



Project "Learn it Today to Manage it Tomorrow" (01.09.2018-28.02.2021)

### Study Materials and Lesson Plans







#### Dear reader!

During our project implementation 18 different lesson plans were created with a link to the digital study materials used during or made for the lesson/lessons. We tested it with students locally as well as during our international meetings, got a feedback from students as well as from colleagues and tried to make changes into the description for the benefit for all those teachers interested in our work in the near future.

Please take a look at lesson plans and study materials and use them with or without any changes. Lesson plans are compiled into groups according to the competency. So, you will find five sections: COMPUTATIONAL (OR PROGRAM-BASED THINKING), DESIGN MINDSET (OR DESIGN THINKING), CROSS-CULTURAL OR INTERCULTURAL COMPETENCY, TRANSDISCIPLINARITY, and VIRTUAL COLLABORATION (VIRTUAL COOPERATION).

You may be surprised finding that the same lesson plan may be found under different competencies. However, this is totally normal since during the lesson a set of competencies were developed.

But now – it's time to go to the class!



#### **GLOSSARY**

COMPUTATIONAL (OR PROGRAM-BASED THINKING) – ability to transfer a big amount of data into abstract concepts, building an algorithm.

DESIGN MINDSET (OR DESIGN THINKING) – ability to see/find the problem, to solve it and to present to others.

CROSS-CULTURAL OR INTERCULTURAL COMPETENCY – ability to cope with the situation in unknown cultural environment.

TRANSDISCIPLINARITY – ability to transfer and use knowledge and skills acquired in different subjects.

VIRTUAL COLLABORATION (VIRTUAL COOPERATION) – ability to work effectively in teams in virtual environment supporting and respecting each other.

# COMPUTATIONAL (OR PROGRAM-BASED THINKING)

#### **Subject: Mathematics**

#### Topic: The solution of exponential equations by equalizing indicators Type of lesson: Development lesson

#### General competencies developed during the lesson:

Computational thinking

Digital study materials developed for the lesson:

https://quizizz.com/join/quiz/5cbc1bf91341ff001a9f3fe8/start

https://padlet.com/ekolegova7/q86riwom60nf

https://edu.glogster.com/edit/glog/?id=63653852

#### **Objectives:**

- 1. Student is able to apply basic formulas to calculate numerical expressions containing a degree;
- 2. Student is independently able to propose a hypothesis for creating an algorithm for solving exponential equations;
- 3. Student understands the need to test the hypothesis;
- 4. Student is able to formulate an algorithm for solving exponential equations by adjusting indicators;
- 5. Student is able to present the final product through the interactive board Padlet.

#### A. Introduction:

Activating pre-knowledge.

The great Russian scientist M.V. Lomonosov said: "Let one delete the degree in math, and one will see that without it no one will go far."

Link: <a href="https://edu.glogster.com/edit/glog/?id=63653852">https://edu.glogster.com/edit/glog/?id=63653852</a>

I suggest you to revise all the material which you know by doing this test about "Degree of number"

Link: https://edu.glogster.com/edit/glog/?id=63653852

(section I. Repeat the topic "Properties of degrees")

#### B. Independent research and practice:

Complete the tasks.

Link: https://edu.glogster.com/edit/glog/?id=63653852

(section II. Complete the task)

#### > Exponential equations. DEFINITION:

An equation in which the variable appear in the exponent, is called an exponential equation. The exponential equation in the form of  $y = a^x$ , where "a" is positive real number and "x" is the real number is known as the exponential equation. Therefore:

 Using the properties and formulas of degrees, figure out how to solve exponential equations;

a) 
$$3^x = 3^2$$

- b)  $5^{3x+1} = 5^2$
- c)  $2^{8x-3} = 4$ 
  - Create an algorithm for solving such equations;
- > Algorithm. DEFINITION:

Algorithm – instruction, procedure for solving a problem.

Link: <a href="https://edu.glogster.com/edit/glog/?id=63653852">https://edu.glogster.com/edit/glog/?id=63653852</a>

(section III. Add your algorithm and solved equations to the board Padlet . )

Add your algorithm and solved equations to the board Padlet .

#### C. Summarizing

Today, you did not just recall the properties of degrees; you managed to make a real discovery in class. You managed to figure out how to solve exponential equations by equalizing indicators.

#### D. For the teacher use:

Possible answers for the algorithm for solving exponential equations using equalization indicators

- 1. Present both parts of the exponential equation as a degree with the same base;
- 2. Take advantage of the property: if the bases of the degrees are equal, then their indicators are also equal;
- 3. Equate the exponents, and reject the grounds;
- 4. Solve the resulting equation;
- 5. Record the answer.

#### Example:

$$5^{x} = 125$$

$$5^x = 5^3$$

$$x = 3$$

#### **Answer: 3**

#### **Subject: Mathematics**

#### **Topic: Stereometry. Volumes of Solids of Revolution**

#### General competencies developed during the lesson:

Program-based thinking

Digital study materials developed for the lesson:

https://edu.glogster.com/glog/the-main-miracle-of-our-planet/37566uw5owq

#### **Objectives:**

- 1. Student understands the definition of "solids of revolution";
- 2. Student is able to apply basic formulas to calculate the volume and surface area of solids of revolution;
- 3. Student is able to analyze information and highlight the most significant information, generalize, systematize and present it in the form of a problem.
- 4. Student is able to present the problem in the language of Mathematics (create a Math problem).
- 5. Student is able to present the result of the group work through interactive board (Padlet).

#### A. Introduction:

➤ Activating pre-knowledge. The program *Kahoot* (*section: "Kahoot"*) is used for the survey.

#### B. Guided practice:

Application of knowledge in solving the problem (*section: "Solve the problem"*). The teacher draws the students' attention to *sections "Solids of Revolution"* and "*Directory*" which can be used as an additional material for solving the problem.

Given:Solution:Cylinder1. 
$$A = 2\pi RH + \pi R^2 = \pi dH + \pi R^2$$
;  $d = 2R$  $d = 14,6 \text{ cm}$  $H = \frac{A - \pi \cdot R^2}{\pi d}$ ;  $H = \frac{443 - \pi \cdot 7.3^2}{14.6 \pi} \approx 6 \text{ (cm)}$  - jar height $A = 443 \text{ cm}^2$ 2.  $V = \pi R^2H$ ;  $V = \pi \cdot 7,3^2 \cdot 6 = 1004 \text{ (cm}^{3)} \approx 1,004 \text{ (l)}$  - water $H - ? V - ?$ loss per day $365 \cdot 1,004 = 366,46 \text{ (l)}$  - water loss per year.

Analysis and synthesis of the information received. The discussion should lead to the understanding that, as demonstrated, in case of the water leak in an apartment of 1 liter per day, the loss per year will be 366.5 liters. If to take into consideration the possibility of this problem in a city, country and so on, it becomes global. The illustration of the problem is in a 3D model of the globe (section: "Blue planet"), ¾ of which is covered by water and it may seem that there is a lot of water. However, the supply of fresh drinking water on Earth is

limited and amounts to about 2-3% of the total amount of water, including glaciers.

#### C. Guided discussion:

According to this what conclusion can we draw? Why do we need to know this?

#### D. Independent Practice (can be assigned as home work):

➤ On the interactive poster there is a section "100 facts about water". Using this material, as well as other sources, perform the following group work (*section "Groupwork"*). An example of the assignment can also be found on the Padlet ( *link "Padlet"* ).

#### **Subject: Music**

#### **Topic: Music around us**

#### General competencies developed during the lesson:

- Intercultural competence (listening and analyzing works of Finnish composer, French song performance in different ways and different languages).
- Computational competence (performance of tasks by analogy).

#### Digital study materials developed for the lesson:

https://prezi.com/view/yuQUHinwleLXaUPMRl51/

#### **Objectives:**

- 1. The student is able to understand the musical language of communication.
- 2. The student has completed two different musical tasks:
- Task1. Orchestra without musical instruments
- Task 2. Eight sounds of one musical instrument
- 3. The student is able to analyze the heard musical work of Jean Sibelius Water Droplets
- 4. The student is able to tap out the rhythm pattern using different improvised musical instruments following the example.
- 5. The student understands the gestures of the teacher-conductor.
- 6. The student acts as a conductor himself/herself and, following the example of the teacher, conducts the group of eight students playing on bells.

#### A. Introduction:

➤ The teacher introduces the idea that the musical language of communication helps all people on Earth to understand each other and suggest the group of students perform some music by completing 2 tasks.

The program prezi.com is used for delivering visual content. Also, the following resources are used during the tasks: set of eight bells with a certain pitch and improvised items: pens, pencils, etc.

#### B. Guided practice:

#### TASK 1. Orchestra without musical instruments.

#### Step 1

- ➤ Tapping out the simple rhythm pattern TA TA ti ti TA following the teacher's example.
- ➤ Tapping out the same rhythm pattern using different methods and dividing into groups with different improvised musical instruments.

#### Step 2

Jean Sibelius - Water Droplets

- Listening and analysis of the Finnish composer Jean Sibelius' musical composition *Water Droplets*.
- ➤ Performing of the learned rhythm pattern following the conductor's gestures in order to create an accompaniment for the composition *Water Droplets*.

The teacher makes the conclusion that everyone became part of the orchestra even though no musical instruments were used.

#### TASK 2. Eight sounds of one musical instrument.

The teacher explains that our instrument is the eight bells on which eight students will play.

#### Step 1. Let's tune our musical instrument

Each of the eight bells has its own pitch, but they stand in a different order.

- ➤ Determine which one is the lowest.
- ➤ Put all eight bells in the correct order from the lowest to the highest.

#### Step 2. Let's learn how to play our instrument

- Each of the eight students, take your bell correctly.
- Try ringing softly (PIANO) and loudly (FORTE).
- ➤ Carefully follow the gestures of the conductor, which will show when and how many times your bell should sound in a common melody.

## Step 3. Let's perform a musical piece - the French song Frère Jacques (also known in English as Brother John).

- Listen to two examples of the same piece's performance.
- ➤ Keep in mind the melody movement and apply it when performing by yourself.

#### C. Guided discussion

The discussion should lead to the understanding that

In the first task, "Orchestra without musical instruments," we

- > Tapped the rhythm in different ways, turning our body and objects at hand into different percussion instruments,
- ➤ Performed a beautiful rhythmic accompaniment for the musical composition of Jan Sibelius *Water Droplets*.

In the second task, "Eight Sounds of a Musical Instrument," we

- Used our ear for music and placed the bells in the correct order,
- Learned how to play them and listen to each other,
- Learned how to sing the song *Brother Jacob* in English and French.
- ➤ All together performed the instrumental version of the song *Brother Jacob* on the bells turning eight students into one musical instrument.

We did a great job! Music unites us!!!

#### Conclusion

Today's lesson proved that the musical language of communication helped us to understand each other and as a result, we created the interesting product of our joint musical creativity!

# Subject: Physics and 3D-modelling Topic: Why the ships are floating

#### General competencies developed during the lesson:

Design thinking, transdisciplinary competence

Digital study materials developed for the lesson:

https://docs.google.com/presentation/d/1lyCYf\_fRYBbO02E3zEK1z1TQO8F8BDnV4rq4a2uLXW M/edit?usp=sharing

#### **Objectives:**

Students will:

- 1) get acquainted with the law of Archimedes, with the law of swimming bodies in a liquid,
- 2) develop the ability to apply the law of Archimedes, the law of swimming bodies in solving problems
- 3) get acquainted with the technique of modeling a 3D model of a boat and anchor in 123D-design
- 4) develop the ability to model 3D objects for experiment
- 5) develop the ability to behave safely on the water

#### 1. Lead-in

- ▶ Demonstration of the experiment (boat and anchor / ball of the same mass).
- ➤ Goal setting:
  - 1) find the answer, why do objects of the same mass behave differently in water one floats, the other drowns?
  - 2) simulate 3D objects, conduct an experiment with them and draw conclusions in groups.
  - 3) present your work

#### 2. Definition

> Search for an answer through reading material on the Internet.

#### 3. 3D-modelling

Modeling floating objects, conducting an experiment with them through work in a group

#### 4. Conclusion

According to this what conclusion can we draw? Why do we need to know this?

#### **Subject: Technology**

#### Topic: Using tools in the technology class.

#### General competencies developed during the lesson:

Computacional thinking, Design mindset, transdisciplinarity (TEC, ICT)

Digital study materials developed for the lesson:

https://b.socrative.com/login/student/

#### **Objectives:**

- 1. Student encourages his cognitive and connective abilities.
- 2. Evaluation the knowledge of the contents of the subject.
- 3. Use digital devices.

#### A. Introduction:

- Socrative can be accessed on the top three operating systems: Windows, Apple, and Chrome. No downloads are required. A web browser that utilizes HTML-5 is needed to access all functions. Socrative is also usable on various hardware: desktops, smartphones, tablets, and mobile phones.
- Technical help is offered via a web page that offers tips and answers frequently asked questions presented by users.

#### B. Guided practice:

Socrative is a formative assessment tool which allow teacher to check understanding of all students during a lesson. It's designed for use in class, in real time.

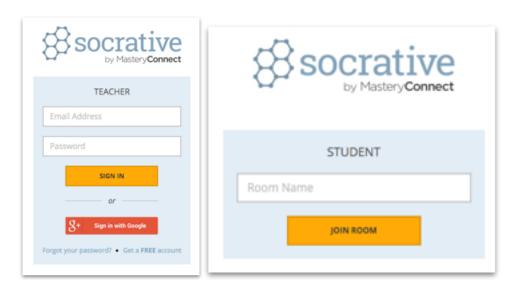
- 1. The quiz allows teacher to create multiple-choice, true/false or short-answer question quizzes that they can save and use again.
- 2. In class, the teacher launches the quiz and students complete it in real time on their devices.
- 3. As students answer the questions, the teacher can see the results and then download them.
- 4. The teacher can then make more informed decisions about what happens next in the lesson.

The advantages of using Socrative are:

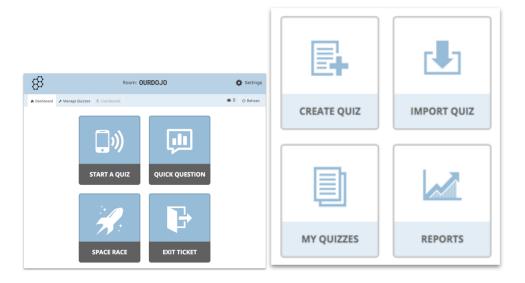
- Visualize student understanding
- Ask multiple choice and true/false questions
- Ask open-ended questions and vote on the results
- Create your own quizzes (instantly graded for you)
- Share quizzes with other teachers
- Give end of class exit tickets
- Play games with our space race
- View students results in real time
- Reporting Download, Email or send to Google Drive.

Socrative is a cloud-based student response system developed in 2010 by Boston-based graduate school students. It allows teachers to **create simple quizzes** that students can take quickly on laptops – or, more often, via classroom tablet computers or their own smartphones.

- 1. Go to socrative.com and click *TEACHER LOGIN*. You can sign up for free account or use your existing Google account.
- 2. Students need NOT register, and will only enter their names later.

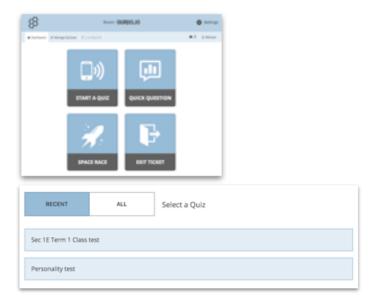


- 3. This is the room name to give students
- 4. Upon sigining in, you will enter your *DASHBOARD*. You may not have created a quiz yet, so click on *MANAGE QUIZZES*.
- A new set of options will appear.Click on CREATE QUIZ to start the process.



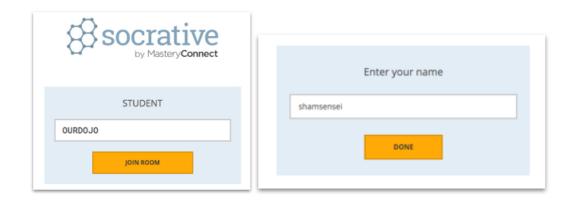
6. You have the options of creating MULTIPLE CHOICE, TRUE / FALSE or SHORT ANSWER quiestions.

- 7. You can create as many questions as you'd like, and the procedure is quite straightforward. You can also optionally include answers if you want the system to generate the marks automatically.
- 8. Once satisfied, go ahead and click SAVE & EXIT for the next step.
- 9. Take note if want to share. You can insert the number SOC-39086897. "Tools vocabulary" is the example used in Estonia.

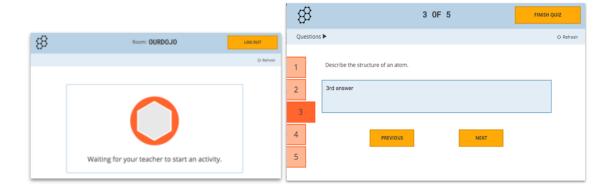


- 10. You will be sent to your dashboard again. Now click on START A QUIZ to use the quiz that you've created earlier. You can recycle the ones you have used before as well as they will be stored in the system for future use. Click on the quiz you want to use.
- 11. Best for home based learning
- 12. Recommended to turn off to capture student names in report
- 13. Select the type of quiz you like, and click *START* to begin the quiz.

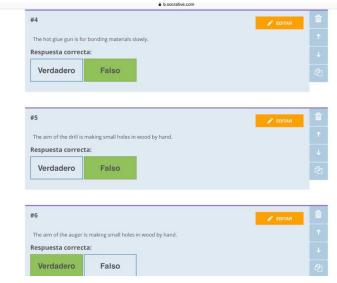
Step by Step for students.



- 1. This is what the student will see after clicking STUDENT LOGIN in the main page.
- 2. Notice that they just need to know the Room Name and click *JOIN ROOM* to begin, thus reducing the need for tedious registration process.
- 3. Once they entered their names, clicking *DONE* will lead them to a page where they wait for the teacher to start the quiz (if he/she has not already done so).

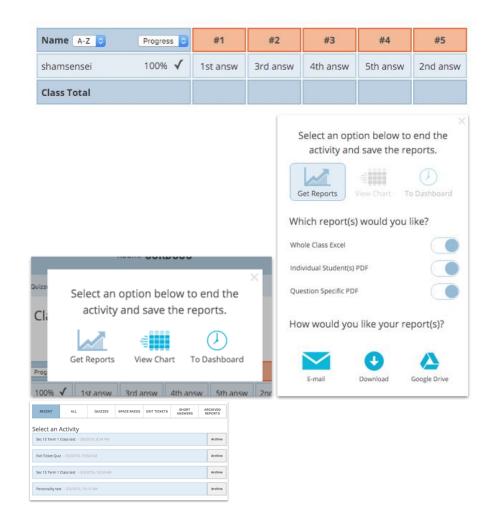


- 4. Use PREVIOUS and NEXT instead of FINISH QUIZ
- 5. Students can choose which to do first
- 6. When the teacher starts the quiz, the student will automatically see the question and an answer box. Depending on the type of quiz set earlier, the teacher has the flexibility of



choosing the pace of the quiz. Remember to tell them to click *FINISH QUIZ* only after they are satisfied with their answers. A waiting screen will appear once they are done.

