How could these four things be used to improve you object?

Now explain what has changed in your project and why your object is better/worse now, than it was before.

If you use an electrical board like Arduino and Makey Makey, but also Rusberry or Microbit, you can even improve your idea with Coding, and have a finer and better solution to your problem.

CIRCLE TIME

At the end the participants can express the degree of interest and involvement they had during this work, and even if they believe the experience has improved their interest about this innovative and technological discipline.

Scenario No. 13

Topic: C2 Creative culture – Making videos

Introduction:

The workshop aims to show how to design and make videos can be considered an important classroom activity for students.

This involving project helps to turn learning plans into more and more inclusive activities, by allowing all students to be motivated and to apply their knowledges, skills and competences to carry out something real and, above all, funny.

The pedagogical principle underlying this activity is the "Learning by doing", a theory of education expounded by the American philosopher John Dewey, who theorized that learning should be relevant and practical, not just passive and theoretical. So every class plan should end with an authentic activity with a real product to ensure the knowledge be fixed in the deepest areas of the brain.

The better way to carry out this product is the cooperative one.

This learning approach allows students to share their skills and the peer's support turns down its affective filter, an invisible psychological filter that can either facilitate or hinder language production in a second language. When the affective filter is high, students may experience stress, anxiety, and lack of self-confidence that may inhibit success in acquiring a second language. On the other hand, a low affective filter facilitates risk-taking behavior in regards to practicing and learning a second language, as Krashen teaches us.

Duration: 3 hours.

Lesson objectives:

- Employ the applications available in the student's mobile phones to shoot videos
- write a script for a commercial, a movie trailer or a shopping set
- work in pair or in a small group
- achieve a realistic video (with soundtrack, digital effects...)

Teaching materials:

- paper sheets
- mobile phones
- interactive whiteboard with computer and projector

all that students need to create their sets

Lessons plan:

1. Warm-up:

FIRST ACTIVITY – brainstorming

Have you ever made a video? How can you film a video? With a camera? With a mobile phone? Which apps do you use to realize your videos?

SECOND ACTIVITY - in pair

Write down a list of advantages and disadvantages of these apps and explain which one do you prefer and why.

What're advantages and disadvantages of IMOVIE? What're advantages and disadvantages of MOVIE MAKER? What're advantages and disadvantages of VIDEO STAR? What're advantages and disadvantages of FLIPAGRAM? Finally, come to a choice of the app you will use.

THIRD ACTIVITY- pooling and sharing

Using the pair's information, the group comes to pick out two apps to be used.

2. Implementation:

We divide the class in small groups The teacher makes the groups thinking on level and skills of each student. **FIRST ACTIVITY- cooperative**

Each group decides which type of video will create

Each group decides the technical role of every member....director, writers, dresser, musical director...; moreover everyone must act.

SECOND ACTIVITY - pooling and sharing

We create a schedule on the whiteboard with all the groups, the types of videos, the role of each student and we decide the date of delivery.

Then the teacher informs the students that in Edmodo, they'll find the links of some videos which explain the characteristics of trailers and commercials. They have to write down a mind map of the topics of the videos using the app SimpleMind.

How to make a trailer (in Spanish) https://www.youtube.com/watch?v=bhQ4Q_YW17EHow to make a commercial (in Spanish with English subtitles) https://www.youtube.com/watch?v=UtqZD01kElQ Edmodo is an app that creates an online meeting point for teachers and students and that we can use for the Flipped Classroom Method.

3.Practical implementation

Each group has to put in Edmodo his playbook waiting for its correction, then they can start to film. The videos will participate in the "Nitti Oscar" Event with a Board of Experts and a final Award Ceremony.













Scenario No. 14

Topic: C² Creative Culture - "ChocoSchool": The Chocolate Lab.

