

| Learning Tool Code | Title |
|--|---|
| SDGfP goal 12 | Responsible Consumption and Production |
| Objectives | |
| <p>After the lesson students will be able to:</p> <ul style="list-style-type: none"> - understand the meaning of the terms consumption and production - name and recognize different types of waste such as household / municipal waste, hazardous waste, radioactive waste, wastewater, etc. - familiarize themselves with various ways of sorting different types of waste - research positive examples of reusing and recycling materials instead of disregarding them - apply critical thinking to offer suggestions on how to effectively decrease their own material footprint - draw parallels and respond positively to the targets and indicators set by the SDGfP goal 12 | |
| Activity details | |
| <p>Materials → see Annex Duration: 180 – 225 minutes Class size: 20 – 28 students (6th grade, age 12)</p> | |
| Instructions | |
| <p>LESSON 1</p> <p>Introduction / Engaging the students (10 – 15 mins)</p> <p>The teacher starts by asking questions such as <i>What's the last thing you've thrown away?</i> or <i>What type of materials do we discard most frequently?</i> in order to motivate them so they would engage in a conversation with him/her. A follow up question may include <i>What about kitchen appliances? Do we even try to repair them nowadays?</i></p> <p>After the first round of answers the teacher moves on to mention waste sorting with questions such as <i>How do we separate materials we don't need?</i> and <i>What do the colored garbage cans indicate?</i> A follow up question may include <i>What materials do the different colors correspond to?</i></p> <p>The teacher then focuses on the material footprint of each person with questions like <i>Is there a way to reuse some of the materials differently?</i> and <i>What materials are the most suitable for reuse?</i></p> <p>The teacher then brings the introduction to a close by administering a blank table to the students with the instructions to answer the questions and fill out the table using the Internet:</p> | |

Student name:

What are **sustainable consumption and production**? Give some examples:

What are the planet's **natural resources**? Classify the main ones and give some examples:

Research (5 – 10 mins)

After the students finish writing in their answers, the teacher calls upon a couple of them to read what they have found. Other students can chime in with additional comments or a brief discussion.

Finally, the teacher introduces one of the goals of today's lesson by stating *Today you will make a presentation where you will distinguish between the main types of waste we generate and propose ways on how to reduce your own material footprint.*

Preparation for the assignment (15 – 20 mins)

The teacher divides the students into pairs or groups of three and gives them instructions on how a quality presentation should be made (the instructions mostly include the accepted font size, the appropriate number of rows, line spacing and the position of the text and images). The teacher also gives them some examples of the titles they should use which may include:

- *What is waste*
- *The main waste types (waste paper and cardboard, waste plastic, glass waste, metallic waste, batteries, electrical equipment, difficult household waste, etc.)*
- *Preventing waste generation*
- *Reusing*
- *Sorting and recycling*

The teacher lets them know their presentation should include a quiz at the end and that the best pair or group will present their work to the rest of the class two weeks after. After this the students may begin their work.

Pair / group work (45 mins)

The students use prior knowledge to come up with the ideas and build their presentation. The teacher in the meantime shifts from group to group and gives advice on how to approach a certain topic the students chose or to help build a certain slide. The teacher takes note of the time and 5 minutes before the lesson ends reminds them to save their work so they can continue the week after.

LESSON 2

Introduction (5 – 10 mins)

The teacher asks the students if they remember the most important topics from the week before and reminds them what they are doing and why.

The teacher then checks the pairs / groups from the previous week and lets them return to their saved work and continue with the presentation.

Pair / group work (35 mins)

The teacher again shifts from group to group and gives advice on how to fine tune the slides and put the finishing touches on the presentation.

Instructions on creating the quiz (5 – 10 mins)

The teacher asks the students if they remember how to build an interactive quiz inside a presentation and reminds them of the structure and how the slides should be arranged. The teacher also shows the students how the correct and wrong answers are linked with the corresponding slides.

Pair / group work (30 mins)

The students use prior knowledge to design the appropriate questions and the slides used for giving feedback. The teacher in the meantime shifts from group to group and gives advice on how to formulate certain questions and check if the slides are linked correctly.