- 7. Toggle off to show on screen
- 8. Tick signifies student has finished quiz
- 9. On the teacher's screen, he/she will be updated on the progress of all the students in real-time. This is a good chance for the teachers to either discreetly monitor or choose to show the class how they are doing so far.
- 10. Once the time is up or when all have completed the task, click *FINISH*.
- 11. You are now ready to generate your report. For now, Click on *TO DASHBOARD* to return to the homescreen.
- 12. No. of students in room



- 13. Turn on all to generate reports to give students
- 14. To save soft copies
- 15. Take note of date to get correct reports
- 16. Click on *MANAGE QUIZZES* as before and click on *REPORTS*. You are given many options of how you want to generate the reports.
- 17. **DOWNLOAD** will save a zipped file into your hard drive, and a few sample of how they appear is in the next page.



#### C. Guided discussion:

According to this what did you find difficult about today's lesson??

#### D. Independent Practice (can be assigned as home work):

You could also use Socrative to assess reading or listening comprehension. You can also add information about why an answer is correct in the "explanation box" which could be very useful for exam classes.

#### **Subject: Technology**

Topic: Review mechanism.

#### General competencies developed during the lesson:

Computacional thinking, Design mindset, transdiciplinarity (TEC, ICT).

Digital study materials developed for the lesson:

www.playposit.com

#### **Objectives:**

- 1. Students benefit from an engaging and differentiated, computer-based experience.
- 2. Use digital devices and testing.
- 3.Students achieve a whole-school alignment of blended learning.

#### A. Introduction:

Playposit is a interactive web-based video platform that allows educators to provide formative assessment both inside and outside the classroom. Teachers are able to embed quiz-type questions into videos on Youtube, Vimeo, Khan Academy and other popular video platforms. Data can then be analyzed on the individual or group level, provided powerful insight into educational trends in the classroom.

#### **B.** Guided practice:

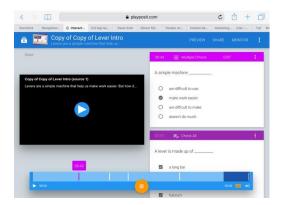
A bulb is an interactive video created in PlayPosit.

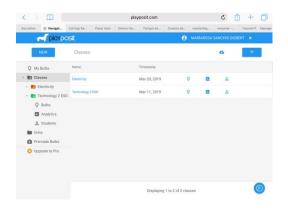
First of all, transform any video into an active experience for students by embedding questions, images, audio, and other media elements.

Secondly, add any of the premium question types to make your video engaging for students.

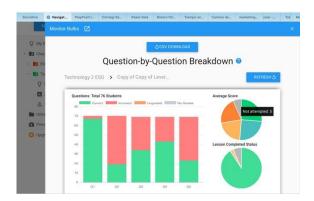
At the end you can see the student participation and responses.

The Analytics tab provides you with a broad overview on student performance including score, total time spent, and their progress across all bulbs assigned to the course.









#### Step by step

Register as an instructor in www.playposit.com

Create a bulb and adding a video.

- 1. In My Bulbs, click New Bulb to open the designer
- 2. Select You Tube, search for a video, select one, and click Done.
- 3. Click the button labeled "Add and Interaction" to insert a question at your current playback timestamp. When you're done adding your interaction's text and answer options, click Done to save and close the interaction.

Create a class and adding students.

- 1. Click on Classes.
- 2. Click Add new class, title it, and click save.
- 3. Students enter Search code. Students individually log in to their Playposit accounts, click add class, and enter your instructor search code.

#### Assigning bulbs.

- 1. In My Bulbs, click the triple dots icon at the right for the bulb you want to use and click Assign.
- 2. Select a due data for the class you want to assign this bulb to and click ok.
- 3. You should get a green toast notification indicating that your bulb has been successfully assigned.

#### Monitoring responses.

- 1. Click Monitor for the specific class.
- 2. You should see all of that class's responses for this bulb.

#### Premade Bulbs.

- 1. Filter all premade. Classify by grade and topic.
- 2. Copy bulb.
- 3. Edit bulb.

I choose "pulleys" from premade bulb for technology class. I test the bulb in Slovenian students.

#### C. Guided discussion:

What do you think about this application? Was it useful for you? Did you enjoy using it?

#### D. Independent Practice (can be assigned as home work):

You could also use Playposit anywhere. So this enables its students to also use at home, on their own without needing help. The application is not just for use in schools.

# Subject: Language, communication & Technology Topic: Making a Pecha Kucha in English

#### General competencies developed during the lesson:

Expressing in English, Computational thinking, Design mindset, transdisciplinarity (TEC, ICT) **Digital study materials useful for the lesson:** 

https://www.youtube.com/watch?v=32WEzM3LFhw

#### **Objectives:**

- 1. Student encourages his cognitive and connective abilities.
- 2. Evaluation the knowledge of the contents of the subject.
- 3. Use digital devices.

#### > Introduction:

➤ Pecha Kucha can be designed by using PowerPoint or Google Presentations.

#### **▶** Main Goal

- Our main goal is to make a Pecha Kucha about the similarities and differences of your own culture and that of other countries.
- > Students from different countries are able to communicate with each other in English.

#### > Sub Goals

#### Fase 1

#### Students

- o can express themselves in English;
- o are able to make a Pecha Kucha;
- can present their own world to other international students by means of a Pecha Kucha;
- o get a clear picture of the image of their own country;
- o are aware what image other European students have of your own country.

#### Fase 2

#### Students

o are able to present actual issues from their own country;

- know about current issues that are important in other European countries;
   (environmental problems, state establishment, refugee policy, European cooperation, Trump, fake news, etc);
- o are able to describe a historical event that has had a major impact on their country. (fall of the Berlin Wall, World War II, local heroes, etc);
- o know how a historical event can have different consequences for countries.

#### > Our project can be integrated into

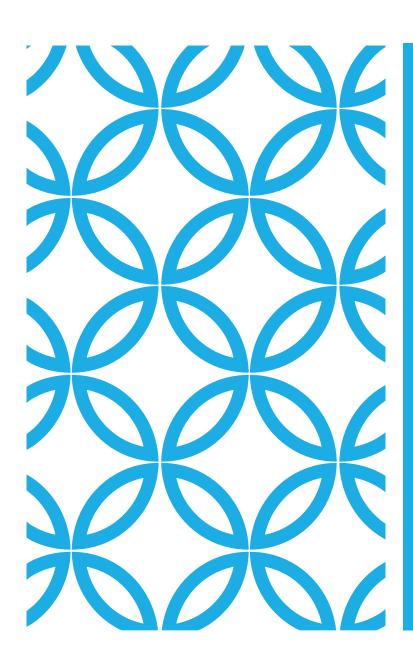
- o History
- o English
- Social studies
- o Economics
- o Geography

#### ➤ Guided lessonplan

And now, how does it work? We refer to several documents.

- 1. Ppt instruction teachers Pecha Kucha eTwinning (pdf)
- 2. Example Pecha Kucha eTwinning (pdf)
- 3. Ppt pupils Pecha Kucha eTwinning (pdf)

Have fun and good luck!



# PECHA KUCHA

Hanneke Bibian

# INTRODUCTION

Our main goal is to engage students to have a conversation about the similarities and differences of their own culture and those of other countries.

# PECHA KUCHA



# GOALS FASE 1

#### **Students**

can expres themselves in English.

are able to make a Pecha Kucha.

can present their own world to other international students by means of a Pecha Kucha.

get a clear picture of the image of their own country.

are aware what image other European students have of their own country.

# GOALS FASE 2

#### **Students**

- 1. are able to present actual issues from their own country.
- 2. know about current issues that are important in other European countries. (environmental problems, state establishment, refugee policy, European cooperation, Trump, fake news, etc)
- 3. are able to describe a historical event that has had a major impact on their country. (fall of the Berlin Wall, World War II, local heroes, etc)
- 4. know how a historical event can have different consequences for countries.

• • • •

# INTRODUCTION

Our project can be integrated into History English Social studies **Economics** Geography

# **OUR EXAMPLE**



# YOUR TURN!



# SUGGESTIONS FOR THE PECHA KUCHA

Who am I? What does my neighbourhood look like? What does my country look like? What does my school like? How does my language sound? What is the favourite dish of my country? Which remarkemable customs has my country. How do foreigners look at my country? What is the most important export product? What is your country proud of?

# SUGGESTIONS FOR FASE 2



How do Europeans from different countries look at certain historical, European events.



What current problems does our country have? What are the hot items of domestic news?



• • • • •

# QUESTIONS



# MAKE YOUR OWN PECHA KUCHA

Make pairs.

Make your own Pecha Kucha.

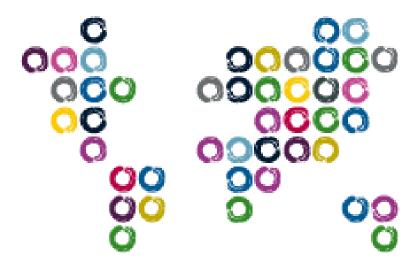
- Look at our suggestions.
- Your starting point is your own world. ...





And.... here we are!







draait om jou!



# Mondial College Nijmegen









On the way to school







Nijmegen











The Netherlands according to the tourist information

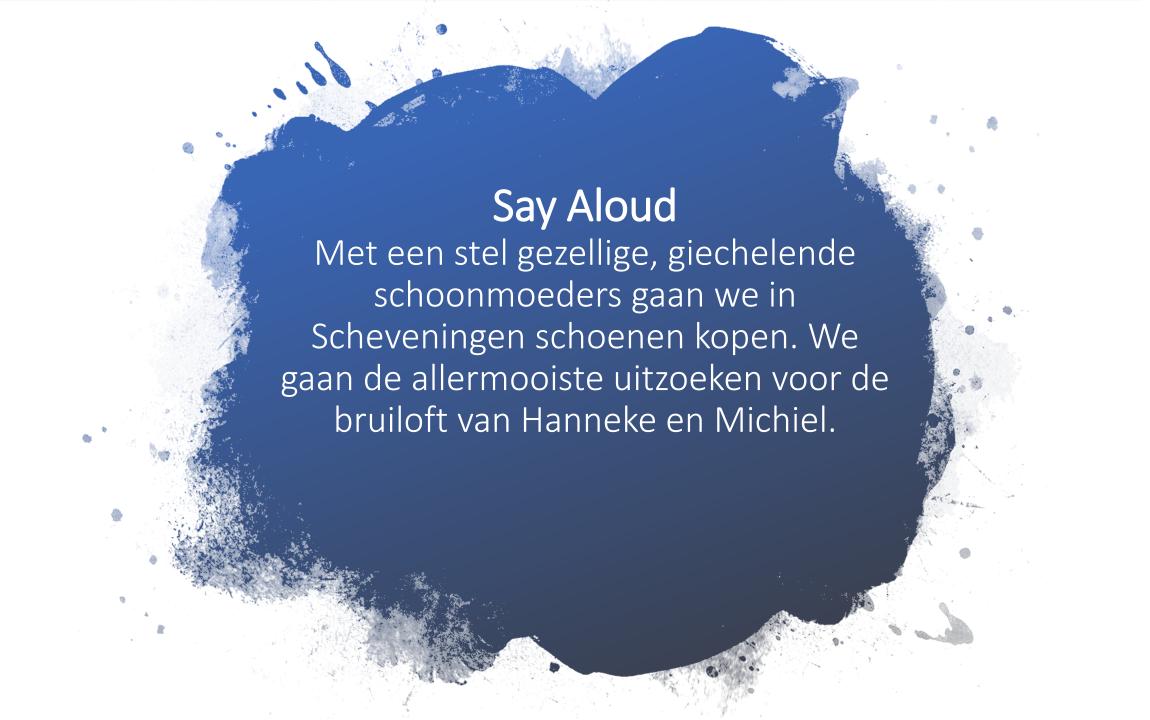






The Netherlands on an ordinary day





### Throat defect?

With a couple of nice, giggling mothers-in-law we are going to buy shoes in Scheveningen. We are going to find the nicest pair for the wedding of Hanneke and Michiel.









Strange?



# Our national pride





Import- and exportproduct







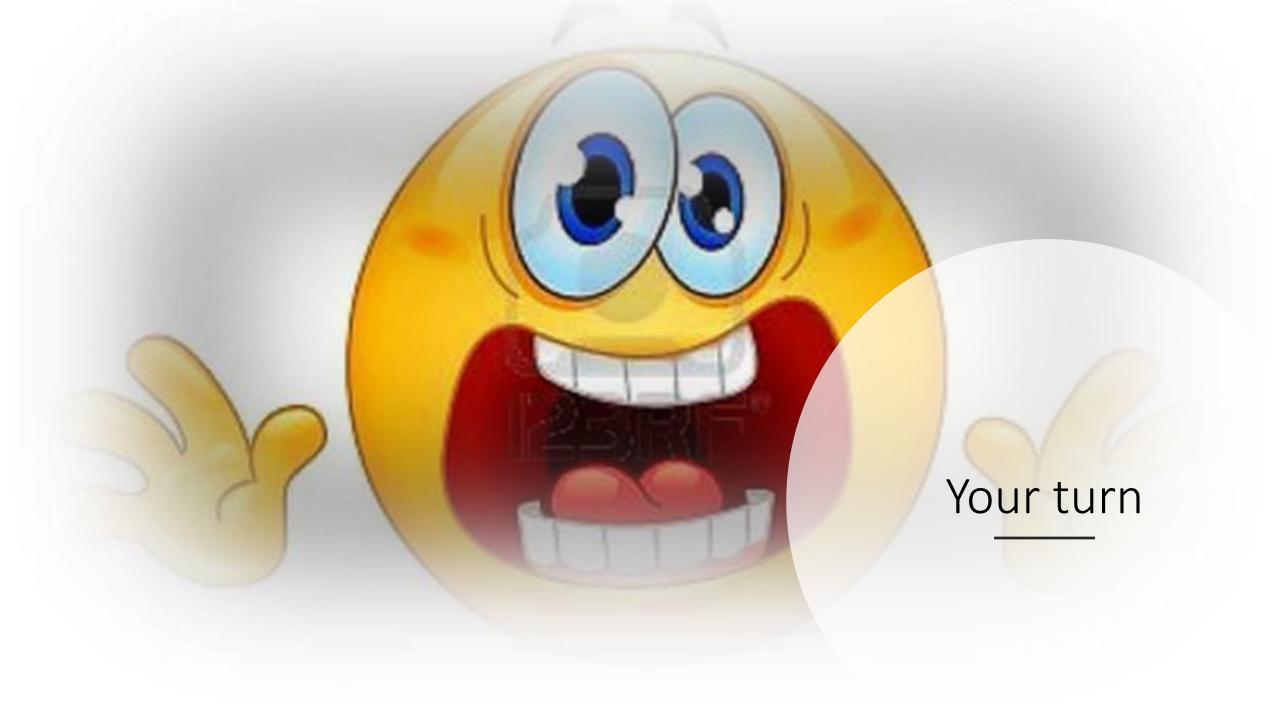
CO2

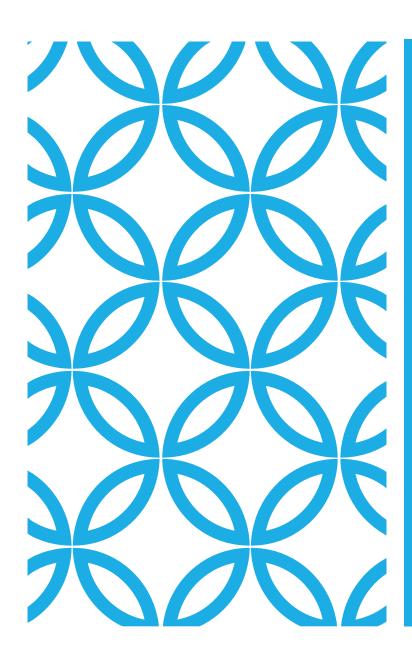
## solutions













Hanneke Bibian

## PECHA KUCHA

introduction

Our main goal for today is to make a Pecha Kucha about the similarities and differences of your own culture and that of other countries.



# DESIGN YOUR SLIDES: IMAGES



# WHAT'S TYPICALLY DUTCH....

from your point of view.

from the point of view of foreigners.

## MAKE YOUR OWN PECHA KUCHA

Listen to the example

## THE NEXT STEP



Make contact with a pupil from another country.



Present your Pecha Kucha.



Start a conversation about the different subjects.

Talk about the differences you noticed.

## MAKE YOUR OWN PECHA KUCHA

## Make pairs.

## Make your own Pecha Kucha.

- Look at our suggestions.
- Your starting point is your own world. ...

## SUGGESTIONS FOR THE PECHA KUCHA

Who am I? What does my neighbourhood look like? What does my country look like? What does my school look like? How does my language sound? What is the favourite dish of my country? What remarkable customs does my country have? How do foreigners look at my country? What is the most important export product? What is my country proud of?

## QUESTIONS



# YOUR TURN!



#### Subject: Health Topic: First Aid

#### General competencies developed during the lesson:

Cross - Cultural competency, Computatinal thinking, Design mindset

Digital study materials developed for the lesson:

https://share.nearpod.com/Vj3i8K1IM0

#### Digital sources used for the lesson:

Powerpoint

https://nearpod.com/
App: PuppetPals2

#### **Objectives:**

Students will:

- 1. Know what basic first Aid is and how to examine an acute ill or injured person
- 2. Recognize symptoms that suggest that the patient needs first Aid
- 3. Perform basic first Aid and CPR
- 4. Use digital devices
- 5. Practice and develop the communication skills required for their future proffesion

#### 1. Lead in

➤ Teacher introduces the topic First Aid with a Nearpod lesson.

#### 2. Guided practice

- ➤ Nearpod is a student engagement platform designed for use in class.
- With Nearpod, teachers interact with students and view student responses in real time, enabling students to take ownership of their learning rather than passively viewing a teacherdirected whole-class presentation.
  - 1. The teacher needs to create an account in Nearpod. This is free of charge or maybe your school have the school edition.
  - 2. Upload a Powerpoint
  - 3. Start adding activities; quiz's, polls, videos, drawing- boards, web content, matching pairs, memory test, 3D
  - 4. You can change the order of your slides

- 5. Share the wanted Nearpod with the class by pressing Live session/ Studentpaced, give the student the code to access (iPad, smartphone, computer). Students dont have to create an account.
- 6. After session you get a report on students results

#### 3. Problem solving - Puppet Pals2

- > Student work in groups of three
- > They need one iPad or smartphone
- Download the app "Puppet Pals2"

#### **Assignment:**

Make a story about a family that is a little unfortunate on an abnormal action-packed summer holiday. Family members must have names and ages.

The task should be presented as an animated film in which you use the app "PuppetPals2", this film will be shown to the class.