Lesson objectives:

- Students are facilitated in the process of building their complete personalities, through the integration with the environment and their socio-cultural background
- Students understand what to be an active part of the society means: they learn to participate in productive activities and to be an aware citizen
- Students know, perceive and evaluate the productive activities in their district (list its elements/manifestations)
- Students create ideas to improve the situation in the environment undertake and plan collectively productive/social initiatives for the school/district
- From an operative point of view, students know the origin of cocoa and its main processing times
- Students learn to think about the implications linked to the consumption of these kind of products
- Students learn to discern the genuine product (chocolate) from the chocolate flavored one
- Students know the meaning of an "Ethical Purchasing Group"

Methods and forms of work:

- Data and document analysis: diagrams, grids, forms, templates, tables, charts....
- discussion (with the whole group and in teams)
- interviews
- researches on jobs, materials and instruments
- pair and group work, teamwork
- multimedia presentation

Teaching materials:

- sheets of paper, markers, proper clothes,
- cooking clothes, kitchen instruments, ingredients
- digital cameras (may be cameras in students' mobile phones)
- computer(s) with Internet access, projector or interactive board, sound system

Results/Products:

- Home-made chocolates to be sold at Christmas in the 'School Solidarity Market'
- Poster to promote the event
- ebook of the event
- photo album of the event
- book of recipes

Duration of classes: 5 lessons (3 in class and 2 in the shop/lab) of 2/3 hours each.

A. Initial stage:

FIRST ACTIVITY - KNOWING OUR SURROUNDINGS

1 – WALKING AROUND THE DISTRICT (outdoor activity 1h)

The teacher takes the group to the "discovery" of their living area, asking the students to focus on their shops, business and the productive offers: How many shops can you see? List them

What kind of shops are they? Group them according to their business What are they useful for? Which one do you prefer and why?

2 – INTERVIEW THE SHOP OWNERS/ASSISTANTS (outdoor activity 1h)

Divide the group into smaller ones -2 or 3 smaller groups (4-5 people) according to the number of students, and ask them to interview the shop owners/assistants about their jobs. What is your role in the shop?

How is your job organized? - What do you do every day?

Do you make/produce something in your job (cakes, bread....) or you sell something?

3 – BRAINSTORMING (class activity 2h)

Coming back to school, students are asked to collect all the information, organizing the notes they have taken in a coherent way.

Make the entire group choose a productive activity they like (in our case the chocolate shop), and prepare themselves to become chocolates producers for a while.

The students plan strategies to contact the responsible of the shop.

B. Implementation stage:

SECOND ACTIVITY – WE ARE ALL CONFECTIONERS

1 KNOWLEDGE (class activity 2h)

In class, students divided into groups analyze different topics and aspects related to cocoa and chocolate, and its processing phases:

- Cocoa plants (botanical and geographical research)
- Cocoa plantations (location, characteristics, type of work)
- Cocoa storage

- Chocolate production
- Chocolate selling
- How to read a label correctly

2 PREPARING (activity in the shop 1h)

- Students talk with the responsible of the chocolate shop to the plan the workshop both from a theoretical and practical point of view, that is: implementing a project for all the production phases, being aware of the equipment needed for them (clothes, instruments...)
- Students visit the chocolate laboratory, know the people working there and observe the production phase carefully
- Students decide what kind of chocolate they want to prepare (milk chocolates, dark chocolates, stuffed ones), choose and select the necessary ingredients

3 MAKING (activity in the shop 2h)

In small groups, students start to make their own chocolate pralines, one for each student. Each group has a tutor (an effective worker of the lab) who follow them closely.

C. Summary stage:

THIRD ACTIVITY: DOCUMENTATION and DISSEMINATION (class activity 2 hours)

Students divide into three smaller group to develop the following tasks:

- Packaging of the pralines for the "School Solidarity Market"
- Creation of the poster to promote the event
- Documentation of the entire Project (selection of photos, documents, best pralines recipes to create a photo album, an e-book of recipes, a video......)



Appendix No. 1

The Project can also conclude with a moment of self-evaluation through interviews or questionnaires (to students, workers from the shop, market buyers...). Here are some examples of possible questions:

- Explain what you made and its aim
- Have you had any problems? In which part of the project?
- Did you like cooking?
- Are you satisfied with your product?
- How do you consider the experience to work with school students being their tutor?
- Did the students produce satisfactory products?
- Could the chocolates be sold in your shop?
- Are you satisfied with the product?
- Do you like the way the pralines are packed?
- Have you tasted them? Are they good?
- How do you evaluate this initiative?

Appendix No. 2







v. Creativity and creation - educational implications.

