

Faecal disposal, sewage and canalisation



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ENVI-MOBILE: Integration of mobile learning into environmental education fostering local communities' development

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Activity No. 1

Part of the lesson: EVOCATION

The aim of the activity: To distinguish the differences between drinking water and wastewater.

Step 1

Brief description of the activity:

The teacher divides the students in 3 groups.

The teacher shows 3 different bottles with 3 different types of water (natural water, sparkling, wastewater from the kitchen or from lavatory . . .). Each group will get one bottle (no tasting!!!).

Teacher asks each group to write down on a paper some adjectives describing the water in the particular bottle (more than one expression per bottle).

Each group reads their expressions and then discusses them.

Instruction (what you need to tell the students):

Look at the bottles. Try to write on a paper some adjectives describing the water in the particular bottle (more than one expression per bottle).

Step 2

Brief description of the activity:

The class and the teacher discuss their notes. Teacher writes relevant adjectives on table in 3 columns (natural, sparkling, wastewater) with no headlines (they should find out, what kind of water adjectives refer to - natural/sparkling/wastewater). At the end students summarize, where the water came from and what is it like.

Instruction (what you need to tell the students):

What did you write about the water in your bottle?

What do you think where the waters in each bottle came from?

Tools for the activity (everything you need to take to the classroom): 3 different bottles with 3 different types of water (natural water, sparkling, wastewater from the kitchen or from lavatory . . .), paper and pen

Estimated time (max. 40 min.): 5 minutes

Notes: On the preceding lesson, the teacher provides students with a worksheet table and asks them to record information about what happened during a week and what activities their family used water for (e.g. W.C., wash or shower, washing dishes etc.) . They have to record how many times during the week they did each activity and this information will be used during the reflection.

You can use table suggested in ANNEX 1.

Activity No. 2

The aim of the activity: Activating prior knowledge about water use, introducing new words and key words.

Step 1

Brief description of the activity:

Each group writes on a paper words or short sentences describing how water and wastewater comes and goes to and from their houses (Where does it come from? Where does it go after using?).

Try to make notes about what they are talking about and create mind map.

Students should find out that the water used in the households becomes the part of natural water circulation process in nature.

Instruction (what you need to tell the students):

In groups write on a paper words or short sentences describing how water and wastewater comes and goes to and from your homes. Try to answer following questions:

Where does it come from?

Where it goes after using?

Step 2

Brief description of the activity:

Students will understand the difference between natural water circulation and water circulation with involvement of humans and their activities (households) – eg. Wastewater circulation.

Each group works on different water cycle. First group draws on A2 sheet of paper natural water cycle, second group will do the same with artificial water cycle. Both groups present their work and the third group should summarise the differences between both cycles and discuss them with the others.

Instruction (what you need to tell the students):

Work in groups.

First group draws on A2 sheet of paper natural water cycle, its parts and functions.

Second group will do the same with artificial water cycle at home.

The third group should summarise the differences between both cycles and discuss with the others. Members of third group could observe the work of two other groups and discuss the details, if needed.

Use the internet for more information, if needed. You have 15 minutes to do this.

Tools for the activity (everything you need to take to the classroom): Internet connection, laptops for each group, pen, paper format A2/flipchart paper

Estimated time (max. 40 min.): 25 minutes

Part of the lesson: APPRECIATION

Activity No. 3

Part of the lesson: REFLECTION

The aim of the activity: Wastewater and what can I personally do with it.

Step 1

Brief description of the activity:

Groups summarize their experience.

Each group, using the materials produced in the appreciation, and their personal use of water experience collected prior to the lesson (ANNEX 1), answers the following questions:

- How much water did your family spend during the monitored week?
- How can we save water at home?
- How can be wastewater re-used?
- What's your feeling about water pollution caused by households? What do you think about it?

Let the students think for 3 minutes on their own (no group work) and then start to discuss.

Instruction (what you need to tell the students):

Work with the information brought from homework (ANNEX 1) and also with the information from previous activities. Answer the questions:

- How much water did your family spent during the monitored week?
- How can we save water at home?
- How can be wastewater re-used?
- What's your feeling about water pollution caused by households?

Tools for the activity (everything you need to take to the classroom): Information/notes from previous activities, ANNEX 1 filled in, pen and paper for each student

Estimated time (max. 40 min.): 10 minutes

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Annex 1

The use of water in the households during the week

Number of family members:			
EXAMPLES of Activity (students can write down their own)	Estimated amount of water used per one use (students can make estimations on their own..)	The frequency of activity during the week (all family members)	Consumption of water for this activity during the entire week in total
Splashing the toilet	3 – 10 l		
Bathing	100 – 200 l		
Taking a shower	30 – 60 l		
Dishwashing by dishwasher	7 – 20 l		
Dishwashing manual	5 – 20 l		
Washing cloth/washing machine	30 – 90 l		
Hands washing	3 l		
Car washing	200 l		
Face washing	3 l		
Teeth cleaning	0,5 – 10 l		
Water to drink per person/ day	2 l		
Cooking water per day	5 – 7 l		
Cleaning works in the households etc.			
TOTAL			
Water consumption by each family member in average:			

Remark: Estimated numbers are only approximate. If you are able to provide more specific estimations in column 2 (e.g. in a case of saving devices on toilets or dishwashers), please adjust the numbers in second column accordingly. Your measured results per week will be more precise then.

SOURCE: <http://www.veronica.cz/?id=12&i=142>

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