During the story, you must show two different first Aid situations;

- Accident
- Symptoms
- Aid

The first Aid situation you can choose from is;

- Fracture
- Concussion
- Poisoning
- Choking
- Burning
- CPR
- Bleeding
- Heat stroke/freeze
- Stroke

#### 5. Conclusion

According to this what conclusion can we draw? Why do we need to know this?

## Subject: Communication and problem solving Topic: Keep talking and nobody explodes

#### General competencies developed during the lesson:

Cross-cultural competence, Computational thinking, Transdisciplinary, Design mindset **Digital study materials developed for the lesson:** 

#### Digital sources used for the lesson:

https://keeptalkinggame.com/ http://www.bombmanual.com/ https://bombmanual.github.io/

#### **Objectives:**

Students will:

- 1) Practice and develop collaboration skills
- 2) Improve their concentration
- 3) Use digital devices

#### A. Introduction:

- A student is trapped inside a virtual room along with a ticking bomb that has to be disarmed. The other students are the bomb experts with a manual. They need to find out how the bomb can be disarmed by interpreting the information they find in the "Bomb Defusal Manual". The problem is ... the experts can't see the bomb! Through communication the student with the bomb and the experts have to solve the problem before the bomb explodes.
- ➤ Before class you have to purchase and download the game. Purchase the game from the developers, not Steam. If you use Steam you have to be logged in to play the game.

#### B. The gameplay

#### 1 Hour

Divide the class into groups of 3-4 students.

One group decide who should be "disarmer" (1 student) and who should be "bomb experts" (rest of the group). Let the group study the bomb manual and give them time to make a strategy on how to divide the tasks required to disarm the bomb. For example who is the leader that makes the final

decisions, divide the modules etc. The other groups have to observe and are later to give feedback on the bomb groups communication and collaboration skills.

Let the class and the disarmers see the bomb on a whiteboard/screen. The bomb experts are facing away from the screen.

The teachers role in this assignment is to make sure that they all follow the rules and help when the disarmers are completely astray.

After the first group of students have tried to disarm the bomb let the other groups discuss and come with constructive criticism on what could have been done differently to improve the result.

Then it's the next groups turn.

#### **Subject: Geography**

#### Topic: DRAWING AND INTERPRETATION OF CLIMOGRAPHS

#### General competencies developed during the lesson:

Computational thinking

Transdisciplinarity (GEO, ICT)

Digital study materials developed for the lesson:

#### Digital sources used for the lesson:

http://www.climatemps.com/

https://www.weatherbase.com/

http://www2.arnes.si/~mpavle1/klimogram.html

#### General Objectives:

Students will:

 develop the ability to search, collect and process online information, data and concepts and use it for learning

#### Geography Objectives:

Students will:

- distinguish climate types using climographs
- understand and evaluate the impacts of the climate on the economy and daily human activities

#### 1. Lead-in

a) What is a climograph - students form a definition

A **climograph** is a <u>graphical</u> representation of a location's basic <u>climate</u>. It is useful tool to quickly describe a location's climate.

A **climograph** (sometimes referred to as a climate graph) is a specialist graph used by geographers to show two things:

- how the temperature changes throughout the year
- how the amount of rainfall varies during the year.

b) What data do we need for creating a climograph

- monthly average temperature (a line graph)
- monthly average <u>precipitation</u> (a **bar** graph)
- b) Where can we find data for drawing a climograph?

Using smart phones students try to find:

- a web page with weather data for Slovenia
- a web page with weather data for the world

#### 2. Drawing climographs - OPTION A

#### Students:

- pick a name of a city/place
- find data (monthly average <u>temperature</u> and monthly average <u>precipitation</u>) on <a href="http://www.climatemps.com/">http://www.climatemps.com/</a>
- create climograph using <a href="http://www2.arnes.si/~mpavle1/klimogram.html">http://www2.arnes.si/~mpavle1/klimogram.html</a>
- determine climate type

#### 3. Drawing climographs - OPTION B

#### Students:

- pick a name of a city/place
- find data (monthly average <u>temperature</u> and monthly average <u>precipitation</u>) on <a href="http://www.climatemps.com/">http://www.climatemps.com/</a>
- create climograph in Excel
- determine climate type

#### 4. Conclusion

**Subject: English** 

**Topic:** WRITE FOR RIGHTS

#### **General competencies developed during the lesson:**

intercultural competence program-based thinking transdisciplinarity design thinking

#### Digital study materials developed for the lesson:

#### Digital sources used for the lesson:

https://www.amnesty.org/en/get-involved/write-for-rights/ http://amnesty.soc.srcf.net/what/letter-writing/ https://www.amnesty.org/download/Documents/ORG1090612018ENGLISH.PD F

#### **General Objectives:**

Empathy development

Critical thinking

Encourage students to get actively involved

Being aware of different problems people around the globe face

Better understanding of cultural differences

#### **English Objectives:**

Being able to understand an issue and adjust the style/vocabulary of the letter to the addressee

Developing reading & writing skills

Acquiring new vocabulary

Each student writes a letter (formal OR informal)

#### 1. Lead-in

- a) Presenting Amnesty International show the logo, ask if they know what it is, what they do
- b) Discussion: students answer, ask; teacher explains

#### **2.** Case study

#### Students:

- get the handouts or link to Amnesty International webpage: https://www.amnesty.org/en/get-involved/write-for-rights/
- read about the cases in question or read the handouts provided by AI
- decide which case they feel most strongly about, explain why
- study AI letter guide
- read 'sample letter' so that they find out what the most important parts are, what to pay attention to
- write a letter, checking the handouts or accessing AI webpage & online dictionary when necessary
- ask for teacher's advice if needed
- hand in the letters

#### 3. Conclusion

Students check Amnesty International webpage to see how their case is developing, if it has been solved and how.

# CROSS-CULTURAL OR INTERCULTURAL COMPETENCY

#### **Subject: Music**

#### **Topic: Music around us**

#### General competencies developed during the lesson:

- Intercultural competence (listening and analyzing works of Finnish composer, French song performance in different ways and different languages).
- Computational competence (performance of tasks by analogy).

#### Digital study materials developed for the lesson:

https://prezi.com/view/yuQUHinwleLXaUPMRl51/

#### **Objectives:**

- 1. The student is able to understand the musical language of communication.
- 2. The student has completed two different musical tasks:
- Task1. Orchestra without musical instruments
- Task 2. Eight sounds of one musical instrument
- 3. The student is able to analyze the heard musical work of Jean Sibelius Water Droplets
- 4. The student is able to tap out the rhythm pattern using different improvised musical instruments following the example.
- 5. The student understands the gestures of the teacher-conductor.
- 6. The student acts as a conductor himself/herself and, following the example of the teacher, conducts the group of eight students playing on bells.

#### A. Introduction:

➤ The teacher introduces the idea that the musical language of communication helps all people on Earth to understand each other and suggest the group of students perform some music by completing 2 tasks.

The program prezi.com is used for delivering visual content. Also, the following resources are used during the tasks: set of eight bells with a certain pitch and improvised items: pens, pencils, etc.

#### B. Guided practice:

#### TASK 1. Orchestra without musical instruments.

#### Step 1

- ➤ Tapping out the simple rhythm pattern TA TA ti ti TA following the teacher's example.
- ➤ Tapping out the same rhythm pattern using different methods and dividing into groups with different improvised musical instruments.

#### Step 2

Jean Sibelius - Water Droplets

- Listening and analysis of the Finnish composer Jean Sibelius' musical composition *Water Droplets*.
- ➤ Performing of the learned rhythm pattern following the conductor's gestures in order to create an accompaniment for the composition *Water Droplets*.

The teacher makes the conclusion that everyone became part of the orchestra even though no musical instruments were used.

#### TASK 2. Eight sounds of one musical instrument.

The teacher explains that our instrument is the eight bells on which eight students will play.

#### Step 1. Let's tune our musical instrument

Each of the eight bells has its own pitch, but they stand in a different order.

- ➤ Determine which one is the lowest.
- ➤ Put all eight bells in the correct order from the lowest to the highest.

#### Step 2. Let's learn how to play our instrument

- Each of the eight students, take your bell correctly.
- Try ringing softly (PIANO) and loudly (FORTE).
- ➤ Carefully follow the gestures of the conductor, which will show when and how many times your bell should sound in a common melody.

### Step 3. Let's perform a musical piece - the French song Frère Jacques (also known in English as Brother John).

- Listen to two examples of the same piece's performance.
- ➤ Keep in mind the melody movement and apply it when performing by yourself.

#### C. Guided discussion

The discussion should lead to the understanding that

In the first task, "Orchestra without musical instruments," we

- > Tapped the rhythm in different ways, turning our body and objects at hand into different percussion instruments,
- ➤ Performed a beautiful rhythmic accompaniment for the musical composition of Jan Sibelius *Water Droplets*.

In the second task, "Eight Sounds of a Musical Instrument," we

- Used our ear for music and placed the bells in the correct order,
- Learned how to play them and listen to each other,
- Learned how to sing the song *Brother Jacob* in English and French.
- ➤ All together performed the instrumental version of the song *Brother Jacob* on the bells turning eight students into one musical instrument.

We did a great job! Music unites us!!!

#### Conclusion

Today's lesson proved that the musical language of communication helped us to understand each other and as a result, we created the interesting product of our joint musical creativity!

## **Subject: Foreign languages / Geography Topic: Introduction to water footprint.**

General competencies developed during the lesson:

Design thinking, intercultural competence

Digital study materials developed for the lesson:

https://www.thinglink.com/scene/1149350772316569603

Digital sources used for the lesson:

https://www.calacademy.org/educators/lesson-plans/your-hidden-water-footprint-defining-a-problem-to-find-a-solution

https://padlet.com/viktor\_sestakov/waterfootprint

https://waterfootprint.org/en/water-footprint/what-is-water-footprint/

https://yourwaterfootprint.files.wordpress.com/2014/08/ywf-graphic-ywf-cola.jpg

http://www.waterfootprintassessmenttool.org/national-explorer/

https://www.watercalculator.org/

#### **Objectives:**

Students will:

- 1) develop their knowledge of how the goods we buy and use can contribute to our indirect water footprint.
- 2) establish what they already know about a problem and what questions to ask to better understand the context and constraints of a design solution.
- 3) practice describing the info graphic and writing a review about the supply chain water footprint of the cola with the class
- 4) develop their communication and interaction skills, sensibility to an intercultural topic, discovering differences/similarities between cultures

#### 1. Lead-in

➤ Brainstorm. Section 2. Ways in which we use water. Work in groups or pairs and write all your ideas in which you use water. (5 minutes) The Padlet.com is used for the task.

#### 2. Definition

- ➤ Read the article in section 3 "Water footprint" and give your own definition.
- > Calculate how much water you're using the link in section "Calculate your water footprint".
- Discussing the definitions and personal water footprint.

#### 3. Review

Review the info graphic. Pre-activity: explain this example of water used to produce a bottle of cola. TASK 1: Answer the questions: 1) what kinds of problems do you identify from this supply chain? 2) When you drink a bottle of cola, are you only consuming the amount of

water that is physically in the bottle? TASK 2: Make a review about the supply chain water footprint of the cola with the class, taking note of what is most surprising or novel.

#### 4. Problem solving

- ➤ Choose a country to represent (or use suggested one)
- > Explore information about water footprint in the chosen country
  - Use section: "National water footprint explorer"
  - TASK 1: Describe the water footprint of your country and of each citizen.
  - TASK 2: Choose another country and compare it to yours.
  - TASK 3: Find out how much of that footprint lies within a country (internal) and how much is related to water used for imported products or ingredients (external).
- > Discussion about the ways of solving the problem
- > Finding differences/similarities
- ➤ Reflection about cultural differences and ways to bridge them.

#### 5. Conclusion

According to this what conclusion can we draw? Why do we need to know this?

#### **Subject: Music & Art**

#### Topic: Let's communicate by the means of music & Art

#### General competencies developed during the lesson:

Communication in English

Communication through music & art

Learn more about other countries and cultures.

#### Digital study materials developed for the lesson:

Instruction video

#### **Objectives:**

- 1. Student (is able to communicate in English)
- 2. Student (is able to communicate by the means of social media, email, skype)
- 3. Student (is able to use correct forms of grammar while communicating in English)
- 4. Student (is able to make a creative "switch"-> Mood board)
- 5. Student (is able to research a certain piece of art and to express his or her own emotions related to a certain piece of art).

#### A. Introduction:

Watch the instruction video.

#### B. Guided practice:

1. What do you need?

Magazines

Glue

Scissors

A piece of paper in A3 form

Markers

- 2. From your teacher you will get an email address of a student/pupil who lives in another country.
- 3. Choose a song in your own language.
- 4. Send the clip of the song to the given email address. All further communication will be in English from now.
- 5. You will receive a clip of a song from the other student in his/her mother language.
- 6. **Mood board:** Make a mood board in which you express the feelings you get from the song. Also include what you think the song is about.











7. Take a picture of your mood board and send the picture to the other student with the explanation of what you think the song is about and the feelings you got while listening to the song.



8. Make sure to think of 5 specific questions in order to get to know the other student.



9. You have both listened to each other's song and you made a mood board. Now call the other student.



10. **Skype call:** check if the interpretation of the song is correct. Discuss the mood board and explain why/or why not, this particular song is a good representation of your country.

11. This is the end of the assignment. Show your teacher the results and explain what you have learned.

#### C. Guided discussion:

- What did you learn from the other person?
- What did you learn about his/her country?
- Did you get the chance to improve your English?
- Did the other person learn anything from you as far as English is concerned?
- How did you like this assignment and what exactly?

#### D. Independent Practice (can be assigned as home work):

- Choose a random country that you always wanted to visit but know very little about. Find a song that you like a make a mood board based on that particular song. By means of researching as much as possible about the country, try to figure out whether your mood board is 'on the point'.

## Subject: Communication and problem solving Topic: Keep talking and nobody explodes

#### General competencies developed during the lesson:

Cross-cultural competence, Computational thinking, Transdisciplinary, Design mindset **Digital study materials developed for the lesson:** 

#### Digital sources used for the lesson:

https://keeptalkinggame.com/ http://www.bombmanual.com/ https://bombmanual.github.io/

#### **Objectives:**

Students will:

- 1) Practice and develop collaboration skills
- 2) Improve their concentration
- 3) Use digital devices

#### A. Introduction:

- A student is trapped inside a virtual room along with a ticking bomb that has to be disarmed. The other students are the bomb experts with a manual. They need to find out how the bomb can be disarmed by interpreting the information they find in the "Bomb Defusal Manual". The problem is ... the experts can't see the bomb! Through communication the student with the bomb and the experts have to solve the problem before the bomb explodes.
- ➤ Before class you have to purchase and download the game. Purchase the game from the developers, not Steam. If you use Steam you have to be logged in to play the game.

#### B. The gameplay

#### 1 Hour

Divide the class into groups of 3-4 students.

One group decide who should be "disarmer" (1 student) and who should be "bomb experts" (rest of the group). Let the group study the bomb manual and give them time to make a strategy on how to divide the tasks required to disarm the bomb. For example who is the leader that makes the final

decisions, divide the modules etc. The other groups have to observe and are later to give feedback on the bomb groups communication and collaboration skills.

Let the class and the disarmers see the bomb on a whiteboard/screen. The bomb experts are facing away from the screen.

The teachers role in this assignment is to make sure that they all follow the rules and help when the disarmers are completely astray.

After the first group of students have tried to disarm the bomb let the other groups discuss and come with constructive criticism on what could have been done differently to improve the result.

Then it's the next groups turn.

## Subject: Geography Topic: Turkey

#### General competencies developed during the lesson:

intercultural competence, transdisciplinarity

#### Digital study materials developed for the lesson:

https://create.kahoot.it/share/what-do-i-know-about-turkey/06bb238e-0b06-49a3-ba60-6981968a2409

https://create.kahoot.it/share/turkey-and-its-neighbours/a37b1e54-4294-4d63-b1cf-72b61466687f https://create.kahoot.it/share/beautiful-turkey/093591e5-7930-44a1-aa9d-a7e217a23246

#### Digital sources used for the lesson:

http://www.yourchildlearns.com/online-atlas/turkey-map.htm https://www.rtvslo.si/

#### General objectives:

Students will:

- develop a positive attitude towards cultural diversity
- develop awareness of solving local, regional and global problems according to the principles of sustainable development and the principles of the World Declaration of Human Rights;
- develop their own awareness by studying the problems of other nations and cultures

#### Geography objectives

Students will:

- learn about the position of Turkey as an important player in European and Middle Eastern politics and economy
- find information about history of modern Turkey and explore its relations with its neighbours in the past and nowadays
- learn how countries have tried to solve mutual conflicts and how successful they have been
- get to know some natural and cultural sights of Turkey and evaluate them from the point of view of the preservation and suitability for the development of tourism

#### PART A

#### 1. Turkey and its neighbours

a) What do I know about Turkey? - Kahoot quiz <a href="https://create.kahoot.it/share/what-do-i-know-about-turkey/06bb238e-0b06-49a3-ba60-6981968a2409">https://create.kahoot.it/share/what-do-i-know-about-turkey/06bb238e-0b06-49a3-ba60-6981968a2409</a>

- b) Map of Turkey and its neighbours
- one student draws a large map (A1) of Turkey and its neighbours
- one student prepares leaflets with names of Turkey's neighbours and the length of borders
- other students put leaflets on the right position on a map
- c) News from Turkey

What is written about Turkey in online papers?

- students find news related to Turkey on <a href="https://www.rtvslo.si/">https://www.rtvslo.si/</a>
  - they try to find news related to Turkey's domestic affairs
  - they try to find news related to Turkey's problems with neighbouring countries
- students paste the links to Google Drive Document
- students present what they found
- discussion about Turkey's domastic affairs and Turkey's conflicts with neighbouring countries
- d) Turkey and its neighbours teacher's ppt presentation and discussion
- e) What did I learn? Kahoot quiz

https://create.kahoot.it/share/turkey-and-its-neighbours/a37b1e54-4294-4d63-b1cf-72b61466687f

#### PART B

#### 2. Why I love Turkey?

- a) Teacher's experience of Turkey
- as a tourist
- as a teacher on Erasmus+ exchange (Serik Antalya)
- b) Must-see historical and natural sights of Turkey
- teacher puts a list of 15 must-see sights in Turkey in Google Drive Document
- each student chooses one
- students find information about the chosen sight
- students complete a worksheet (picture, text, resources) and send it to teacher
- c) Kahoot quiz: How beautiful is Turkey?
- after each question a student presents the selected sight <a href="https://create.kahoot.it/share/beautiful-turkey/093591e5-7930-44a1-aa9d-a7e217a23246">https://create.kahoot.it/share/beautiful-turkey/093591e5-7930-44a1-aa9d-a7e217a23246</a>
- d) Discussion/chat with Turkish tea, baklava and lokum

#### **PART C**

#### 3. Mustang

a) Students watch a Turkish movie Mustang (Deniz Gamze Ergüven, 2015)

Early summer. In a village in northern Turkey, Lale and her four sisters are walking home from school, playing innocently with some boys. The immorality of their play sets off a scandal that has unexpected consequences. The family home is progressively transformed into a prison; instruction in homemaking replaces school and marriages start being arranged. The five sisters who share a common passion for freedom, find ways of getting around the constraints imposed on them.