Changing societies and economies, new challenges, different from the previous ones which "today's student, and a man of success in couple of years" faces, require a definitely new approach to the goals and objectives of 21st century education. In the opinion of the authors of the Report, developed by Jacques Delors for UNESCO, the International Commission for Education for the 21st Century, "education in the society of knowledge" should prepare citizens for innovation, make them able to develop, adapt quickly to a changing world, capable of solving problems in a creative way, and also ensure each student the acquisition of "evolving competence" - adapting to changing conditions. Being creative, problem-solving, critical thinking, leadership skills, self-confidence, and the ability to plan one's own future in times of great change are added by the authors to the collection of essential skills in our modern world in which everybody has the possibility and should control one's own life and be independent. The need to take an interest in the issue of creative learning was born out of the fact that the duty of a modern school is to educate an active, independent, creative, knowledgeable persons who transform themselves and transforms the world around. The didactic and educational process should be creative in both teacher and student work.

Joy P. Guilford believed that creativity is the key to education, which also enables solving the most serious problems of humanity, and the development of cognitive psychology, in particular cognitive theories of intelligence, facilitate understanding of the creative aspects of the human intellect. The essence of the concept of creative activity is to introduce, to the extent possible, individual, independent and creative problem solving into the process of shaping the key competences of students. Emotional engagement in problems, striving to find the right ways to learn effectively, overcoming difficulties, make it easy to remember new things. The highly personalized nature of acquiring a skill causes the students to progress at different rates, experiencing different difficulties and failures in mastering specific skills. It is therefore impossible for identically performed teaching activities, proposed simultaneously to all students, to be equally effective. "Equalize" exercise rarely meets the needs and abilities of every child.

The learners, as a subject in the learning process, must be aware not only of their progress but also of shortcomings and difficulties. Such an attitude will certainly make it possible, with the help of a teacher, in accordance with individual predispositions, ambitions and motivations, to formulate the purpose and direction of their activity and to develop a program of action and deliberate modifications of it, as well as to evaluate their own results of work.

It has long been known that active methods not only engage pupils emotionally, they stimulate their inner motivation, interest, but above all they teach independent and creative thinking and acting. Students' activity should show interest in the material, participation and

co-operation. You cannot expect students to just listen and remember. They should be actively involved in the teaching process.

The initiation, direction and maintaining of physical and mental activity are inherent components of motivation, without which our talents and all wisdom do not matter. The motivation of the learner is influenced by the teacher's various behavior: the way of presenting knowledge, the choice of teaching methods, the attractiveness of the activities, the criticism towards the students, the emotional nature of the activities and the conversations with the students.

At this point you have to consider what forms can children's creativity adopt, because it differs significantly from the creativity of adults. There are several forms of such activity:

- motion and facial expression all kinds of gestures, facial expressions, spontaneous movements and dancing;
- verbal expression the emotional transmission of the literary text;
- verbal and musical expression improvisation of songs, melodies;
- musical expression pretending to play any musical instrument of choice; art expression - spontaneous art activities using a variety of materials;
- structural and technical expression building and creation of any spatial forms and play expression - a combination of the above-mentioned forms of activity when playing with other children.

Children's creativity is not limited to following the instruction of a teacher, but it has a much broader and richer scope, which can be used during lessons to enhance and stimulate student's interest in the topic. Especially creative is the so-called thematic roleplaying. The imitating elements of the play are characterized by their creative character, as they depend on the imagination of the child and the scenery of the play (Popek, 1985). An important factor in developing the child's creative potential is fun/play. Creative and critical abilities of students develop when solving open problems based on independent and subjective treatment. A critically thinking individual is willing to actively search for knowledge that is related to the problems being solved.

The stimulus to be active, and consequently creative, is undoubtedly the element of novelty in the lessons. Students are eager to have surprising experiences, do not like boredom. And here various activation methods can be helpful.

Independent problem solving by students makes them self-realize in the course of acquiring a given skill, becoming at the same time active and creative participants in the educational process. The emphasis placed by teachers on the student's creative activity relates not only to their very good academic results, but also to the ease of coping in various, often complex life situations in the future.