Conclusion (5 mins)

The teacher takes note of the time and 5 minutes before the lesson ends reminds everyone to save their work and also determines which pair / group is the best. The pair / group in question is given additional instructions on how to deliver the presentation the week after.

LESSON 3

Introduction (5 – 10 mins)

The teacher asks the students if they remember the most important topics from the previous two weeks and reminds them that their colleagues have prepared a presentation for them. He/she instructs them to actively listen and jot down any potential question they might have.

Pair / group presentation (20 – 25 mins)

The best pair / group present their work to the rest of the class. They use the quiz at the end of a presentation as a fun way to check if their colleagues have been paying attention.

Conclusion (10 mins)

The teacher asks several students from the rest of the class to read their questions for the group. He/she also asks them to comment on the presentation and the quiz, thanks the best pair /group and reminds everyone of the most important topics they have learned in the previous three weeks.

Tips for the facilitator

The students should have prior knowledge of building a quality presentation, designing their own master slide theme and linking appropriate slides for the quiz portion of the presentation.

See Annex for further details.

Debriefing

The teacher can check how much the students remember about the topic by creating a questionnaire based on the presentation they watched. The activity can be planned for the week after the presentation, but it is completely optional.

Follow-up/Inspiration for the future

The students can use the knowledge acquired from the previous three lessons to create a poster or an infographic for their Art class.

References/Further reading

<http://idop.hr/hr/dop-trendovi/ciljevi-odrzivog-razvoja/o-ciljevima-odrzivog-razvoja-i-primjeri-dobre-prakse/sdg12-cilj-odrzivog-razvoja-12-odgovorna-potrosnja-i-proizvodnja/>
<https://www.un.org/sustainabledevelopment/sustainable-consumption-production/>
<https://unstats.un.org/sdgs/report/2019/goal-12/>
<https://sdgs.un.org/goals/goal12>
<https://en.unesco.org/sites/default/files/resources-sdg12.pdf>

Annex

Additional documents included with the lesson plan:

Quality Presentation Reminder

QUALITY PRESENTATION REMINDER

A presentation should be clear and concise, so ask yourself the following while building a slide:

- 1) **Is the font size between 24 and 28?**
 - if not, adjust it; enlarge the text if it's too small and vice versa
- 2) **Do you have between 4 and 6 rows of text?**
 - only the most important notes go on the slide; remove all non-essential lines
 - be careful: three rows or less is way too little text
- 3) **Does your slide contain images?**
 - each slide should contain between 1 and 4 images
 - be careful: images should not cover text or be too large
- 4) **Do you have any empty space on the slide?**
 - Increase line spacing to 1.5 or 2.0 and use larger text frames
 - do not use a larger font instead because the slide could become cluttered
- 5) **Did you use animations in your presentation?**
 - text is more important than images so it should appear first
 - images come with the text or after it; do not use slides with images only
 - animated images should not obstruct the text
- 6) **Do you use different slides in your presentation?**
 - the presentation will quickly become boring if you use the same slides all the time, you can change the layout of the slides so your presentation stays fresh and interesting

USUAL SLIDE LAYOUTS

We have many different ways of designing slide layouts, but they mostly concern the position of the text and images on the slide. For example, we can put the text below or above the images:



We can also position the text to the left or right of the images:



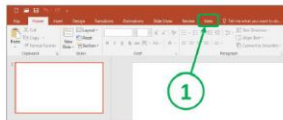
We can also use slides with two different text frames:



Using Slide Master

HOW TO USE SLIDE MASTER TO ADD YOUR OWN BACKGROUND

Create a new presentation and click on the **VIEW** (1) tab.

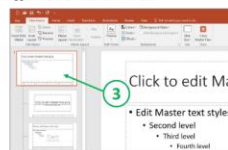


Under the **VIEW** tab click the **SLIDE MASTER** (2) button.



BE CAREFUL! we do not use the Slide Master to create the presentation itself. We only use it to set the background and adjust the text frames.

Click the slide on the very top of the slide panel (3). The slide in question is bigger than all the other slides.



Copy and paste the image you want to use. The parts outside of the slide frame will not appear on the slide itself. Right-click the image and choose the **SEND TO BACK** (4) option to set the image as the default background.