Source: <a href="https://www.imdb.com/title/tt3966404/">https://www.imdb.com/title/tt3966404/</a>

https://www.youtube.com/watch?v=ABNB3zw5BAo https://www.youtube.com/watch?v=hPppc2VGn8Q

#### b) Discussion

- The significance of the title of the movie mustang: Who 'tames, domesticates' the girls? What are the consequences? How do the sisters resist restrictions?
- Five sisters, five profiles (personalities/ characters), five fates: What are the differences between the sisters? Which sister is closest to you?
- The position of women in traditional society: What is the gender role of women in traditional society? What can the girls do and what they should not do? What is not suitable for girls? What is expected of a "good wife"? What household chores should they learn and why?
- Arranged marriages, the role of the grandmother and the uncle in the "bride factory": How do you see the role of the uncle?

What is the role of the grandmother? Do you remember the scenes where she tried to protect the girls? Do you think she's as cruel as their uncle?

Why do uncle and grandma think that the wedding is a good solution for the girls? What do they expect from the girls? Do you think that uncle and grandmother are also victims of the traditional system?

**Subject: English** 

**Topic:** WRITE FOR RIGHTS

#### **General competencies developed during the lesson:**

intercultural competence program-based thinking transdisciplinarity design thinking

#### Digital study materials developed for the lesson:

#### Digital sources used for the lesson:

https://www.amnesty.org/en/get-involved/write-for-rights/ http://amnesty.soc.srcf.net/what/letter-writing/ https://www.amnesty.org/download/Documents/ORG1090612018ENGLISH.PD F

#### **General Objectives:**

Empathy development

Critical thinking

Encourage students to get actively involved

Being aware of different problems people around the globe face

Better understanding of cultural differences

#### **English Objectives:**

Being able to understand an issue and adjust the style/vocabulary of the letter to the addressee

Developing reading & writing skills

Acquiring new vocabulary

Each student writes a letter (formal OR informal)

#### 1. Lead-in

- a) Presenting Amnesty International show the logo, ask if they know what it is, what they do
- b) Discussion: students answer, ask; teacher explains

#### **2.** Case study

#### Students:

- get the handouts or link to Amnesty International webpage: https://www.amnesty.org/en/get-involved/write-for-rights/
- read about the cases in question or read the handouts provided by AI
- decide which case they feel most strongly about, explain why
- study AI letter guide
- read 'sample letter' so that they find out what the most important parts are, what to pay attention to
- write a letter, checking the handouts or accessing AI webpage & online dictionary when necessary
- ask for teacher's advice if needed
- hand in the letters

#### 3. Conclusion

Students check Amnesty International webpage to see how their case is developing, if it has been solved and how.

## DESIGN MINDSET (OR DESIGN THINKING)

Type of material: Part of lesson plan

Subject: Mathematics
Topic: Statistics. Percent

General competencies developed during the lesson:

transdisciplinarity, design-thinking and virtual cooperation.

Digital study materials developed for the lesson:

https://www.thinglink.com/scene/1152506275729244162

#### **Objectives:**

- 1. Student understands the definition of "percent, percentage";
- 2. Student knows the notion of a chart;
- 2. Student is able to apply basic formulas to calculate the percent;
- 3. Student is able to analyze information and highlight the most significant information, generalize, systematize and present it.
- 4. Students can work in a group (using virtual cooperation), supporting and motivating each other;
- 5. Student is able to present the result of the group work through interactive tools.

#### A. Introduction:

Activating pre-knowledge. Students will follow the link and try to complete the task. Exercises are made using sites <a href="www.thinglink.com">www.thinglink.com</a>, <a href="www.purposegames.com">www.purposegames.com</a>, <a href="Google Docs">Google Docs</a>

#### B. Guided practice:

➤ Based on the example students will analyse and synthase the received information, discuss in groups and make a development plan of their project. The discussion should lead to an understanding of what needs to be done and how it will look.

#### C. Independent Practice (can be assigned as home work):

> The project can be prepared at home and completed in class.

## **Subject: Foreign languages / Geography Topic: Introduction to water footprint.**

General competencies developed during the lesson:

Design thinking, intercultural competence

Digital study materials developed for the lesson:

https://www.thinglink.com/scene/1149350772316569603

Digital sources used for the lesson:

https://www.calacademy.org/educators/lesson-plans/your-hidden-water-footprint-defining-a-problem-to-find-a-solution

https://padlet.com/viktor\_sestakov/waterfootprint

https://waterfootprint.org/en/water-footprint/what-is-water-footprint/

https://yourwaterfootprint.files.wordpress.com/2014/08/ywf-graphic-ywf-cola.jpg

http://www.waterfootprintassessmenttool.org/national-explorer/

https://www.watercalculator.org/

#### **Objectives:**

Students will:

- 1) develop their knowledge of how the goods we buy and use can contribute to our indirect water footprint.
- 2) establish what they already know about a problem and what questions to ask to better understand the context and constraints of a design solution.
- 3) practice describing the info graphic and writing a review about the supply chain water footprint of the cola with the class
- 4) develop their communication and interaction skills, sensibility to an intercultural topic, discovering differences/similarities between cultures

#### 1. Lead-in

➤ Brainstorm. Section 2. Ways in which we use water. Work in groups or pairs and write all your ideas in which you use water. (5 minutes) The Padlet.com is used for the task.

#### 2. Definition

- ➤ Read the article in section 3 "Water footprint" and give your own definition.
- > Calculate how much water you're using the link in section "Calculate your water footprint".
- Discussing the definitions and personal water footprint.

#### 3. Review

Review the info graphic. Pre-activity: explain this example of water used to produce a bottle of cola. TASK 1: Answer the questions: 1) what kinds of problems do you identify from this supply chain? 2) When you drink a bottle of cola, are you only consuming the amount of

water that is physically in the bottle? TASK 2: Make a review about the supply chain water footprint of the cola with the class, taking note of what is most surprising or novel.

#### 4. Problem solving

- ➤ Choose a country to represent (or use suggested one)
- > Explore information about water footprint in the chosen country
  - Use section: "National water footprint explorer"
  - TASK 1: Describe the water footprint of your country and of each citizen.
  - TASK 2: Choose another country and compare it to yours.
  - TASK 3: Find out how much of that footprint lies within a country (internal) and how much is related to water used for imported products or ingredients (external).
- > Discussion about the ways of solving the problem
- > Finding differences/similarities
- ➤ Reflection about cultural differences and ways to bridge them.

#### 5. Conclusion

According to this what conclusion can we draw? Why do we need to know this?

#### **Subject: Technology**

#### Topic: Using tools in the technology class.

#### General competencies developed during the lesson:

Computacional thinking, Design mindset, transdisciplinarity (TEC, ICT)

Digital study materials developed for the lesson:

https://b.socrative.com/login/student/

#### **Objectives:**

- 1. Student encourages his cognitive and connective abilities.
- 2. Evaluation the knowledge of the contents of the subject.
- 3. Use digital devices.

#### A. Introduction:

- ➤ Socrative can be accessed on the top three operating systems: Windows, Apple, and Chrome. No downloads are required. A web browser that utilizes HTML-5 is needed to access all functions. Socrative is also usable on various hardware: desktops, smartphones, tablets, and mobile phones.
- Technical help is offered via a web page that offers tips and answers frequently asked questions presented by users.

#### B. Guided practice:

Socrative is a formative assessment tool which allow teacher to check understanding of all students during a lesson. It's designed for use in class, in real time.

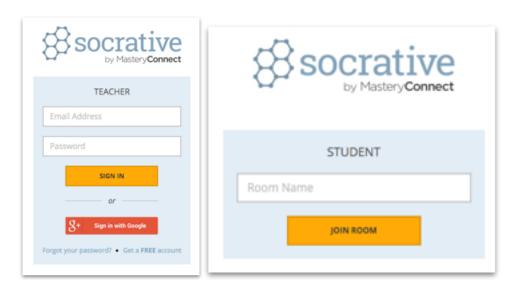
- 1. The quiz allows teacher to create multiple-choice, true/false or short-answer question quizzes that they can save and use again.
- 2. In class, the teacher launches the quiz and students complete it in real time on their devices.
- 3. As students answer the questions, the teacher can see the results and then download them.
- 4. The teacher can then make more informed decisions about what happens next in the lesson.

The advantages of using Socrative are:

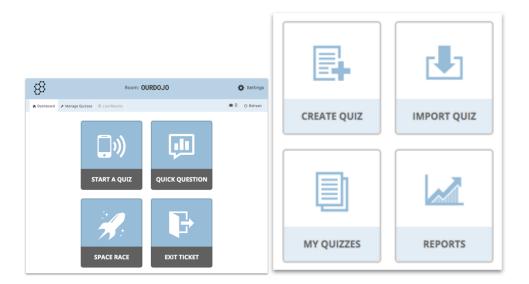
- Visualize student understanding
- Ask multiple choice and true/false questions
- Ask open-ended questions and vote on the results
- Create your own quizzes (instantly graded for you)
- Share quizzes with other teachers
- Give end of class exit tickets
- Play games with our space race
- View students results in real time
- Reporting Download, Email or send to Google Drive.

Socrative is a cloud-based student response system developed in 2010 by Boston-based graduate school students. It allows teachers to **create simple quizzes** that students can take quickly on laptops – or, more often, via classroom tablet computers or their own smartphones.

- 1. Go to socrative.com and click *TEACHER LOGIN*. You can sign up for free account or use your existing Google account.
- 2. Students need NOT register, and will only enter their names later.

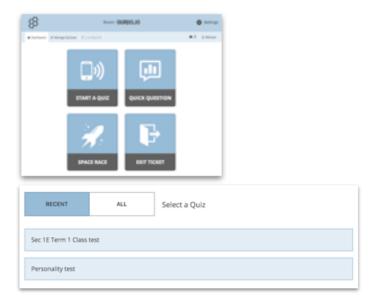


- 3. This is the room name to give students
- 4. Upon sigining in, you will enter your *DASHBOARD*. You may not have created a quiz yet, so click on *MANAGE QUIZZES*.
- A new set of options will appear.Click on CREATE QUIZ to start the process.



6. You have the options of creating MULTIPLE CHOICE, TRUE / FALSE or SHORT ANSWER quiestions.

- 7. You can create as many questions as you'd like, and the procedure is quite straightforward. You can also optionally include answers if you want the system to generate the marks automatically.
- 8. Once satisfied, go ahead and click SAVE & EXIT for the next step.
- 9. Take note if want to share. You can insert the number SOC-39086897. "Tools vocabulary" is the example used in Estonia.

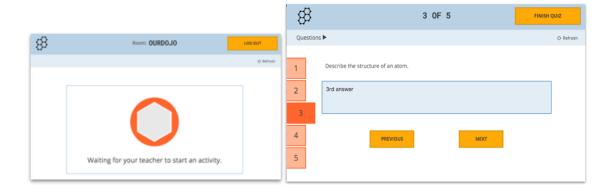


- 10. You will be sent to your dashboard again. Now click on START A QUIZ to use the quiz that you've created earlier. You can recycle the ones you have used before as well as they will be stored in the system for future use. Click on the quiz you want to use.
- 11. Best for home based learning
- 12. Recommended to turn off to capture student names in report
- 13. Select the type of quiz you like, and click *START* to begin the quiz.

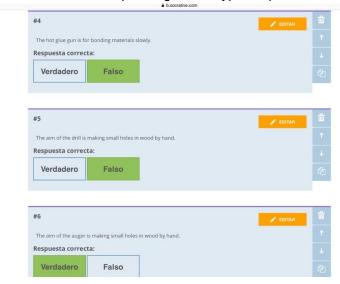
Step by Step for students.



- 1. This is what the student will see after clicking **STUDENT LOGIN** in the main page.
- 2. Notice that they just need to know the Room Name and click *JOIN ROOM* to begin, thus reducing the need for tedious registration process.
- 3. Once they entered their names, clicking *DONE* will lead them to a page where they wait for the teacher to start the quiz (if he/she has not already done so).

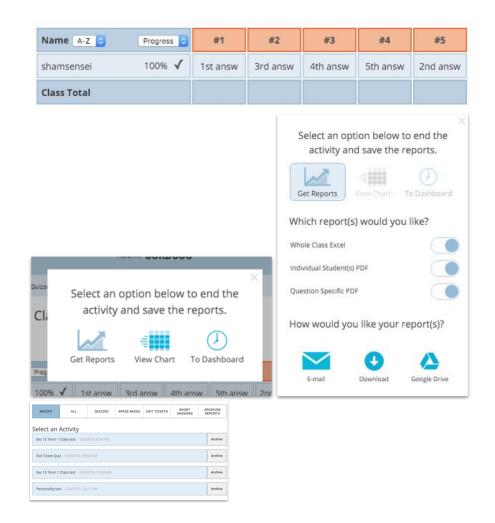


- 4. Use PREVIOUS and NEXT instead of FINISH QUIZ
- 5. Students can choose which to do first
- 6. When the teacher starts the quiz, the student will automatically see the question and an answer box. Depending on the type of quiz set earlier, the teacher has the flexibility of



choosing the pace of the quiz. Remember to tell them to click *FINISH QUIZ* only after they are satisfied with their answers. A waiting screen will appear once they are done.

- 7. Toggle off to show on screen
- 8. Tick signifies student has finished quiz
- 9. On the teacher's screen, he/she will be updated on the progress of all the students in real-time. This is a good chance for the teachers to either discreetly monitor or choose to show the class how they are doing so far.
- 10. Once the time is up or when all have completed the task, click *FINISH*.
- 11. You are now ready to generate your report. For now, Click on *TO DASHBOARD* to return to the homescreen.
- 12. No. of students in room



- 13. Turn on all to generate reports to give students
- 14. To save soft copies
- 15. Take note of date to get correct reports
- 16. Click on *MANAGE QUIZZES* as before and click on *REPORTS*. You are given many options of how you want to generate the reports.
- 17. **DOWNLOAD** will save a zipped file into your hard drive, and a few sample of how they appear is in the next page.



#### C. Guided discussion:

According to this what did you find difficult about today's lesson??

#### D. Independent Practice (can be assigned as home work):

You could also use Socrative to assess reading or listening comprehension. You can also add information about why an answer is correct in the "explanation box" which could be very useful for exam classes.

#### **Subject: Technology**

Topic: Review mechanism.

#### General competencies developed during the lesson:

Computacional thinking, Design mindset, transdiciplinarity (TEC, ICT).

Digital study materials developed for the lesson:

www.playposit.com

#### **Objectives:**

- 1. Students benefit from an engaging and differentiated, computer-based experience.
- 2. Use digital devices and testing.
- 3.Students achieve a whole-school alignment of blended learning.

#### A. Introduction:

Playposit is a interactive web-based video platform that allows educators to provide formative assessment both inside and outside the classroom. Teachers are able to embed quiz-type questions into videos on Youtube, Vimeo, Khan Academy and other popular video platforms. Data can then be analyzed on the individual or group level, provided powerful insight into educational trends in the classroom.

#### **B.** Guided practice:

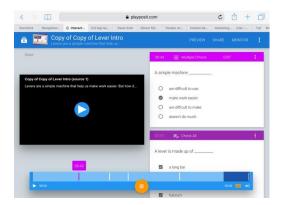
A bulb is an interactive video created in PlayPosit.

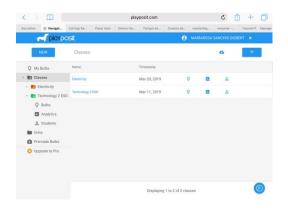
First of all, transform any video into an active experience for students by embedding questions, images, audio, and other media elements.

Secondly, add any of the premium question types to make your video engaging for students.

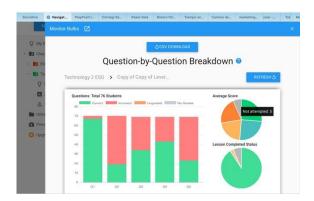
At the end you can see the student participation and responses.

The Analytics tab provides you with a broad overview on student performance including score, total time spent, and their progress across all bulbs assigned to the course.









#### Step by step

Register as an instructor in www.playposit.com

Create a bulb and adding a video.

- 1. In My Bulbs, click New Bulb to open the designer
- 2. Select You Tube, search for a video, select one, and click Done.
- 3. Click the button labeled "Add and Interaction" to insert a question at your current playback timestamp. When you're done adding your interaction's text and answer options, click Done to save and close the interaction.

Create a class and adding students.

- 1. Click on Classes.
- 2. Click Add new class, title it, and click save.
- 3. Students enter Search code. Students individually log in to their Playposit accounts, click add class, and enter your instructor search code.

#### Assigning bulbs.

- 1. In My Bulbs, click the triple dots icon at the right for the bulb you want to use and click Assign.
- 2. Select a due data for the class you want to assign this bulb to and click ok.
- 3. You should get a green toast notification indicating that your bulb has been successfully assigned.

#### Monitoring responses.

- 1. Click Monitor for the specific class.
- 2. You should see all of that class's responses for this bulb.

#### Premade Bulbs.

- 1. Filter all premade. Classify by grade and topic.
- 2. Copy bulb.
- 3. Edit bulb.

I choose "pulleys" from premade bulb for technology class. I test the bulb in Slovenian students.

#### C. Guided discussion:

What do you think about this application? Was it useful for you? Did you enjoy using it?

#### D. Independent Practice (can be assigned as home work):

You could also use Playposit anywhere. So this enables its students to also use at home, on their own without needing help. The application is not just for use in schools.

## Subject: Language, communication & Technology Topic: Making a Pecha Kucha in English

#### General competencies developed during the lesson:

Expressing in English, Computational thinking, Design mindset, transdisciplinarity (TEC, ICT) **Digital study materials useful for the lesson:** 

https://www.youtube.com/watch?v=32WEzM3LFhw

#### **Objectives:**

- 1. Student encourages his cognitive and connective abilities.
- 2. Evaluation the knowledge of the contents of the subject.
- 3. Use digital devices.

#### > Introduction:

➤ Pecha Kucha can be designed by using PowerPoint or Google Presentations.

#### **▶** Main Goal

- Our main goal is to make a Pecha Kucha about the similarities and differences of your own culture and that of other countries.
- > Students from different countries are able to communicate with each other in English.

#### > Sub Goals

#### Fase 1

#### Students

- o can express themselves in English;
- o are able to make a Pecha Kucha;
- can present their own world to other international students by means of a Pecha Kucha;
- o get a clear picture of the image of their own country;
- o are aware what image other European students have of your own country.

#### Fase 2

#### Students

o are able to present actual issues from their own country;

- know about current issues that are important in other European countries;
   (environmental problems, state establishment, refugee policy, European cooperation, Trump, fake news, etc);
- o are able to describe a historical event that has had a major impact on their country. (fall of the Berlin Wall, World War II, local heroes, etc);
- o know how a historical event can have different consequences for countries.