One of the most effective ways to support and develop cognitive activity and autonomy is to provide students with relevant educational tasks. Tasks are factors triggering activity and thereby stimulating development (J. Bonar). They are one of the basic means of didactic and educational influence that enable students to change at all levels of the learning process.

Students need to develop a career orientation, readiness to perform tasks no matter whether they are attractive or correspond with their needs, so they must learn to separate their feelings and needs from what they really need to do (Bonar 2008).

So the question is how to manage and organize the teaching and learning process at school so that it becomes a cognitive activating educational environment conducive to self-learning, allowing students to seek, study and explore. The answer to this question is not simple and unambiguous. It is certain that in the educational process one should take into account the already existing knowledge and personal viewpoints and beliefs held by students. It is important for each student to be able to express what they already know, what they think, what they feel, what they think is right in relation to their task. Therefore, we need to create educational situations conducive to the manifestation of independent thinking and acting. Do not miss the opportunity to support and inspire the creative thinking of the students, creating conditions for them to do so. Active learning is based on stimulating students' initiative in thinking and accepting their autonomy by encouraging to self-formulate hypothesis and designing verifying activities. The teacher ceases to be a source of knowledge, and becomes an initiator of creative task situations, and the organizer of the learning process.

Creative activity of students

Developing creative thinking is one of the most actual tasks of modern education. Great importance is attached to the issue of preparing young people to live in a rapidly changing world, full of troublesome problems. One of the important elements of this preparation is stimulating children to think and act creatively. A creative individual is able to accept novelties and changes, boldly confronts the problems that he/she encounters in life, strives for self-fulfillment, is capable of creating something new, original and valuable. The increase in interest in the issues of creativity we observe in recent years is mainly due to the fact that the surrounding reality is becoming more complex and non-standard (Turska 1994, p. 7).

Creative participation of students and teachers in the process of acquiring, processing and creating new knowledge is the best development strategy. Today it is easy to predict that the development of various fields of science signals a further, rapid increase in knowledge. Which means that we must learn effectively and throughout our lives. The result of this process should be not so much the amount of knowledge gained, but the ability to independently and actively acquire it, as well as the ability to creatively use it to create new qualities. So today, the school must develop students' cognitive potential, the ability to analysis and synthesis, to assess, convergent and divergent thinking, to allow creative thinking in adult life.

Creativity is an indispensable attribute of modern and future human life. Creativity and creative problem solving are complex concepts. There is no single theory in this field, so information about these processes can be found in different disciplines of knowledge.

Creativity is related to divergent and convergent thinking. Guilford (1967) points to evidence that creativity is linked to the process of divergent thinking, which is the opposite of convergent thinking. Divergent thinking is about finding a solution to a problem for which there is no single solution. In divergent processes, the creation of alternatives involves searching for many combinations of elements that can provide possible solutions. Divergent search for alternative solutions to the problem is characterized by fluidity of thinking and the originality of ideas, without strictly adhering to the prescribed steps and criteria to find the only right solution. This last approach - the only correct solution - is typical for convergent way of solving problems. However, Guilford sees the possibility of linking these two ways - as the divergent approach can be applied in the quest for a convergent solution.

In modern education, it is necessary to found the learning process on the principles that enable imagination, divergent thinking and student's intuition, while limiting the use of methods imparting ready knowledge and known activities.

Creative attitude is the student's specific attitude to self-discovering the world, accumulating diverse experiences, drawing conclusions, and consequently leading to transformation of the existing reality. Creativity does not remain solely the domain of artists and scientists - it becomes the most desirable element of student's self-awareness. Creativity is what we do with our skills. Everyone can be creative in the sense of the capacity they possess or can shape (Perkins, 1999, p. 107). According to E. Nęcka, "creativity is usually manifested in some form of observable behavior, consisting in the production of new and valuable products, sometimes the product can be the behavior (e.g in choreography)" (Nęcka, 2000, p. On the other hand, in D. Jankowski's view, "creativity is all psychic processes leading to changes in views, evaluations, established patterns of thinking, feelings, etc., if they construct a new quality of personality, realizing the subject's own program" (Jankowski, 1988, p. 27).

