

DRIVING QUESTION



Should K+S be allowed to continue discharging salty wastewater into the Werra?



LOCAL WORKING GROUP MEMBERS

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SCENARIO

In this web-environment you have the possibility to concern yourself about topics related to the salinization of the Werra. You should find your own opinion about the problem. To deal with the subject, you should first watch the video (look below "round table") and then internalize the assignment (topic). At the map you can see the course of the Werra in Germany.

Salty wastewater is a by-

product in the potassium salt mining process. The company K + S discharges it to a river called Werra. This procedure of disposal is controversially discussed in public. Imagine a public decision where you have to decide about the problem. After the voting you will be interviewed. Give reasons about your personal decision and discuss the arguments. When arguing do not only rely on social and economical issues but also on scientific issues.

PILOT ENACTMENT

Beginning date: Apr. 20th 2009
Ending date: June 10th 2009
Number of sessions: 12 – 14
Duration of each session: 45 minutes
Frequency of meetings: 2 to 4 sessions per week / 2 full days
Grade level: 9th grade (15 years) up to 10th grade (16 years)
Subject: Chemistry (and Biology)
Number of students: ~ 20 – 27

WORKSPACE

There are 4 templates:

#1 to get familiar with the problem,

#2 to get familiar with alternative disposals and their consequences,

#3 to analyze the stakeholder viewpoints in the light of the sustainability concept,

#4 to decide on the issue, to give reasons and to discuss their arguments in addition with rebutting possible counter-arguments.

LEARNING GOALS

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| a. The main objective is to promote students skills in making sound decisions on socio scientific issues. | 1-2 | Demonstrator |
| b. Students should learn not only to decide on intuitive or affective aspects. | | |
| c. We want them to know that sound decisions could only be made after gaining "deep" knowledge about the issue to decide on. | 3-10 | News clip, 1st decision |
| d. Students should gain conceptual understanding in the following concepts: salt, ionic bonding, concentration, concentration change, impact of salt on fishes and plants, threshold values | 11-12 | Prepare for classroom discussion |
| | 13 | Discussion |
| | 14 | 3rd Decision |

INQUIRY ACTIVITY OVERVIEW