#### > Our project can be integrated into

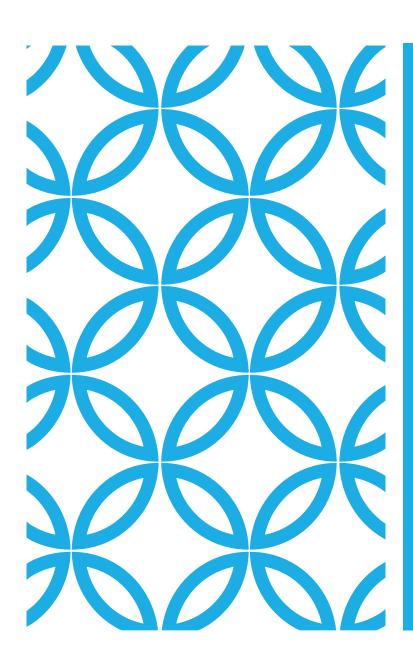
- o History
- o English
- Social studies
- o Economics
- o Geography

#### ➤ Guided lessonplan

And now, how does it work? We refer to several documents.

- 1. Ppt instruction teachers Pecha Kucha eTwinning (pdf)
- 2. Example Pecha Kucha eTwinning (pdf)
- 3. Ppt pupils Pecha Kucha eTwinning (pdf)

Have fun and good luck!



## PECHA KUCHA

Hanneke Bibian

## INTRODUCTION

Our main goal is to engage students to have a conversation about the similarities and differences of their own culture and those of other countries.

## PECHA KUCHA



## GOALS FASE 1

#### **Students**

can expres themselves in English.

are able to make a Pecha Kucha.

can present their own world to other international students by means of a Pecha Kucha.

get a clear picture of the image of their own country.

are aware what image other European students have of their own country.

## GOALS FASE 2

#### **Students**

- 1. are able to present actual issues from their own country.
- 2. know about current issues that are important in other European countries. (environmental problems, state establishment, refugee policy, European cooperation, Trump, fake news, etc)
- 3. are able to describe a historical event that has had a major impact on their country. (fall of the Berlin Wall, World War II, local heroes, etc)
- 4. know how a historical event can have different consequences for countries.

• • • •

## INTRODUCTION

Our project can be integrated into History English Social studies **Economics** Geography

## **OUR EXAMPLE**



## YOUR TURN!



## SUGGESTIONS FOR THE PECHA KUCHA

Who am I? What does my neighbourhood look like? What does my country look like? What does my school like? How does my language sound? What is the favourite dish of my country? Which remarkemable customs has my country. How do foreigners look at my country? What is the most important export product? What is your country proud of?

## SUGGESTIONS FOR FASE 2



How do Europeans from different countries look at certain historical, European events.



What current problems does our country have? What are the hot items of domestic news?



• • • • •

## QUESTIONS



## MAKE YOUR OWN PECHA KUCHA

Make pairs.

Make your own Pecha Kucha.

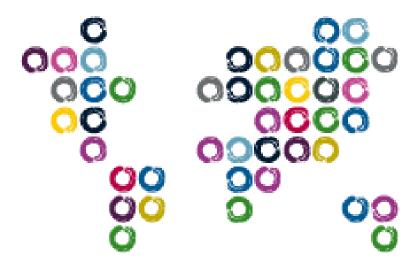
- Look at our suggestions.
- Your starting point is your own world. ...





And.... here we are!







draait om jou!



## Mondial College Nijmegen









On the way to school







Nijmegen











The Netherlands according to the tourist information

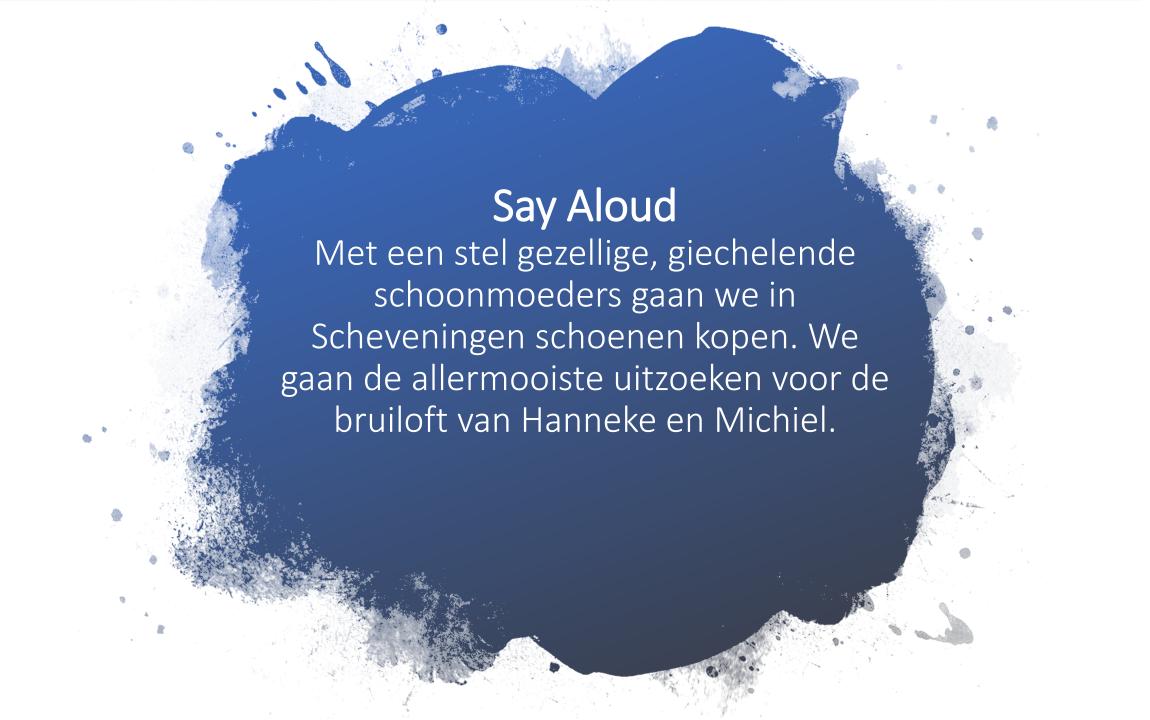






The Netherlands on an ordinary day





#### Throat defect?

With a couple of nice, giggling mothers-in-law we are going to buy shoes in Scheveningen. We are going to find the nicest pair for the wedding of Hanneke and Michiel.









Strange?



## Our national pride





Import- and exportproduct







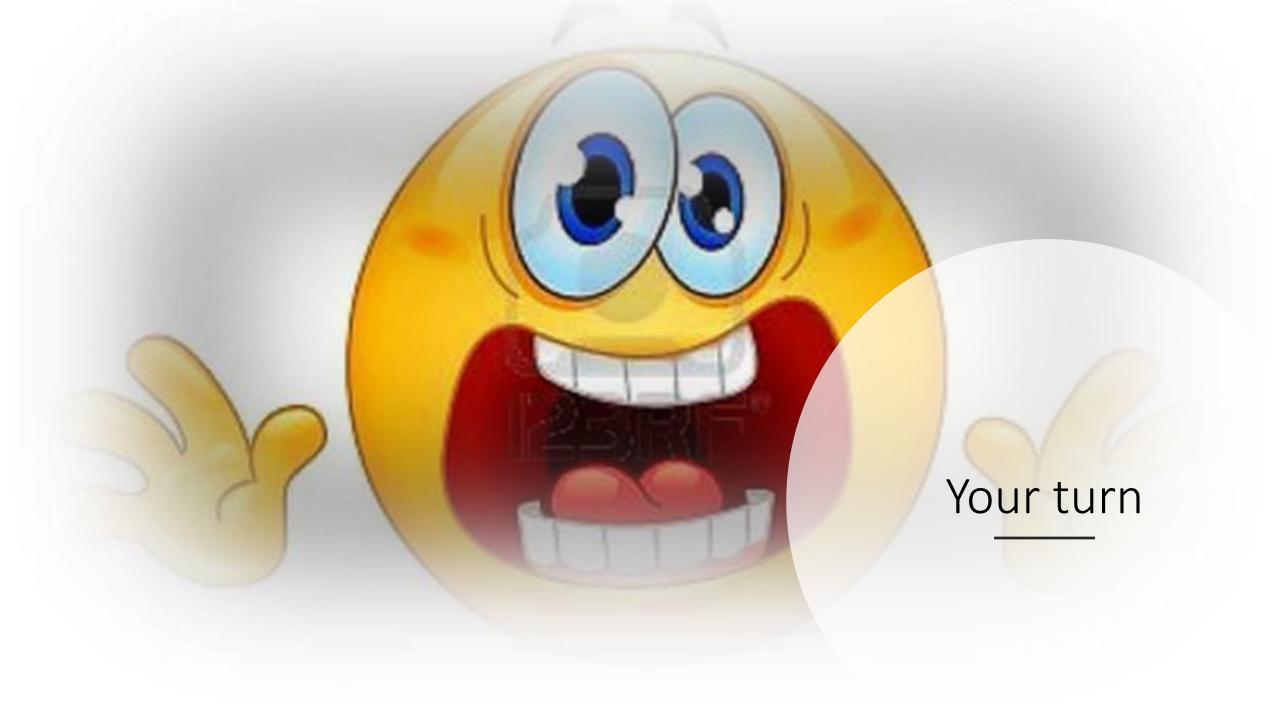
CO2

## solutions









# Basis Scherm gebruiken Downloaden

Materiaal:

micro:bit / batterij / USB-kabel / laptop

Site:

makecode.microbit.org





#### Werkwijze

1. Schrijf je code online op makecode.microbit.org:



- 2. Test je code online op het beeldscherm
- Geef je programma een naam; bijvoorbeeld Test 1

Test 1

4. Klik op Download en kopieer je code naar de micro:bit. Dat kan je doen door het bestand naar het station van de micro:bit te slepen.



## Stappenteller



#### Materiaal:

micro:bit / batterij / USB- i



Site:

makecode.microbit.org

## Werkwijze

5. Schrijf je code online op makecode.microbit.org:

```
wanneer knop A ▼ wordt ingedrukt

stel stappen ▼ in op 0

toon nummer 0

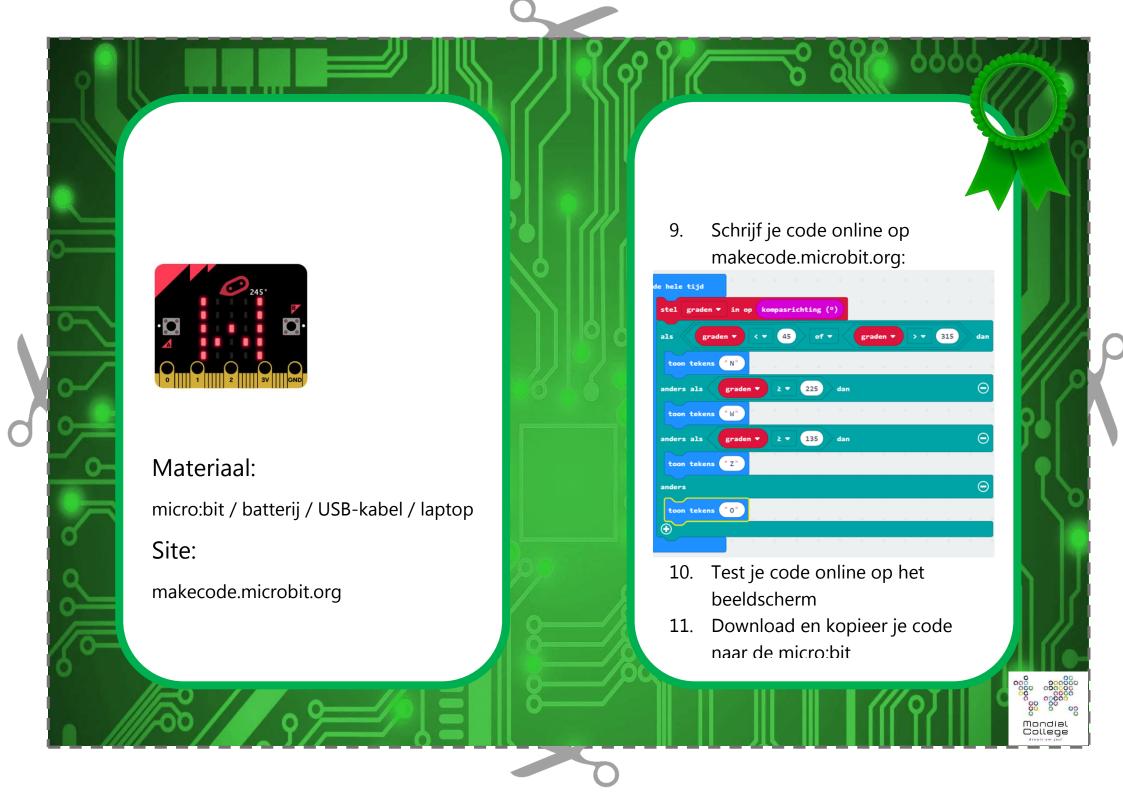
bij 3g ▼

verander stappen ▼ met 1

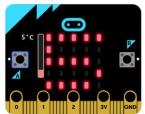
toon nummer stappen ▼
```

- 6. Test je code online op het beeldscherm
- 7. Download en kopieer je code naar de micro:bit
- 8. Bevestig de micro:bit met batterij





### **Thermometer**



Temperatuursensor

#### Materiaal:

micro:bit / batterij / USB-kabel / laptop

Site:



makecode.microbit.org

## Werkwijze

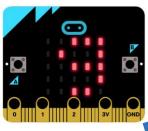
Schrijf je code online op makecode.microbit.org:

```
in op temperatuur (°C)
```

- Test je code online op het beeldscherm
- 14. Download en kopieer je code naar de micro:bit



#### **Magneet Detector**



Magnetisch veldsterkte

#### Materiaal:

micro:bit / batterij / USB-kabel / laptop

Site:

makecode.microbit.org

## Werkwijze

Maak eerst de variabele f

15. Schrijf je code online op makecode.microbit.org:



- 16. Test je code online op het beeldscherm
- 17. Download en kopieer je code naar de micro:bit



#### Muziekinstrument



#### Materiaal:

micro:bit / batterij / USB-kahel / lantop

Site:



#### Werkwijze

19. Schrijf je code online op makecode.microbit.org:



- 20. Test je code online op het beeldscherm
- 21. Download en kopieer je code naar de micro:bit
- 22. Verander de toon door meer of minder licht op de display van de micro:bit toe te laten.
- 23. Varieer met andere rekensommen voor de



Type of material: Lesson plan

#### **Subject: Physics**

#### **Topic:** Uniformly Accelerated Motion

#### General competencies developed during the lesson:

program-based thinking design thinking

#### **Equipment/resources required:**

Computer (program LoggerPro)

Overhead projector

School board

Equipment for experiment: small toy cart, weights, pulley, cord, motion detector, Vernier LabQuest



#### **General Objectives:**

Drawing graphs
Being able to perform measurements

#### **Physics Objectives:**

Understanding basics of motion and accelerated motion Understanding graphs of motion and being able to draw graphs: s(t), v(t), a(t) Being able to use motion equations for calculations of missing parameters Being able to solve problems regarding uniformly acceleration motion Being able to design an experiment describing accelerated motion

#### 1. Lead-in

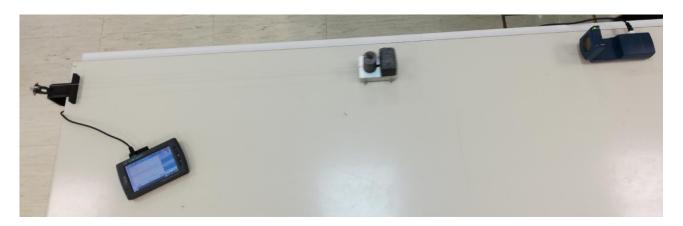
Warm up questions regarding uniform motion and non-uniform motion:

- a) What kind of motion do you know/recall?
- b) What is uniform linear motion? Can you give some examples?
- c) Which equations represent uniform linear motion? Does velocity depend on time for this kind of motion?
- d) Can you draw a displacement-time graph of the given example?

#### 2. Experiment

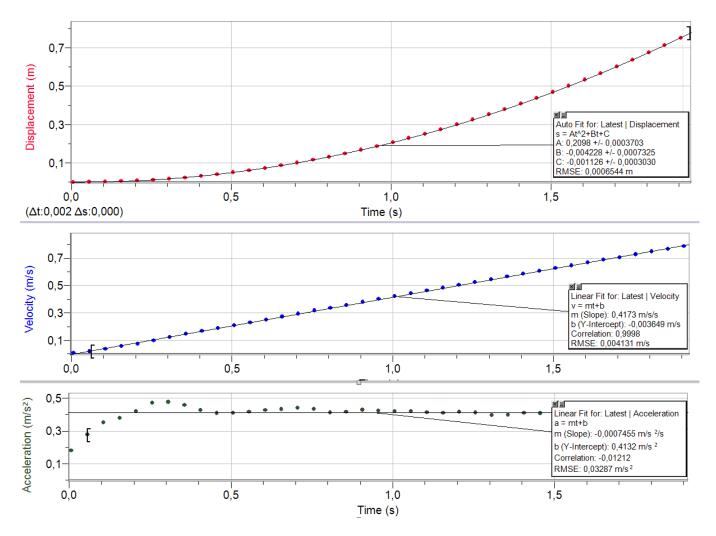
#### A. Demonstration

Teacher demonstrates experiment of uniformly acceleration motion in which motion detector measures the distance between the small toy cart and the detector. The detector is connected to a Labquest device which is able to measure displacement, velocity and acceleration of the toy cart. The device is connected to the PC and the overhead projector.



Before the demonstration the teacher gives some questions about the possible outcomes of the experiment (type of motion, acceleration, velocity, displacement, how graphs should look like, ...). At the end of the discussion students should be able to predict the outcome (make a hypothesis) of the experiment.

Outcome of the experiment:



Explanation of the outcome is followed by a discussion.

After the discussion the teacher derives equations for uniformly acceleration motion:

1.) 
$$a = \frac{\Delta v}{\Delta t} = \frac{v - v_0}{t} \implies v = v_0 + at$$

2.) 
$$s = \overline{v} \cdot t$$
,  $\overline{v} = \frac{v_0 + v}{2}$   $\Rightarrow$   $s = \frac{v_0 \cdot t}{2} + \frac{v \cdot t}{2}$ 

Combine 1.)  $\rightarrow$  2.):

$$s = \frac{v_0 \cdot t}{2} + \frac{(v_0 + at) \cdot t}{2} = v_0 \cdot t + \frac{a \cdot t^2}{2}$$

Final equations for uniformly acceleration motion:

$$a = \frac{\Delta v}{\Delta t} = \frac{v - v_0}{t}$$
$$v = v_0 + at$$
$$s = v_0 \cdot t + \frac{a \cdot t^2}{2}$$

#### **B.** Controlled practice:

a) Draw graphs of the demonstration experiment: s(t), v(t) and a(t).