The ability of creative thinking is not related to the level of intelligence. People who think creatively, have a lot of ideas, discover more innovative solutions than just talented people who are not outstanding in their creative abilities. The characteristic feature of creative thinking is the ability to compile issues that differ from one another - the ease of seeing what is unnoticed for others. Most students, having been given a problem to solve, can provide a convergent response. It's typical, they think in a reproductive way. In problem situations we use previous experiences and we choose this method of approach to a problem that has worked out before. Experience shows, however, that effective creative thinking is productive, not reproductive. When a productive person faces a problem, he/she approaches it from different points of view and looks for many different ways to solve it. They create many ideas for solutions, some of which are completely unconventional, often unique. The goal of productive thinking is a desire to discover different points of view, even when one of them seems to lead to a solution. On the contrary, reproductive thinking, usually means thinking too rigid. This may cause the inability to solve a problem that only

superficially resembles previous experiences. Reproductive thinking leads to solutions we used in the past instead of original solutions.

At present, the main idea of the traditional educational system aimed at raising the so-called "enlightened" person is being rejected. It is contrasted with a different educational model - the one which goal is the "innovative" person. The purpose of teaching is to train an individual not focused on receiving and reproducing information received, but on the contrary - a transgressive person who learns not so much from the given pattern, but through his/her own experience. It is difficult to imagine that a curious of life and world person - the first, second and third grade students of primary school - is devoid of passion for research; just have a look at him/her playing. Thus, enabling them to use their own initiative, entrepreneurship, and even risk taking seems to be very beneficial. The world surrounding the student is not, contrary to the assumptions of traditionally understood pedagogy, a world characterized by absolute constancy. Such an outlook on pedagogy is no longer sufficient - it does not correspond to individual aspirations of the student, social expectations, or civilization requirements.

In pedagogical theory and accepted theses (according to the concept of J. Kozielecki): - the primary purpose of education is to shape the learner's attitude as a persistent tendency to look for problems and to overcome them independently;

- in education of an innovative, creative individual, an important place is occupied by the student's personal experience and direct contact with studied reality;

- the structure of knowledge that the student receives changes; Its order is not completely imposed from the outside; on the contrary, the student participates in its processing, organization and reconstruction;

- the student is not a passive receiver of information - on the contrary, he/she becomes the actor: initiates the action, manifests resourcefulness, makes choices, accepts responsibility; - the so-called prospective orientation is gaining importance, it's inseparable from the ability of alternative thinking about the world, about the problem to be solved. It is necessary to formulate tasks and content in such a manner that the adopted assumption - the development of creative attitudes (along with a number of other ultimate goals) - does not remain a mere "dead" slogan, leading to no change in the teacher's approach to pedagogical practice.

The presence of such formulated goal does not a priori guarantee pedagogical success, does not entail a qualitative change. As we learn from the literature of the subject, schools are relatively receptive to new teaching content, but they are far less effective at creating and adopting new forms of work organisation (teaching and learning methods, didactic instruments, etc.). And that means that the almost universal enthusiasm of teachers accompanying the acceptance of such a goal seems to be apparent - it does not follow the understanding of the concept, and consequently is not followed by a change in the style of work. Providing the appropriate climate by the teacher, fostering the development of the child's imagination, encouraging him/her to ask original questions, solve creative problems,

to divergent thinking - enables him/her to develop creativity and personal qualities such as openness, independence and self-esteem.

Principles resulting from the postulate of creative activity of students and teachers and the postulate of "bringing to light" unconventional mental processes (according to the concept of W. Dobrołowicz, 1995) are in particular: - principle of subjectivity - principle of optimism principle of appreciating imagination - principle of divergent approach to problems principle of appreciating ingenuity and originality - principle of appreciating intuition and guess - the principle of incubation. Descriptions of the specific experience of researchers dealing with the issue of creativity when confronted with school practice, reveal the main causes for spoiling a creative climate by teachers. They mention negative reinforcement often used in school practice: incorrect, wrong, do not fantasize and other. Most teachers link creativity with fantasies which do not have much in common with logical thinking. Hence, there is a reluctance to include in school education, especially in areas such as mathematical education or natural and technical competences, competences related to entrepreneurship, activities perceived as unrealistic, impossible to happen in reality, in short "having the head in the clouds." In fact, creativity is not "having the head in the clouds", but an important personality trait that allows to cross mental barriers, approach and solve the problem unconventionally, to reject stereotypes.