We just have to set the background color of the text frames and we're done. Click on a text frame and choose the **FORMAT** (5) tab.



Under the **FORMAT** tab click the **SHAPES FILL** (6) button and choose the color you want to use. Repeat steps (5) and (6) for other text frames.



Click on the **SLIDE MASTER** (7) tab and choose the **CLOSE MASTER VIEW** (8) button.



The background is all set! You may begin with building your presentation.

Creating a Quiz

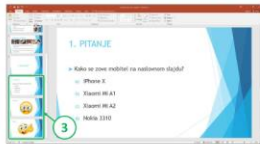
HOW TO CREATE A QUIZ

Create a new presentation and build a couple of slide with the topic of your choosing (1). Add a new title slide at the end (2).



You need three slides with the following titles for each question (3):
QUESTION → WRONG → CORRECT.

Be sure to use the titles, that way it will be easier to link the slides later.



Why this particular order? The **WRONG** slide will return you to the question, while the **CORRECT** slide will allow you to proceed.

We need to link the **WRONG** and **CORRECT** answers with the corresponding slides. Select one of the answers (4), click the **INSERT** (5) tab and use the **HYPERLINK** (6) button:



When a pop-up window appears click the **PLACE IN THIS DOCUMENT** (7) button, choose the slide you want to link it with (8) and click **OK** (9).



Repeat steps (4) to (9) for all the other answers.

We need to add an action button to the **WRONG** slide so the participants could return to the question. Click the **INSERT** tab and choose the **SHAPES** (10) button. Select the **BACK OR PREVIOUS** (11) action button in the bottom row:



Place the action button on the slide and click **OK** (12) in the pop-up menu:



And that's it! You can add a **THANK YOU FOR PLAYING** slide as the last one.

- Reducing my material footprint (example presentation)



What is waste?

- waste is any substance or object that we throw away, but not all waste is rubbish!
- proper waste management saves both energy and natural resources
- we can properly dispose of waste in bins, recycling yards or by composting

Waste paper and cardboard

- paper and cardboard make up the largest percentage of waste generated in households, schools and offices and mainly consists of office paper, newspapers, magazines, books, packaging products and cardboard boxes
- it can be recycled four to six times, thus saving water, energy and preventing de-forestation

Waste plastic

- plastic is used in almost all industries, especially as a raw material for packaging and other products that we use every day
- it takes between 100 and 1000 years for plastic products to decompose, so by recycling plastics we help preserve the environment

Glass waste

- waste glass can be completely recycled countless times and it should be a recycling priority
- recycling of 1 tonne of glass saves 700 kg of quartz sand, 200 kg of limestone and yields energy savings of up to 950 kWh of electricity

Metallic waste

- metal is produced from natural raw materials - ores which make up a significant part of natural resources
- those reserves are constantly being depleted
- metallic waste holds a great potential for reuse
- collection of metal waste reduces the consumption of electricity, chemicals and water in production processes

Batteries

- old and used up batteries with household waste as they contain dangerous heavy metals such as mercury, lead and cadmium, which can pollute the environment and harm human health
- since they are classified as hazardous waste, they require a special method of disposal



Electrical equipment

- electronic waste contains many substances harmful to humans and the environment
- it is not allowed to dispose of it together with other household waste
- it also contains valuable components such as recyclable metals and plastic



Difficult household waste

- it must be collected separately as it contains hazardous substances that can endanger human and animal health, and because it poses a danger to the environment

- it consists of waste such as acids, solvents, pesticides, oils, medications, paints, adhesives, cleaning products, etc.



How can I prevent waste generation?

- here are some tips for achieving this goal:

1. instead of printing on paper we can send an e-mail or use a PDF document
2. we can use canvas bags instead of plastic or paper
3. we don't have to buy excessive amounts of food that will spoil
4. we can power our devices with rechargeable batteries

Which items can I reuse?

- what other purpose could old items serve – here's a few ideas:

1. old newspaper can be used to wrap fragile items when moving to another home
2. cotton T-shirts can become cleaning cloths
3. a printed sheet of paper can be used for notes and drawings
4. we can give away items we no longer have use for

Quiz time!

(hopefully, you've been paying attention)