#### C. Free practice:

a) Read the graph and find displacement, velocity and acceleration at t = 1.0 s.

$$s = 16.5$$
 cm,  $v = 0.415$  m/s,  $a = 0.42$  m/s<sup>2</sup>

b) Calculate the acceleration of the toy cart from graph v(t).

$$a = \frac{\Delta v}{\Delta t} = \frac{v_2 - v_1}{t_2 - t_1} = \frac{0.62 \text{ m/s} - 0.21 \text{ m/s}}{1.5 \text{ s} - 0.5 \text{ s}} = 0.41 \text{ m/s}^2$$

c) Exercise: Peter rides on a motorcycle at a speed of 36 km/h for 10 seconds. Then he starts accelerating. His speed increases to 144 km/h in 6.0 seconds. Calculate the acceleration.

$$a = \frac{\Delta v}{\Delta t} = \frac{v - v_0}{t} = \frac{40 \text{ m/s} - 10 \text{ m/s}}{6.0 \text{ s}} = 0.50 \text{ m/s}^2$$

#### 3. Conclusion

#### Review and Follow up:

- a) Continue with the given exercise and calculate the total displacement of Peter and his motorcycle for the given time.
- b) Draw graphs: s(t), v(t) and a(t) for the given exercise.
- c) Gravitational acceleration vertical motion

#### Subject: Health Topic: First Aid

#### General competencies developed during the lesson:

Cross - Cultural competency, Computatinal thinking, Design mindset

Digital study materials developed for the lesson:

https://share.nearpod.com/Vj3i8K1IM0

#### Digital sources used for the lesson:

Powerpoint

https://nearpod.com/
App: PuppetPals2

#### **Objectives:**

Students will:

- 1. Know what basic first Aid is and how to examine an acute ill or injured person
- 2. Recognize symptoms that suggest that the patient needs first Aid
- 3. Perform basic first Aid and CPR
- 4. Use digital devices
- 5. Practice and develop the communication skills required for their future proffesion

#### 1. Lead in

➤ Teacher introduces the topic First Aid with a Nearpod lesson.

#### 2. Guided practice

- ➤ Nearpod is a student engagement platform designed for use in class.
- With Nearpod, teachers interact with students and view student responses in real time, enabling students to take ownership of their learning rather than passively viewing a teacherdirected whole-class presentation.
  - 1. The teacher needs to create an account in Nearpod. This is free of charge or maybe your school have the school edition.
  - 2. Upload a Powerpoint
  - 3. Start adding activities; quiz's, polls, videos, drawing- boards, web content, matching pairs, memory test, 3D
  - 4. You can change the order of your slides

- 5. Share the wanted Nearpod with the class by pressing Live session/ Studentpaced, give the student the code to access (iPad, smartphone, computer). Students dont have to create an account.
- 6. After session you get a report on students results

#### 3. Problem solving - Puppet Pals2

- > Student work in groups of three
- > They need one iPad or smartphone
- Download the app "Puppet Pals2"

#### **Assignment:**

Make a story about a family that is a little unfortunate on an abnormal action-packed summer holiday. Family members must have names and ages.

The task should be presented as an animated film in which you use the app "PuppetPals2", this film will be shown to the class.

During the story, you must show two different first Aid situations;

- Accident
- Symptoms
- Aid

The first Aid situation you can choose from is;

- Fracture
- Concussion
- Poisoning
- Choking
- Burning
- CPR
- Bleeding
- Heat stroke/freeze
- Stroke

#### 5. Conclusion

According to this what conclusion can we draw? Why do we need to know this?

### Subject: Communication and problem solving Topic: Keep talking and nobody explodes

#### General competencies developed during the lesson:

Cross-cultural competence, Computational thinking, Transdisciplinary, Design mindset **Digital study materials developed for the lesson:** 

#### Digital sources used for the lesson:

https://keeptalkinggame.com/ http://www.bombmanual.com/ https://bombmanual.github.io/

#### **Objectives:**

Students will:

- 1) Practice and develop collaboration skills
- 2) Improve their concentration
- 3) Use digital devices

#### A. Introduction:

- A student is trapped inside a virtual room along with a ticking bomb that has to be disarmed. The other students are the bomb experts with a manual. They need to find out how the bomb can be disarmed by interpreting the information they find in the "Bomb Defusal Manual". The problem is ... the experts can't see the bomb! Through communication the student with the bomb and the experts have to solve the problem before the bomb explodes.
- ➤ Before class you have to purchase and download the game. Purchase the game from the developers, not Steam. If you use Steam you have to be logged in to play the game.

#### B. The gameplay

#### 1 Hour

Divide the class into groups of 3-4 students.

One group decide who should be "disarmer" (1 student) and who should be "bomb experts" (rest of the group). Let the group study the bomb manual and give them time to make a strategy on how to divide the tasks required to disarm the bomb. For example who is the leader that makes the final

decisions, divide the modules etc. The other groups have to observe and are later to give feedback on the bomb groups communication and collaboration skills.

Let the class and the disarmers see the bomb on a whiteboard/screen. The bomb experts are facing away from the screen.

The teachers role in this assignment is to make sure that they all follow the rules and help when the disarmers are completely astray.

After the first group of students have tried to disarm the bomb let the other groups discuss and come with constructive criticism on what could have been done differently to improve the result.

Then it's the next groups turn.

# Subject: Interdisciplinary approach: Sales promotion, Arranging, Visual communications, Multimedia advertising, Marketing Topic: Design of a service in event management

#### General competencies developed during the lesson:

Transdisciplinarity, design thinking

Digital study materials developed for the lesson:

Mentimeter question (what do we need to organize an event)

https://www.mentimeter.com/

Digital sources used for the lesson:

- https://www.youtube.com/watch?v=-k5y4bLU5X4 (10 years-movie about reunion)
- https://www.entrepreneur.com/article/345182
- https://www.youtube.com/watch?v=-4J6odn3oSY

#### **General objectives:**

- develop student's identity with the profession,
- develop selfmotiviation,
- · develop the ability to apply theoretical knowledge in practice,
- develop skills in managing the working processes,
- organization and supervision of work,
- develop the ability to monitor the development of the profession,
- · develop skills and sense of responsibility

#### Curriculum units covered by the unit:

- marketing tools,
- sales promotion tools,
- visual identity, decorations,
- animation,
- videoproduction,
- filming,
- photography,
- graphic design (logo, poster, invitation),
- public relations (sponsors, media,...),
- decorations
- arranging
- branding,
- visual merchandising.

#### Following the 5 steps of design thinking method:

#### 1. What do you think that we need to organize an event? DEFINING A PROBLEM

Students are asked to answer the question on Menti. We collect their answers and make a print screen.

We put the answers into groups and we got an organisational diagram with groups of tasks:

- Program group
- Decorations group
- Graphic design group
- Photo/video group
- Catering group

According to their interests students choose the suitable group.

#### 2. Movie time - EMPHATIC UNDERSTANDING OF THE USER

Students watched the movie 10 years. <a href="https://www.youtube.com/watch?v=-k5y4bLU5X4">https://www.youtube.com/watch?v=-k5y4bLU5X4</a>
The movie talks about a high school reunion and is ideal to get ideas.

#### 3. Organisation - ACQUIRING AND SHAPING IDEAS

Brainstorming session for the name of the service: students do the brainstorming or another method to develop ideas to choose a suitable name of the service. The name should be short, have a full meaning and be fashionable to attract.

Another brainstorming session to define the program, the timing, choose places.

Division into groups and distribution of tasks. Each group should choose a leader. Leaders communicate and share ideas. Each group defined their own tasks.

#### 4. Designing a service: PROTOTYPING

Graphic design: the graphic design group prepare a visual identity of the service (logo, colours, font, symbols). <a href="https://www.canva.com/sl">https://www.canva.com/sl</a> si/

Photo/Video: they search for old photos and videos (ask for a school's archive...)

Program: the program group design a program, find records about generation, collect old school's magazines...

Catering group: prepare a menu, contact catering companies, search for prices...

Decorations: prepare accessories, photo stops, promotional boards, visualisation of the main room and other rooms.

#### 5. Implementing: TESTING

Test the idea: present the idea to teachers that were former students of the school, put the flyer on school's FB page and see the reactions. Contact people who reacted to the flyer with a polite invitation.

Post teasing posts about the service, offer the possible dates to choose. Once you got a contact person you can start with the real organisation of the event. You have to be careful with GDPR and HACCAP.

You can use google drive to collect material:

• <a href="https://docs.google.com/document/u/7/">https://docs.google.com/document/u/7/</a>

#### • <a href="https://drive.google.com/drive/u/7/my-drive">https://drive.google.com/drive/u/7/my-drive</a>

Program group: prepares the presentation of What happened in the year.... (the year of graduation of the generation) using old records from school magazine, old photos, maybe videos...contact their class teacher and the headmaster to fix the date. Set a playlist with popular songs from the year.X.

Graphic design: the graphic design group prepares the invitation that includes old photos of the generation. <a href="https://www.canva.com/sl\_si/">https://www.canva.com/sl\_si/</a>

Photo/Video: printing old photos, putting them into frames, printing covers of old magazines for the exhibition in the canteen.

Catering group: prepares a menu, contacts catering companies, searches for prices...decorates the canteen (the board, the exhibition), prepares plates, paper, orders a cake, buys drinks and some snacks

Decorations: prepares accessories, photo stops, promotional boards - #thebestgeneration, Top Anniversary, ... visualisation of the main room and other rooms, decoration of the catering room (balloons, aperitif table and catering table...)

#### 6. EVALUATION:

Students make a written report about their tasks and evaluate the activity with extreme method. They point out the best (pluses) and the worst (minuses) and give possible examples of improvement.

So, the never-ending circle of design thinking has been closed or better: **Ready to start again, with all the improvements.** 

The method hasn't been introduced to the students at the beginning of the learning unit. The unit has been introduced only as a transdiciplinary approach.. During the final part, when they write a report, the teacher introduces the method, so students can connect their experience to the theory. They have to do the same with all the curricular units that were included in this learning unit. I call this type of learning backwards learning. It is based on a real experience and they easily memorize the important parts, and this knowledge is forever. They don't forget, because they don't forget the experience.

**Subject: English** 

**Topic:** WRITE FOR RIGHTS

#### **General competencies developed during the lesson:**

intercultural competence program-based thinking transdisciplinarity design thinking

#### Digital study materials developed for the lesson:

#### Digital sources used for the lesson:

https://www.amnesty.org/en/get-involved/write-for-rights/ http://amnesty.soc.srcf.net/what/letter-writing/ https://www.amnesty.org/download/Documents/ORG1090612018ENGLISH.PD F

#### **General Objectives:**

Empathy development

Critical thinking

Encourage students to get actively involved

Being aware of different problems people around the globe face

Better understanding of cultural differences

#### **English Objectives:**

Being able to understand an issue and adjust the style/vocabulary of the letter to the addressee

Developing reading & writing skills

Acquiring new vocabulary

Each student writes a letter (formal OR informal)

#### 1. Lead-in

- a) Presenting Amnesty International show the logo, ask if they know what it is, what they do
- b) Discussion: students answer, ask; teacher explains

#### **2.** Case study

#### Students:

- get the handouts or link to Amnesty International webpage: https://www.amnesty.org/en/get-involved/write-for-rights/
- read about the cases in question or read the handouts provided by AI
- decide which case they feel most strongly about, explain why
- study AI letter guide
- read 'sample letter' so that they find out what the most important parts are, what to pay attention to
- write a letter, checking the handouts or accessing AI webpage & online dictionary when necessary
- ask for teacher's advice if needed
- hand in the letters

#### 3. Conclusion

Students check Amnesty International webpage to see how their case is developing, if it has been solved and how.

## TRANS-DISCIPLINARITY

#### **Subject: Music**

#### Topic: Forms of expression in music and art

General competencies developed during the lesson:

Transdisciplinarity

Digital study materials developed for the lesson:

https://www.thinglink.com/scene/1150129788455747587

#### **Objectives:**

- 1. The student is able to express his/her opinion about Nikolai Rimsky-Korsakov's musical composition The Sea and Sinbad's Ship and analyze the music, using subject terminology, giving arguments and considering opinions of others.
- 3. The student is able to analyze Camille Saint-Saëns's musical composition Aquarium and compare it to the musical composition The Sea and Sinbad's Ship applying acquired knowledge and using subject terminology.
- 4. The student is able to find necessary information concerning topics of visual art and music using Internet resources.
- 5. The student is able to reveal the connection between forms of expression in music and visual art.

#### A. Introduction:

Activating pre-knowledge. The teacher introduces the discussed point of the connection between music and visual art: the ability to depict the sea. The program Thinglink (section *Introduction*) is used to deliver visual content.

#### B. Guided practice:

#### The First Block (scene *The Night Wave* is used)

- ➤ Learning about Ivan Aivazovsky's painting The Ninth Wave, about the artist himself and about his other marine paintings.
- Application of acquired knowledge in solving the tasks for analyzing forms of expression and answering the questions given at the end of the first block (teamwork and individual work).

The teacher draws the attention of the students to the mentioned links to the websites that can be used as a source of additional information for completing the tasks and answering the questions.

The Second Block (scene *The Sea and Sinbad's Ship* is used)

- Learning about Nikolai Rimsky-Korsakov's musical composition The Sea and Sinbad's Ship and about the composer himself.
- Listening and analysis of two different variants of performing the musical composition The Sea and Sinbad's Ship (changes in the characteristics of music, instruments depicting different moods of the sea etc.).
- Answering the questions given at the end of the second block (teamwork and individual work).

#### The Third Block (scene Aquarium is used)

- ➤ Learning about Camille Saint-Saëns's musical composition Aquarium and about the composer himself.
- ➤ Listening and analyzing two different variants of performing the musical composition using acquired knowledge and professional terminology.
- Answering the questions given at the end of the third block, including the comparison of the musical composition Aquarium to the composition The Sea and Sinbad's Ship (teamwork and individual work).

#### C. Guided discussion and conclusion (scene *Conclusion* is used):

The discussion should lead to the understanding that every form of art has its own artistic opportunities - music can depict the sea as vividly as visual art can.

**Conclusion:** A composer can "draw" a picture of the sea so that a listener can "see" it as it would be drawn by an artist.

Type of material: Part of lesson plan

Subject: Mathematics
Topic: Statistics. Percent

General competencies developed during the lesson:

transdisciplinarity, design-thinking and virtual cooperation.

Digital study materials developed for the lesson:

https://www.thinglink.com/scene/1152506275729244162

#### **Objectives:**

- 1. Student understands the definition of "percent, percentage";
- 2. Student knows the notion of a chart;
- 2. Student is able to apply basic formulas to calculate the percent;
- 3. Student is able to analyze information and highlight the most significant information, generalize, systematize and present it.
- 4. Students can work in a group (using virtual cooperation), supporting and motivating each other;
- 5. Student is able to present the result of the group work through interactive tools.

#### A. Introduction:

Activating pre-knowledge. Students will follow the link and try to complete the task. Exercises are made using sites <a href="www.thinglink.com">www.thinglink.com</a>, <a href="www.purposegames.com">www.purposegames.com</a>, <a href="Google Docs">Google Docs</a>

#### B. Guided practice:

➤ Based on the example students will analyse and synthase the received information, discuss in groups and make a development plan of their project. The discussion should lead to an understanding of what needs to be done and how it will look.

#### C. Independent Practice (can be assigned as home work):

> The project can be prepared at home and completed in class.

### Subject: Physics and 3D-modelling Topic: Why the ships are floating

#### General competencies developed during the lesson:

Design thinking, transdisciplinary competence

Digital study materials developed for the lesson:

https://docs.google.com/presentation/d/1lyCYf\_fRYBbO02E3zEK1z1TQO8F8BDnV4rq4a2uLXW M/edit?usp=sharing

#### **Objectives:**

Students will:

- 1) get acquainted with the law of Archimedes, with the law of swimming bodies in a liquid,
- 2) develop the ability to apply the law of Archimedes, the law of swimming bodies in solving problems
- 3) get acquainted with the technique of modeling a 3D model of a boat and anchor in 123D-design
- 4) develop the ability to model 3D objects for experiment
- 5) develop the ability to behave safely on the water

#### 1. Lead-in

- ▶ Demonstration of the experiment (boat and anchor / ball of the same mass).
- ➤ Goal setting:
  - 1) find the answer, why do objects of the same mass behave differently in water one floats, the other drowns?
  - 2) simulate 3D objects, conduct an experiment with them and draw conclusions in groups.
  - 3) present your work

#### 2. Definition

> Search for an answer through reading material on the Internet.

#### 3. 3D-modelling

Modeling floating objects, conducting an experiment with them through work in a group

#### 4. Conclusion

According to this what conclusion can we draw? Why do we need to know this?

#### **Subject: Technology**

#### Topic: Using tools in the technology class.

#### General competencies developed during the lesson:

Computacional thinking, Design mindset, transdisciplinarity (TEC, ICT)

Digital study materials developed for the lesson:

https://b.socrative.com/login/student/

#### **Objectives:**

- 1. Student encourages his cognitive and connective abilities.
- 2. Evaluation the knowledge of the contents of the subject.
- 3. Use digital devices.

#### A. Introduction:

- ➤ Socrative can be accessed on the top three operating systems: Windows, Apple, and Chrome. No downloads are required. A web browser that utilizes HTML-5 is needed to access all functions. Socrative is also usable on various hardware: desktops, smartphones, tablets, and mobile phones.
- Technical help is offered via a web page that offers tips and answers frequently asked questions presented by users.

#### B. Guided practice:

Socrative is a formative assessment tool which allow teacher to check understanding of all students during a lesson. It's designed for use in class, in real time.

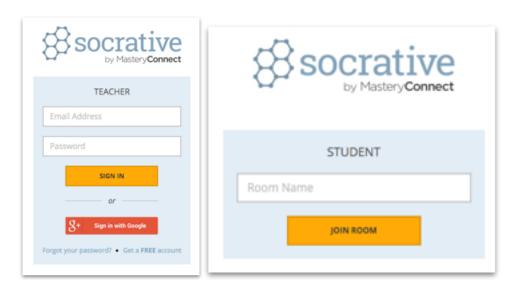
- 1. The quiz allows teacher to create multiple-choice, true/false or short-answer question quizzes that they can save and use again.
- 2. In class, the teacher launches the quiz and students complete it in real time on their devices.
- 3. As students answer the questions, the teacher can see the results and then download them.
- 4. The teacher can then make more informed decisions about what happens next in the lesson.

