QER for Schools

QER Science Lesson – Year 2

Everyday objects made from minerals

NOTES

Objects of all kinds can be described using a rich vocabulary encompassing all of the senses. Many common and useful objects around us are made from oil.

In this lesson, students will:

- question, describe, recognise and name common objects

LESSON-LEVEL CONTENT DESCRIPTIONS

The Australian Curriculum: Year 2

Science understanding

Chemical sciences: Different materials can be combined, including by mixing, for a particular purpose (ACSSU031).

Elaborations

- exploring the local environment to observe a variety of materials, and describing ways in which materials are used
- suggesting why different parts of everyday objects such as toys and clothes are made from different materials

Earth and space sciences: Earth's resources, including water, are used in a variety of ways (ACSSU032).

Elaborations

- identifying the Earth's resources including water, soil and minerals, and describing how they are used in the school

Year 2 achievement standard

By the end of Year 2 students pose questions about their experiences, record and represent their observations and communicate their ideas to others. Students describe changes to objects, materials and living things. They identify that certain materials have different uses, that resources from the Earth are required by living things and describe examples of where science is used in people's daily lives.

LESSON OUTCOMES

The assessment focus of this lesson is formative: The classroom activities provide an opportunity for students to generate evidence with which the teacher can establish the student's progress towards understanding the concepts that are being developed in this lesson.

Science Outcomes	Literacy Outcomes	Numeracy Outcomes
Students may/should be able to:		
• describe and recognise objects • ask appropriate questions about objects • use specific vocabulary to communicate observations about objects	• listen • view • speak • discuss scientific phenomena	• collect qualitative data • collect quantitative data

BACKGROUND INFORMATION

Encourage students to broaden their descriptive vocabulary to encompass all senses.

PREPARATION LIST

- Activity Sorting Materials
- video from QER web site www.qervisitorcentre.com.au/ –> Australia's fuel challenge –> Oil in our lives –> The importance of oil
- equipment for activity:
  - make a collection of all manner of common objects made from different materials: wood, plastic, metal, glass (not fragile), wool, cotton, paper, cardboard, rubber, stone, sand, chalk, synthetic, etc. Choose a range of transparent, opaque, thin, thick, hard, soft, heavy, light, different colours, rigid, flexible, rough, smooth, etc.
  - make a collection of objects with distinctive smells and/or distinctive sounds
  - feelie bags

ACTIVITY SEQUENCE

1. Introduce the lesson by having the children ask specific questions to identify a common object that you have thought of.
2. Run the class Activity Sorting Materials.
3. Discuss the characteristics of plastics and explain that plastics are created from oil in the ground.
4. Video from QER web site www.qervisitorcentre.com.au/ –> Australia's fuel challenge –> Oil in our lives –> The importance of oil. You might like to read the subtitles in the video out loud.
5. Students recall as many of the things made from oil as they can remember from those shown in the video.

OPPORTUNITIES FOR CONDUCTING FORMATIVE ASSESSMENT

- Observation of class discussion, choice of vocabulary in questioning and answering.

LINKS TO OTHER LEARNING AREAS

The following suggested activities may be used to provide a link between the content of this unit and that of other learning areas, in particular those related to Mathematics, English and ICT.

- the vocabulary list developed during this activity could be incorporated into English lessons

ADDITIONAL RESOURCES

- www.qervisitorcentre.com.au – Extensive overview of QER New Fuels Development Centre, including video snippets, animations, graphs, maps and explanations relating to:
  - Australia's fuel challenge
  - QER and sustainability
  - benefits for Australians
  - turning oil shale into fuel

NOTES