Creative attitude is the student's unique attitude to self-discovery of the world, the accumulation of diverse experiences, drawing conclusions, and consequently - transforming of the surrounding reality. It is actually a way of life that assumes that the best source of knowledge is the search for it, and also genetically transmitted and shaped through personal experience, individual cognitive and characterological characteristic, showing a tendency, attitude or willingness to transform the material world and also one's own personality. Such an attitude is expressed in the need of cognition, experience and conscious (as to the purpose, not process) processing of the reality and the self. It is accompanied by features desirable for being creative, such as: activity, vitality, flexibility, originality, consistency, courage, independence, spontaneity, expressiveness, openness, perseverance, responsibility, tolerance, high self-esteem and intellectual competence: sensitivity perceptiveness - ability to memorize, ability to produce and process information. This happens thanks to, but also as a result of, incorporating (here in the learning process) imagination, intuition, and divergent thinking into action. Summing up, using in education creative learners' tendencies and taking into account specific attitudes and readiness to actively participate in solving problems is extremely important for students' development. Thus, creativity does not remain solely the domain of artists and scientists, on the contrary, it becomes the most desirable element of the learner's self-consciousness. The creative process itself, but also the product of creative thought, should not be perceived by teachers as dangerous, from the point of view of student's intellectual development, but on the contrary, as the most desirable elements of self-consciousness of the individual. As such, they should be widely used in education, and creative skills and abilities should be exercised.

Methodology of developing creative skills

Adopting the assumption that students' development is a core value in education, assigns for the teacher the main task of supporting their development. By supporting the student his/her attitudes are shaped not only towards creativity but towards the world and himself/herself, and in providing students with the stimuli that are conducive to their maturation, we see the role of modern education. We need education which, parallelly with the goal of inducing universal and shared development (universal development), promotes actions that take into account individual development. The student's individuality should be seen as an opportunity for the development of their creativity, ensuring the unique personality, the originality of behavior and attitudes. Recognizing that individual activity is one of the most important development factors, which is inherently creative (it is hard to see activity in the traditional pattern of education - the hands raised by the students in response to the teacher's questions about learned rule or "served" knowledge is not a proof of activity) the teacher should refrain from teaching based on instruction, giving students closed tasks and demanding them to perform at a certain pace and time. Otherwise, he would expect only universal changes in the development of children who would resemble each other.

Such an approach to education carries a new understanding of the role of the teacher, which is different from that adopted by traditional pedagogy. He/she resigns from the role of instructor, assuming another role - a kind of " guardian of creative student's development" in the process of shaping his/her conscious, creative attitude. This is possible when taking into account the principle of respecting subjectivity in the educational process, when the student becomes the doer, not just the receiver, initiates various autonomous actions, has the ability to make choices, knows and determines the likelihood and value of the consequences of the chosen action, assumes responsibility for risky solutions and deeds, also for his/her own failures. Being a "guardian of creative development" is not an easy task, especially for a teacher accustomed to schemes, a teacher in the traditional sense, who knows the right solutions, the right answers. Such a teacher expects solutions and answers reflecting the content he/she shared with students, giving them knowledge, patterns and methods. In the meantime, this teacher's attitude limitats student autonomy, resulting in the belief that knowledge is a set of answers that must be remembered rather than searched, discovered and created. It is even more difficult for the teacher to abandon the model based on subordinate relationships in the interaction: adult - child.

Thus, only the relation of equivalence or autonomy makes it possible to create a place and conditions for independent, creative creation of the world and themselves by the students, to deep experience and cognition - through the student's personal participation in the creative process. The concepts of creativity and creative attitudes are not always understood by teachers properly (creative activity is sometimes associated with fantasy), so they are rarely (or never) included in such areas of education as mathematics, natural sciences and technical education. It is assumed that during such "serious" lessons like mathematics, *Co-funded by the Erasmus+ Programme of the European Union*

operational objectives of the type "student know", "student can" should rule, and creative activity can be used in artistic education - within the framework of musical and art education or during extra-curricular classes e.g theatre club. However, the process of creating by students an image of the world and of themselves is captured today in terms of more or less conscious learning, but in this way we speak of constructive rather than reproductive learning. Therefore, there is no rational justification for avoiding creativity in areas considered to be more serious. On the contrary, it is precisely through the creative pedagogical model employed in the teaching of mathematics, natural sciences and technology that we provide students with appropriate emotional developmental conditions. In such a situation, the student discovers that he or she is not subject to criticism because there are many possible solutions to the specific task and any solution may be taken into account, and the search for answers gives a much greater satisfaction than the reproduction of knowledge given by the teacher.