The advantages of using Socrative are:

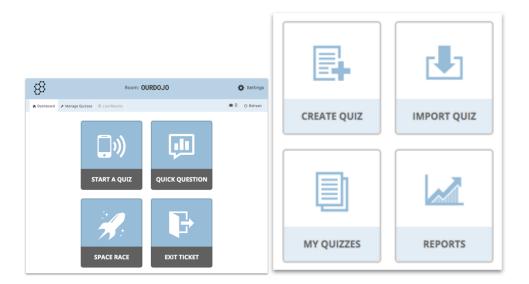
- Visualize student understanding
- Ask multiple choice and true/false questions
- Ask open-ended questions and vote on the results
- Create your own quizzes (instantly graded for you)
- Share quizzes with other teachers
- Give end of class exit tickets
- Play games with our space race
- View students results in real time
- Reporting Download, Email or send to Google Drive.

Socrative is a cloud-based student response system developed in 2010 by Boston-based graduate school students. It allows teachers to **create simple quizzes** that students can take quickly on laptops – or, more often, via classroom tablet computers or their own smartphones.

- 1. Go to socrative.com and click *TEACHER LOGIN*. You can sign up for free account or use your existing Google account.
- 2. Students need NOT register, and will only enter their names later.

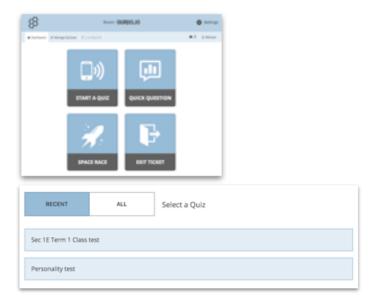


- 3. This is the room name to give students
- 4. Upon sigining in, you will enter your *DASHBOARD*. You may not have created a quiz yet, so click on *MANAGE QUIZZES*.
- A new set of options will appear.Click on CREATE QUIZ to start the process.



6. You have the options of creating MULTIPLE CHOICE, TRUE / FALSE or SHORT ANSWER quiestions.

- 7. You can create as many questions as you'd like, and the procedure is quite straightforward. You can also optionally include answers if you want the system to generate the marks automatically.
- 8. Once satisfied, go ahead and click SAVE & EXIT for the next step.
- 9. Take note if want to share. You can insert the number SOC-39086897. "Tools vocabulary" is the example used in Estonia.

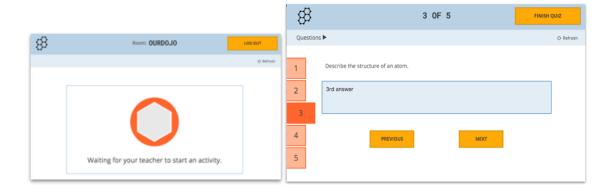


- 10. You will be sent to your dashboard again. Now click on START A QUIZ to use the quiz that you've created earlier. You can recycle the ones you have used before as well as they will be stored in the system for future use. Click on the quiz you want to use.
- 11. Best for home based learning
- 12. Recommended to turn off to capture student names in report
- 13. Select the type of quiz you like, and click *START* to begin the quiz.

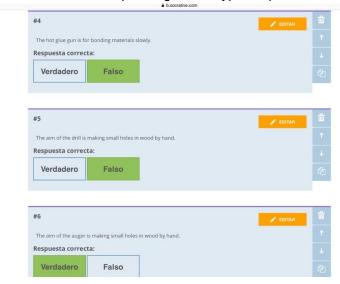
Step by Step for students.



- 1. This is what the student will see after clicking **STUDENT LOGIN** in the main page.
- 2. Notice that they just need to know the Room Name and click *JOIN ROOM* to begin, thus reducing the need for tedious registration process.
- 3. Once they entered their names, clicking *DONE* will lead them to a page where they wait for the teacher to start the quiz (if he/she has not already done so).

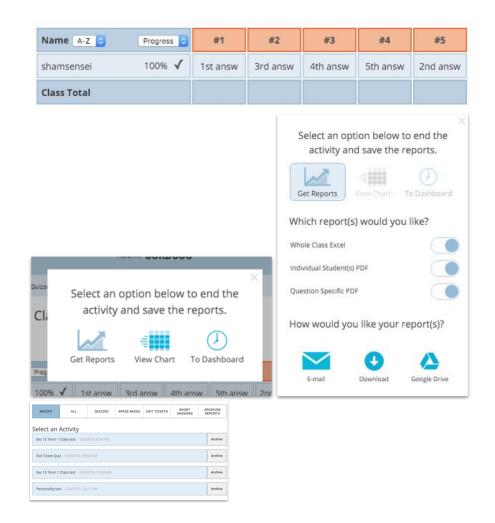


- 4. Use PREVIOUS and NEXT instead of FINISH QUIZ
- 5. Students can choose which to do first
- 6. When the teacher starts the quiz, the student will automatically see the question and an answer box. Depending on the type of quiz set earlier, the teacher has the flexibility of



choosing the pace of the quiz. Remember to tell them to click *FINISH QUIZ* only after they are satisfied with their answers. A waiting screen will appear once they are done.

- 7. Toggle off to show on screen
- 8. Tick signifies student has finished quiz
- 9. On the teacher's screen, he/she will be updated on the progress of all the students in real-time. This is a good chance for the teachers to either discreetly monitor or choose to show the class how they are doing so far.
- 10. Once the time is up or when all have completed the task, click *FINISH*.
- 11. You are now ready to generate your report. For now, Click on *TO DASHBOARD* to return to the homescreen.
- 12. No. of students in room



- 13. Turn on all to generate reports to give students
- 14. To save soft copies
- 15. Take note of date to get correct reports
- 16. Click on *MANAGE QUIZZES* as before and click on *REPORTS*. You are given many options of how you want to generate the reports.
- 17. **DOWNLOAD** will save a zipped file into your hard drive, and a few sample of how they appear is in the next page.



#### C. Guided discussion:

According to this what did you find difficult about today's lesson??

#### D. Independent Practice (can be assigned as home work):

You could also use Socrative to assess reading or listening comprehension. You can also add information about why an answer is correct in the "explanation box" which could be very useful for exam classes.

#### **Subject: Technology**

Topic: Review mechanism.

#### General competencies developed during the lesson:

Computacional thinking, Design mindset, transdiciplinarity (TEC, ICT).

Digital study materials developed for the lesson:

www.playposit.com

#### **Objectives:**

- 1. Students benefit from an engaging and differentiated, computer-based experience.
- 2. Use digital devices and testing.
- 3.Students achieve a whole-school alignment of blended learning.

#### A. Introduction:

Playposit is a interactive web-based video platform that allows educators to provide formative assessment both inside and outside the classroom. Teachers are able to embed quiz-type questions into videos on Youtube, Vimeo, Khan Academy and other popular video platforms. Data can then be analyzed on the individual or group level, provided powerful insight into educational trends in the classroom.

#### **B.** Guided practice:

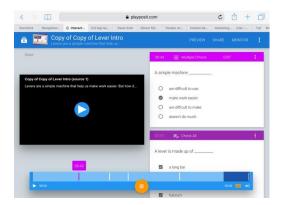
A bulb is an interactive video created in PlayPosit.

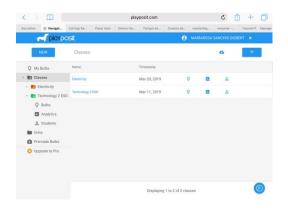
First of all, transform any video into an active experience for students by embedding questions, images, audio, and other media elements.

Secondly, add any of the premium question types to make your video engaging for students.

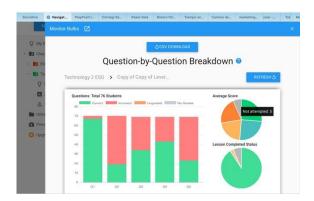
At the end you can see the student participation and responses.

The Analytics tab provides you with a broad overview on student performance including score, total time spent, and their progress across all bulbs assigned to the course.









#### Step by step

Register as an instructor in www.playposit.com

Create a bulb and adding a video.

- 1. In My Bulbs, click New Bulb to open the designer
- 2. Select You Tube, search for a video, select one, and click Done.
- 3. Click the button labeled "Add and Interaction" to insert a question at your current playback timestamp. When you're done adding your interaction's text and answer options, click Done to save and close the interaction.

Create a class and adding students.

- 1. Click on Classes.
- 2. Click Add new class, title it, and click save.
- 3. Students enter Search code. Students individually log in to their Playposit accounts, click add class, and enter your instructor search code.

#### Assigning bulbs.

- 1. In My Bulbs, click the triple dots icon at the right for the bulb you want to use and click Assign.
- 2. Select a due data for the class you want to assign this bulb to and click ok.
- 3. You should get a green toast notification indicating that your bulb has been successfully assigned.

#### Monitoring responses.

- 1. Click Monitor for the specific class.
- 2. You should see all of that class's responses for this bulb.

#### Premade Bulbs.

- 1. Filter all premade. Classify by grade and topic.
- 2. Copy bulb.
- 3. Edit bulb.

I choose "pulleys" from premade bulb for technology class. I test the bulb in Slovenian students.

#### C. Guided discussion:

What do you think about this application? Was it useful for you? Did you enjoy using it?

#### D. Independent Practice (can be assigned as home work):

You could also use Playposit anywhere. So this enables its students to also use at home, on their own without needing help. The application is not just for use in schools.

### Subject: Language, communication & Technology Topic: Making a Pecha Kucha in English

#### General competencies developed during the lesson:

Expressing in English, Computational thinking, Design mindset, transdisciplinarity (TEC, ICT) **Digital study materials useful for the lesson:** 

https://www.youtube.com/watch?v=32WEzM3LFhw

#### **Objectives:**

- 1. Student encourages his cognitive and connective abilities.
- 2. Evaluation the knowledge of the contents of the subject.
- 3. Use digital devices.

#### > Introduction:

➤ Pecha Kucha can be designed by using PowerPoint or Google Presentations.

#### **▶** Main Goal

- Our main goal is to make a Pecha Kucha about the similarities and differences of your own culture and that of other countries.
- > Students from different countries are able to communicate with each other in English.

#### > Sub Goals

#### Fase 1

#### Students

- o can express themselves in English;
- o are able to make a Pecha Kucha;
- can present their own world to other international students by means of a Pecha Kucha;
- o get a clear picture of the image of their own country;
- o are aware what image other European students have of your own country.

#### Fase 2

#### Students

o are able to present actual issues from their own country;

- know about current issues that are important in other European countries;
   (environmental problems, state establishment, refugee policy, European cooperation, Trump, fake news, etc);
- o are able to describe a historical event that has had a major impact on their country. (fall of the Berlin Wall, World War II, local heroes, etc);
- o know how a historical event can have different consequences for countries.

#### > Our project can be integrated into

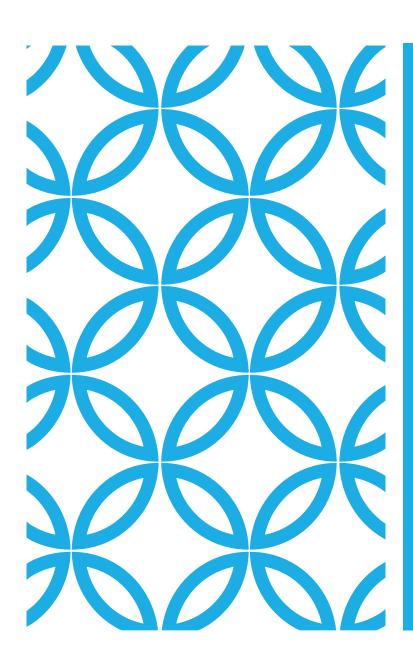
- o History
- o English
- Social studies
- o Economics
- o Geography

#### ➤ Guided lessonplan

And now, how does it work? We refer to several documents.

- 1. Ppt instruction teachers Pecha Kucha eTwinning (pdf)
- 2. Example Pecha Kucha eTwinning (pdf)
- 3. Ppt pupils Pecha Kucha eTwinning (pdf)

Have fun and good luck!



## PECHA KUCHA

Hanneke Bibian

## INTRODUCTION

Our main goal is to engage students to have a conversation about the similarities and differences of their own culture and those of other countries.

### PECHA KUCHA



### GOALS FASE 1

#### **Students**

can expres themselves in English.

are able to make a Pecha Kucha.

can present their own world to other international students by means of a Pecha Kucha.

get a clear picture of the image of their own country.

are aware what image other European students have of their own country.

### GOALS FASE 2

#### **Students**

- 1. are able to present actual issues from their own country.
- 2. know about current issues that are important in other European countries. (environmental problems, state establishment, refugee policy, European cooperation, Trump, fake news, etc)
- 3. are able to describe a historical event that has had a major impact on their country. (fall of the Berlin Wall, World War II, local heroes, etc)
- 4. know how a historical event can have different consequences for countries.

• • • •

## INTRODUCTION

Our project can be integrated into History English Social studies **Economics** Geography

## **OUR EXAMPLE**



# YOUR TURN!



## SUGGESTIONS FOR THE PECHA KUCHA

Who am I? What does my neighbourhood look like? What does my country look like? What does my school like? How does my language sound? What is the favourite dish of my country? Which remarkemable customs has my country. How do foreigners look at my country? What is the most important export product? What is your country proud of?

# SUGGESTIONS FOR FASE 2



How do Europeans from different countries look at certain historical, European events.



What current problems does our country have? What are the hot items of domestic news?



• • • • •

## QUESTIONS



## MAKE YOUR OWN PECHA KUCHA

Make pairs.

Make your own Pecha Kucha.

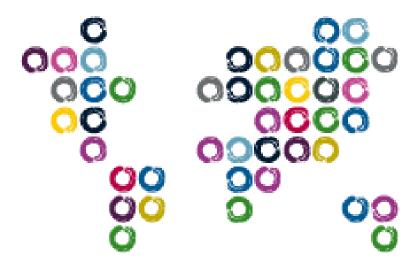
- Look at our suggestions.
- Your starting point is your own world. ...





And.... here we are!







draait om jou!



# Mondial College Nijmegen









On the way to school







Nijmegen











The Netherlands according to the tourist information

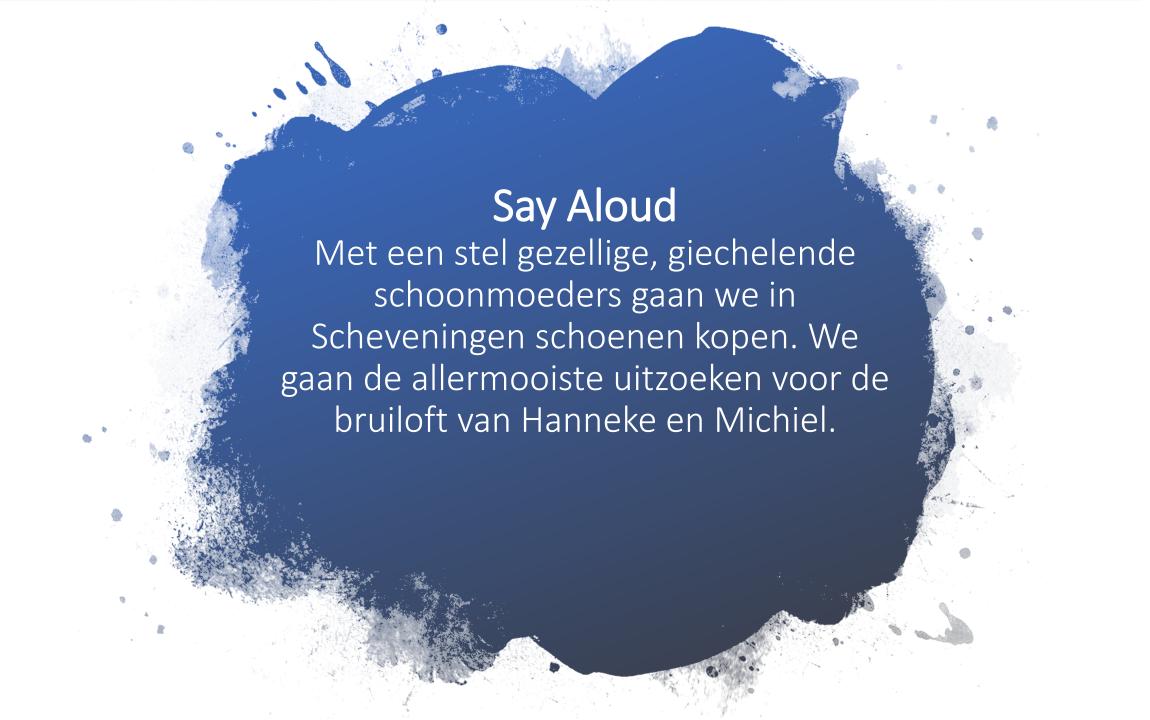






The Netherlands on an ordinary day





### Throat defect?

With a couple of nice, giggling mothers-in-law we are going to buy shoes in Scheveningen. We are going to find the nicest pair for the wedding of Hanneke and Michiel.









Strange?



# Our national pride





Import- and exportproduct







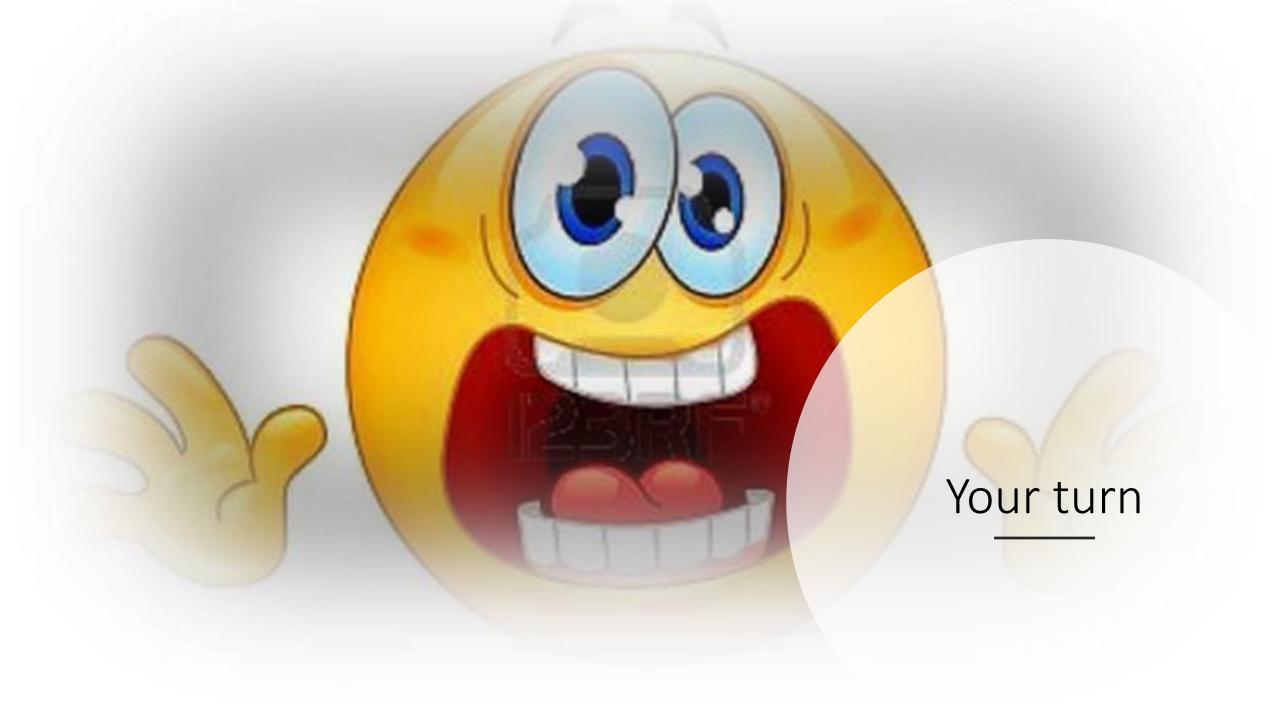
CO2

## solutions









#### **Subject: Music & Art**

#### Topic: Let's communicate by the means of music & Art

#### General competencies developed during the lesson:

Communication in English

Communication through music & art

Learn more about other countries and cultures.

