

ENGAGE

WHAT IS A ROCK AND WHAT IS NOT?

DESCRIBING AND CLASSIFYING ROCKS

30 MINUTES

SUMMARY

What do rocks from space look like? Actually, not that different from Earth rocks. You know, the samples you have in your back yard, all over the school grounds, and quite possibly in a shoebox under your students' beds. We're going to start with them, and try and work out - what makes a rock, a rock?

Students will use their senses to observe and describe lots of samples and start to use ways of storing and sharing that information.

What's brown, hard, has layers and harder bits in it? A rock? or a frozen Snickers bar? Students will need to use lots of describing words to distinguish between rocks and not-rocks.

OUTCOMES

1. Students will observe, describe, compare and group rocks and 'not-rocks' - using colour, shape, informal measurements of length, mass.
2. Students will create a describing key for their rock collection, providing a library of activities to return to later.

EQUIPMENT

- Student rock collections or class sets
- Magnifying glasses or hand lenses (optional)
- Fun-size chocolate bars of different varieties, roughly chopped, frozen is best
- Describing key worksheets, page 50 - 52
- Other 'not-rocks' e.g. toys, building materials like bricks, wood, metal, fabric, plastic
- Large snap lock bags, takeaway containers or document wallets



What makes a rock a rock?

THE ACTIVITY

Warm up:

Students pool their rocks and not-rocks together in groups and use their senses to observe and describe them. Have students place the items on the first template - What's a rock and what's not? Why? See worksheet, page 50.

Have students come up with clear descriptions which explain what things are rocks and what are not. If they find this hard without mentioning saying "it's chocolate, it's wood" tell them to pretend to be aliens who have never seen any of those things before. How would the alien describe it?



What is a rock and what's not? Why?

What objects have characteristics that overlap? Have students use the second template to place objects in Venn diagram-like fields, and write down the group describing word (see worksheet, page 51).

Plan:

Students are going to make a key (guide) for someone else to group their rocks. Have each student collect 4 - 6 rocks and think about all of the things that are the same and different about their rocks. Number the rocks 1 - 6.

Predict:

Students make their key using the worksheet (page 52). They need to ask questions about the rocks to be able to single them out.

To provide an answer sheet, you could

- photocopy the sheet double sided and have students use their key on one side, writing the rock numbers where they fit
- students take a photo of the rocks in the right places.

Test:

Students pack their rocks and the key sheet together in a bag. Students select a rock kit at random and follow the key to group the rocks. They compare their answer with the maker's answer.

Analyse:

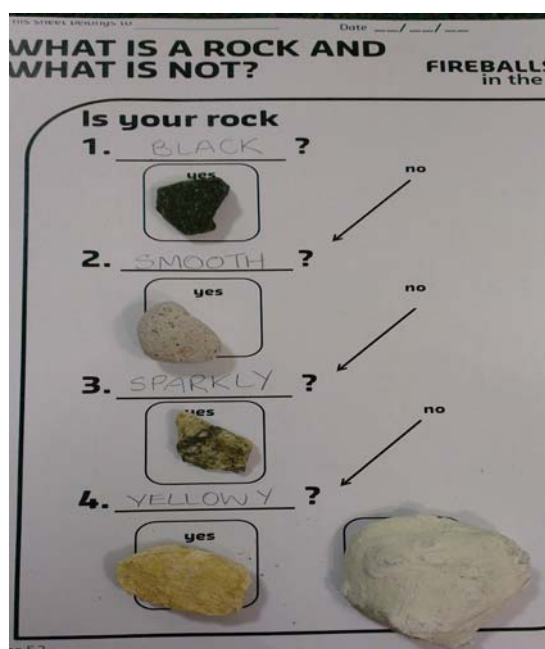
Students share: Did the key work? (ie. did they end up with the rocks groups in the same way to the maker?) If they didn't, why not? Students might then need to refine their key and re-test.

Communicate:

Student rock kits are placed in a box for students to have a go in a spare 5 minutes. Invite parents to try them out too.

SUGGESTIONS FOR THE CLASSROOM

- Example categories of items for learning and practising making describing keys:
 - fruits, shapes, cartoon characters, items in a pencil case
- Use post-it notes with rock features to play with how keys are put together and to find the most useful way of sharing information.
- Instead of using words, students could draw or colour in the boxes to describe the rock features
- Add useful describing words to a vocabulary wall or similar to encourage students to continue using these words



Is your rock ...?