A creative teacher is a driving force for the intellectual and personal development of a student. To cope with these difficult tasks, the teacher must be well acquainted with his/her students, their abilities and their learning styles, should try to understand their thinking style, not to question it - "The teacher asked the students ... what color are apples? Most children replied that apples are red, some that they are green. But one of the children raised his hand, saying that apples are white. The teacher patiently explained that apples may be red or green, sometimes yellow, but certainly not white. But the child insisted on his reply and said: And what about inside ...?

This example demonstrates that it is worthwhile to delve into the nature of the problem to verify your own point of view, to approach the problem in a creative way. Teachers have different working styles and students have different learning styles.

Social aspect of learning

Creativity is a **relational and contextual** phenomenon - both the chance to shape it and its subsequent manifestation in creative and innovative actions happen through interactions with other people and through the context of action. In order for creative behaviors to be more visible, to produce innovations, and to create a lasting ability for creativity, the conditions for encouraging such thinking and acting - a "climate for creativity" - are needed, without which there is no chance that innovative actions will appear and last. The atmosphere in the family and school environment are of great significance for creativity.

In the family environment, factors facilitating creativity are a balance between freedom and security: on one hand, the awareness that parents are nearby, the warm atmosphere and the stimulation of child's curiosity, on the other hand, showing respect and confidence for child's abilities and creating the widest possible space for their development.

The basic factors that favour the climate of creativity in the school environment are in particular: positive relationships in the peer group, leadership styles in the group that are

oriented on creativity and innovation - a particularly important variable in the group, also the school class. Openness of the environment and the teacher to nonconformist behaviors and a wide range of possible ways of expressing creativity.

Tolerance for risk and the right to make mistakes, but also continuing intellectual stimulation and the emergence of new challenges.

Referring to numerous publications and research studies in the field of pedagogy of creativity, we can formulate ideas the realization of which will increase the potential creative abilities of students:

1. **Encouraging creativity.** An essential condition for the emergence of creativity is the conviction of one's own creative potential, the lack of fear to act, the courage to exploit various possible solutions, risk taking, perseverance and flexibility in creation.

2. Help in recognizing creative abilities. Students differ in their potential - a field in which they can develop creative activities. The teacher should help them identify this field and facilitate their development.

3. **Supporting students' creativity.** Creativity has its origin in many ordinary abilities and skills, not in an isolated talent. Therefore, it is helpful to stimulate and promote simple skills, sensitivity and efficiency, and arousing curiosity. It is helpful to learn by doing and the teacher's tasks are as following:

a. allow student's experimental activity, but always explain from the point of view of the purpose of the activity, and in the course of the process allow making mistakes without the threat of sanctions;

b. encourage a free play with ideas, pointing to a variety of solutions or new uses for a given tool, and at the same time – a critical evaluation of the value of these ideas;

c. create a space free from immediate criticism - both from the teacher and from other students - fostering asking questions, curiosity and imagination;

d. teach to understand the temporal dimension of problem solving - the importance of individual phases of the creative process and the knowledge how to solve problems that require action in the long run;

e. show the variety of contexts in which creative ideas appear, the role of intuition, the creative nature of unconscious thought processes and free thinking.

f. create conditions for acquiring the ability to cooperate in a group, as a skill to be with others so that the common goals can be achieved as effectively as possible.

A positive idea to increase students potential for creative thinking of is the ability to inspire such educational situations which organization requires work and collaboration in a team or group.

We all live in the world of knowledge explosion, rapid change and uncertainty today. One of the basic ways in which people get a sense of security is developing a sense of community and belonging to the group. Jerome Bruner's *Toward a Theory of Instruction* (1966) is about the social aspect of learning. The author describes the "deep human need to interact with others and pursue common goals," calling it the "principle of reciprocity." Bruner claims that

interdependence is a source of motivation that every teacher should use to stimulate learning.