#### Digital study materials developed for the lesson:

Instruction video

#### **Objectives:**

- 1. Student (is able to communicate in English)
- 2. Student (is able to communicate by the means of social media, email, skype)
- 3. Student (is able to use correct forms of grammar while communicating in English)
- 4. Student (is able to make a creative "switch"-> Mood board)
- 5. Student (is able to research a certain piece of art and to express his or her own emotions related to a certain piece of art).

#### A. Introduction:

Watch the instruction video.

#### B. Guided practice:

1. What do you need?

Magazines

Glue

Scissors

A piece of paper in A3 form

Markers

- 2. From your teacher you will get an email address of a student/pupil who lives in another country.
- 3. Choose a song in your own language.
- 4. Send the clip of the song to the given email address. All further communication will be in English from now.
- 5. You will receive a clip of a song from the other student in his/her mother language.
- 6. **Mood board:** Make a mood board in which you express the feelings you get from the song. Also include what you think the song is about.











7. Take a picture of your mood board and send the picture to the other student with the explanation of what you think the song is about and the feelings you got while listening to the song.



8. Make sure to think of 5 specific questions in order to get to know the other student.



9. You have both listened to each other's song and you made a mood board. Now call the other student.



10. **Skype call:** check if the interpretation of the song is correct. Discuss the mood board and explain why/or why not, this particular song is a good representation of your country.

11. This is the end of the assignment. Show your teacher the results and explain what you have learned.

#### C. Guided discussion:

- What did you learn from the other person?
- What did you learn about his/her country?
- Did you get the chance to improve your English?
- Did the other person learn anything from you as far as English is concerned?
- How did you like this assignment and what exactly?

#### D. Independent Practice (can be assigned as home work):

- Choose a random country that you always wanted to visit but know very little about. Find a song that you like a make a mood board based on that particular song. By means of researching as much as possible about the country, try to figure out whether your mood board is 'on the point'.

## Subject: Communication and problem solving Topic: Keep talking and nobody explodes

#### General competencies developed during the lesson:

Cross-cultural competence, Computational thinking, Transdisciplinary, Design mindset Digital study materials developed for the lesson:

#### Digital sources used for the lesson:

https://keeptalkinggame.com/ http://www.bombmanual.com/ https://bombmanual.github.io/

#### **Objectives:**

Students will:

- 1) Practice and develop collaboration skills
- 2) Improve their concentration
- 3) Use digital devices

#### A. Introduction:

- A student is trapped inside a virtual room along with a ticking bomb that has to be disarmed. The other students are the bomb experts with a manual. They need to find out how the bomb can be disarmed by interpreting the information they find in the "Bomb Defusal Manual". The problem is ... the experts can't see the bomb! Through communication the student with the bomb and the experts have to solve the problem before the bomb explodes.
- ➤ Before class you have to purchase and download the game. Purchase the game from the developers, not Steam. If you use Steam you have to be logged in to play the game.

#### B. The gameplay

#### 1 Hour

Divide the class into groups of 3-4 students.

One group decide who should be "disarmer" (1 student) and who should be "bomb experts" (rest of the group). Let the group study the bomb manual and give them time to make a strategy on how to divide the tasks required to disarm the bomb. For example who is the

leader that makes the final decisions, divide the modules etc. The other groups have to observe and are later to give feedback on the bomb groups communication and collaboration skills.

Let the class and the disarmers see the bomb on a whiteboard/screen. The bomb experts are facing away from the screen.

The teachers role in this assignment is to make sure that they all follow the rules and help when the disarmers are completely astray.

After the first group of students have tried to disarm the bomb let the other groups discuss and come with constructive criticism on what could have been done differently to improve the result.

Then it's the next groups turn.

## Subject: Geography Topic: Turkey

#### General competencies developed during the lesson:

intercultural competence, transdisciplinarity

#### Digital study materials developed for the lesson:

https://create.kahoot.it/share/what-do-i-know-about-turkey/06bb238e-0b06-49a3-ba60-6981968a2409

https://create.kahoot.it/share/turkey-and-its-neighbours/a37b1e54-4294-4d63-b1cf-72b61466687f https://create.kahoot.it/share/beautiful-turkey/093591e5-7930-44a1-aa9d-a7e217a23246

#### Digital sources used for the lesson:

http://www.yourchildlearns.com/online-atlas/turkey-map.htm https://www.rtvslo.si/

#### General objectives:

Students will:

- develop a positive attitude towards cultural diversity
- develop awareness of solving local, regional and global problems according to the principles of sustainable development and the principles of the World Declaration of Human Rights;
- develop their own awareness by studying the problems of other nations and cultures

#### Geography objectives

Students will:

- learn about the position of Turkey as an important player in European and Middle Eastern politics and economy
- find information about history of modern Turkey and explore its relations with its neighbours in the past and nowadays
- learn how countries have tried to solve mutual conflicts and how successful they have been
- get to know some natural and cultural sights of Turkey and evaluate them from the point of view of the preservation and suitability for the development of tourism

#### PART A

#### 1. Turkey and its neighbours

a) What do I know about Turkey? - Kahoot quiz <a href="https://create.kahoot.it/share/what-do-i-know-about-turkey/06bb238e-0b06-49a3-ba60-6981968a2409">https://create.kahoot.it/share/what-do-i-know-about-turkey/06bb238e-0b06-49a3-ba60-6981968a2409</a>

- b) Map of Turkey and its neighbours
- one student draws a large map (A1) of Turkey and its neighbours
- one student prepares leaflets with names of Turkey's neighbours and the length of borders
- other students put leaflets on the right position on a map
- c) News from Turkey

What is written about Turkey in online papers?

- students find news related to Turkey on <a href="https://www.rtvslo.si/">https://www.rtvslo.si/</a>
  - they try to find news related to Turkey's domestic affairs
  - they try to find news related to Turkey's problems with neighbouring countries
- students paste the links to Google Drive Document
- students present what they found
- discussion about Turkey's domastic affairs and Turkey's conflicts with neighbouring countries
- d) Turkey and its neighbours teacher's ppt presentation and discussion
- e) What did I learn? Kahoot quiz

https://create.kahoot.it/share/turkey-and-its-neighbours/a37b1e54-4294-4d63-b1cf-72b61466687f

#### PART B

#### 2. Why I love Turkey?

- a) Teacher's experience of Turkey
- as a tourist
- as a teacher on Erasmus+ exchange (Serik Antalya)
- b) Must-see historical and natural sights of Turkey
- teacher puts a list of 15 must-see sights in Turkey in Google Drive Document
- each student chooses one
- students find information about the chosen sight
- students complete a worksheet (picture, text, resources) and send it to teacher
- c) Kahoot quiz: How beautiful is Turkey?
- after each question a student presents the selected sight <a href="https://create.kahoot.it/share/beautiful-turkey/093591e5-7930-44a1-aa9d-a7e217a23246">https://create.kahoot.it/share/beautiful-turkey/093591e5-7930-44a1-aa9d-a7e217a23246</a>
- d) Discussion/chat with Turkish tea, baklava and lokum

#### **PART C**

#### 3. Mustang

a) Students watch a Turkish movie Mustang (Deniz Gamze Ergüven, 2015)

Early summer. In a village in northern Turkey, Lale and her four sisters are walking home from school, playing innocently with some boys. The immorality of their play sets off a scandal that has unexpected consequences. The family home is progressively transformed into a prison; instruction in homemaking replaces school and marriages start being arranged. The five sisters who share a common passion for freedom, find ways of getting around the constraints imposed on them.

Source: <a href="https://www.imdb.com/title/tt3966404/">https://www.imdb.com/title/tt3966404/</a>

https://www.youtube.com/watch?v=ABNB3zw5BAo https://www.youtube.com/watch?v=hPppc2VGn8Q

#### b) Discussion

- The significance of the title of the movie mustang: Who 'tames, domesticates' the girls? What are the consequences? How do the sisters resist restrictions?
- Five sisters, five profiles (personalities/ characters), five fates: What are the differences between the sisters? Which sister is closest to you?
- The position of women in traditional society: What is the gender role of women in traditional society? What can the girls do and what they should not do? What is not suitable for girls? What is expected of a "good wife"? What household chores should they learn and why?
- Arranged marriages, the role of the grandmother and the uncle in the "bride factory": How do you see the role of the uncle?

What is the role of the grandmother? Do you remember the scenes where she tried to protect the girls? Do you think she's as cruel as their uncle?

Why do uncle and grandma think that the wedding is a good solution for the girls? What do they expect from the girls? Do you think that uncle and grandmother are also victims of the traditional system?

# Subject: Interdisciplinary approach: Sales promotion, Arranging, Visual communications, Multimedia advertising, Marketing Topic: Design of a service in event management

#### General competencies developed during the lesson:

Transdisciplinarity, design thinking

Digital study materials developed for the lesson:

Mentimeter question (what do we need to organize an event)

https://www.mentimeter.com/

Digital sources used for the lesson:

- https://www.youtube.com/watch?v=-k5y4bLU5X4 (10 years-movie about reunion)
- https://www.entrepreneur.com/article/345182
- https://www.youtube.com/watch?v=-4J6odn3oSY

#### **General objectives:**

- develop student's identity with the profession,
- develop selfmotiviation,
- · develop the ability to apply theoretical knowledge in practice,
- develop skills in managing the working processes,
- organization and supervision of work,
- develop the ability to monitor the development of the profession,
- · develop skills and sense of responsibility

#### Curriculum units covered by the unit:

- · marketing tools,
- sales promotion tools,
- visual identity, decorations,
- animation,
- videoproduction,
- filming,
- photography,
- graphic design (logo, poster, invitation),
- public relations (sponsors, media,...),
- decorations
- arranging
- branding,
- visual merchandising.

#### Following the 5 steps of design thinking method:

#### 1. What do you think that we need to organize an event? DEFINING A PROBLEM

Students are asked to answer the question on Menti. We collect their answers and make a print screen.

We put the answers into groups and we got an organisational diagram with groups of tasks:

- Program group
- Decorations group
- Graphic design group
- Photo/video group
- Catering group

According to their interests students choose the suitable group.

#### 2. Movie time - EMPHATIC UNDERSTANDING OF THE USER

Students watched the movie 10 years. <a href="https://www.youtube.com/watch?v=-k5y4bLU5X4">https://www.youtube.com/watch?v=-k5y4bLU5X4</a>
The movie talks about a high school reunion and is ideal to get ideas.

#### 3. Organisation - ACQUIRING AND SHAPING IDEAS

Brainstorming session for the name of the service: students do the brainstorming or another method to develop ideas to choose a suitable name of the service. The name should be short, have a full meaning and be fashionable to attract.

Another brainstorming session to define the program, the timing, choose places.

Division into groups and distribution of tasks. Each group should choose a leader. Leaders communicate and share ideas. Each group defined their own tasks.

#### 4. Designing a service: PROTOTYPING

Graphic design: the graphic design group prepare a visual identity of the service (logo, colours, font, symbols). <a href="https://www.canva.com/sl">https://www.canva.com/sl</a> si/

Photo/Video: they search for old photos and videos (ask for a school's archive...)

Program: the program group design a program, find records about generation, collect old school's magazines...

Catering group: prepare a menu, contact catering companies, search for prices...

Decorations: prepare accessories, photo stops, promotional boards, visualisation of the main room and other rooms.

#### 5. Implementing: TESTING

Test the idea: present the idea to teachers that were former students of the school, put the flyer on school's FB page and see the reactions. Contact people who reacted to the flyer with a polite invitation.

Post teasing posts about the service, offer the possible dates to choose. Once you got a contact person you can start with the real organisation of the event. You have to be careful with GDPR and HACCAP.

You can use google drive to collect material:

• <a href="https://docs.google.com/document/u/7/">https://docs.google.com/document/u/7/</a>

#### • <a href="https://drive.google.com/drive/u/7/my-drive">https://drive.google.com/drive/u/7/my-drive</a>

Program group: prepares the presentation of What happened in the year.... (the year of graduation of the generation) using old records from school magazine, old photos, maybe videos...contact their class teacher and the headmaster to fix the date. Set a playlist with popular songs from the year.X.

Graphic design: the graphic design group prepares the invitation that includes old photos of the generation. <a href="https://www.canva.com/sl\_si/">https://www.canva.com/sl\_si/</a>

Photo/Video: printing old photos, putting them into frames, printing covers of old magazines for the exhibition in the canteen.

Catering group: prepares a menu, contacts catering companies, searches for prices...decorates the canteen (the board, the exhibition), prepares plates, paper, orders a cake, buys drinks and some snacks

Decorations: prepares accessories, photo stops, promotional boards - #thebestgeneration, Top Anniversary, ... visualisation of the main room and other rooms, decoration of the catering room (balloons, aperitif table and catering table...)

#### 6. EVALUATION:

Students make a written report about their tasks and evaluate the activity with extreme method. They point out the best (pluses) and the worst (minuses) and give possible examples of improvement.

So, the never-ending circle of design thinking has been closed or better: **Ready to start again, with all the improvements.** 

The method hasn't been introduced to the students at the beginning of the learning unit. The unit has been introduced only as a transdiciplinary approach.. During the final part, when they write a report, the teacher introduces the method, so students can connect their experience to the theory. They have to do the same with all the curricular units that were included in this learning unit. I call this type of learning backwards learning. It is based on a real experience and they easily memorize the important parts, and this knowledge is forever. They don't forget, because they don't forget the experience.

**Subject: English** 

**Topic:** WRITE FOR RIGHTS

#### **General competencies developed during the lesson:**

intercultural competence program-based thinking transdisciplinarity design thinking

#### Digital study materials developed for the lesson:

#### Digital sources used for the lesson:

https://www.amnesty.org/en/get-involved/write-for-rights/ http://amnesty.soc.srcf.net/what/letter-writing/ https://www.amnesty.org/download/Documents/ORG1090612018ENGLISH.PD F

#### **General Objectives:**

Empathy development

Critical thinking

Encourage students to get actively involved

Being aware of different problems people around the globe face

Better understanding of cultural differences

#### **English Objectives:**

Being able to understand an issue and adjust the style/vocabulary of the letter to the addressee

Developing reading & writing skills

Acquiring new vocabulary

Each student writes a letter (formal OR informal)

#### 1. Lead-in

- a) Presenting Amnesty International show the logo, ask if they know what it is, what they do
- b) Discussion: students answer, ask; teacher explains

#### **2.** Case study

#### Students:

- get the handouts or link to Amnesty International webpage: https://www.amnesty.org/en/get-involved/write-for-rights/
- read about the cases in question or read the handouts provided by AI
- decide which case they feel most strongly about, explain why
- study AI letter guide
- read 'sample letter' so that they find out what the most important parts are, what to pay attention to
- write a letter, checking the handouts or accessing AI webpage & online dictionary when necessary
- ask for teacher's advice if needed
- hand in the letters

#### 3. Conclusion

Students check Amnesty International webpage to see how their case is developing, if it has been solved and how.

# VIRTUAL COLLABORATION (VIRTUAL COOPERATION)

Type of material: Part of lesson plan

Subject: Mathematics
Topic: Statistics. Percent

General competencies developed during the lesson:

transdisciplinarity, design-thinking and virtual cooperation.

Digital study materials developed for the lesson:

https://www.thinglink.com/scene/1152506275729244162

#### **Objectives:**

- 1. Student understands the definition of "percent, percentage";
- 2. Student knows the notion of a chart;
- 2. Student is able to apply basic formulas to calculate the percent;
- 3. Student is able to analyze information and highlight the most significant information, generalize, systematize and present it.
- 4. Students can work in a group (using virtual cooperation), supporting and motivating each other;
- 5. Student is able to present the result of the group work through interactive tools.

#### A. Introduction:

Activating pre-knowledge. Students will follow the link and try to complete the task. Exercises are made using sites <a href="www.thinglink.com">www.thinglink.com</a>, <a href="www.purposegames.com">www.purposegames.com</a>, <a href="Google Docs">Google Docs</a>

#### B. Guided practice:

➤ Based on the example students will analyse and synthase the received information, discuss in groups and make a development plan of their project. The discussion should lead to an understanding of what needs to be done and how it will look.

#### C. Independent Practice (can be assigned as home work):

> The project can be prepared at home and completed in class.

#### **Subject: Music & Art**

#### Topic: Let's communicate by the means of music & Art

#### General competencies developed during the lesson:

Communication in English

Communication through music & art

Learn more about other countries and cultures.

#### Digital study materials developed for the lesson:

Instruction video

#### **Objectives:**

- 1. Student (is able to communicate in English)
- 2. Student (is able to communicate by the means of social media, email, skype)
- 3. Student (is able to use correct forms of grammar while communicating in English)
- 4. Student (is able to make a creative "switch"-> Mood board)
- 5. Student (is able to research a certain piece of art and to express his or her own emotions related to a certain piece of art).

#### A. Introduction:

Watch the instruction video.

#### B. Guided practice:

1. What do you need?

Magazines

Glue

Scissors

A piece of paper in A3 form

Markers

- 2. From your teacher you will get an email address of a student/pupil who lives in another country.
- 3. Choose a song in your own language.
- 4. Send the clip of the song to the given email address. All further communication will be in English from now.
- 5. You will receive a clip of a song from the other student in his/her mother language.
- 6. **Mood board:** Make a mood board in which you express the feelings you get from the song. Also include what you think the song is about.











7. Take a picture of your mood board and send the picture to the other student with the explanation of what you think the song is about and the feelings you got while listening to the song.



8. Make sure to think of 5 specific questions in order to get to know the other student.



9. You have both listened to each other's song and you made a mood board. Now call the other student.



10. **Skype call:** check if the interpretation of the song is correct. Discuss the mood board and explain why/or why not, this particular song is a good representation of your country.

11. This is the end of the assignment. Show your teacher the results and explain what you have learned.

#### C. Guided discussion:

- What did you learn from the other person?
- What did you learn about his/her country?
- Did you get the chance to improve your English?
- Did the other person learn anything from you as far as English is concerned?
- How did you like this assignment and what exactly?

#### D. Independent Practice (can be assigned as home work):

- Choose a random country that you always wanted to visit but know very little about. Find a song that you like a make a mood board based on that particular song. By means of researching as much as possible about the country, try to figure out whether your mood board is 'on the point'.