Creativity is the ability of a human being to produce new and original things, both in the objective and subjective sense. *Creativity is essential today in various spheres of education, both in the management of education, in its organization, and in the relationships of EDUCATIONAL ENTITIES, in the teaching and learning processes* - reads the PISA Report.²⁴. In the literature of the subject, this problem has appeared a long time ago. Feldhusen and Treffinger²⁵ in the 1980s formulated guidelines for creating an environment that fosters creative thinking in the classroom. They are as follows:

- 1. supporting students' unusual ideas,
- 2. using failure as a positive value,
- 3. developing students' interests and ideas,
- 4. devoting more time to thinking and developing creative ideas,
- 5. creating a climate of mutual respect and acceptance,
- 6. awareness of many different aspects of creativity,
- 7. varied school activities,
- 8. listening to students and harmonise with them,
- 9. train student for independent decision-making and making choices,
- 10. creating didactic situations, enabling students to get involved in the activity.

The need to emphasize creativity in the whole process of education is also mentioned in international educational reports, including: E. Faure *Learning To Be*, The Club of Rome Report *Learn - Without Borders*, The BIE Expert Report *Close and far goals of upbringing*, UNESCO Report of the International Commission for Education for the 21st Century *Learning: the Treasure within*. They emphasize the importance of educating a creative person, and *homo creator* is becoming today a model in education in many highly developed countries in the world.

American psychologists of creativity Sternberg and Williams in 1996.²⁶ formulated 25 strategies for teaching creative thinking that cover a range of activities for the development of creative student. It is worth quoting, as they can form the basis of each teacher's didactic work. These include, among others: modeling creativity and building one's own effectiveness.

The basic techniques for developing creativity are:

- questioning assumptions,
- defining and redefining problems,
- encouraging new ideas,
- mutual "infecting" with ideas,
- giving time for creative thinking,

²⁶Robert J. Sternberg, Wendy Williams Melissa, *How to develop student's creativity*, 1996r

²⁴ PISA Report

²⁵ Government report *Polska 2025. Długookresowa Strategia Rozwoju,* www.premier.gov.pl

- teaching and assessing creativity,
- rewarding creative ideas and creative actions,
- encouraging reasonable risk,
- tolerating ambiguity,
- allowing errors,
- recognising and overcoming obstacles.

An important group of skills sre those that deal with: teaching responsibility for oneself, promoting self-control and delaying gratification, encouraging creative cooperation, and imagining other points of view. Creativity is also emphasised in terms of "environmental exploration", i.e. environmental recognition, excitement, and looking for stimulation in the environment. The above mentioned strategies for creative thinking and teaching should be the basis for the work of teachers, but also for the people involved in teachers training (consultants, methodologists). It could even be argued that this applies to the whole educational community, and therefore to the representatives of the pedagogical supervision authorities and the governing bodies, since on what the emphasis is placed during control depend the actions of the institutions under control. It is also important that teaching creative thinking skills in relation to educational reality is a difficult task, that the effects of such thinking are postponed, and the environmental pressure associated with the results of examinations is very high. Despite the difficulty in changing the mentality of the educational environment, it seems necessary to be aware of the negative effects of misuse of the results of external examinations. Works on reversing this process also involve popularising the idea of formative assessment, which role is particularly important in didactics and internal evaluation.

Creativity, according to Ken Robinson, "is not a distinct ability that some have, but others do not. It is a function of intelligence - it takes many forms, draws on many different abilities and we all have different creative possibilities. Creativity is possible in any form of activity in which human intelligence is actively involved. "Ken Robinson is convinced that "creative synergies have repeatedly led to effective problem solving, to the revolutionary ways of looking, thinking and approaching the conflicts of our everyday human lives, both in art and in life" (Robinson, 2010). Students' creativity, but also the creativity of teachers, is only possible in favorable social conditions. It is not enough for teachers to have theoretical knowledge in the field, they must also see a sense in developing creativity. Only then they will promote behavior that is a manifestation of creative activity.

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