



Sedgwick Museum
of Earth Sciences

Investigating fossils activities

Play the Back to Back Game (describing an object)

N.B. This works best with an object pupils have never seen before so that they are not tempted to name it.

1. The children work in pairs sitting back to back
2. One person chooses a fossil and has to describe it in detail to their partner who cannot see it. The other person must draw try to draw the specimen from their partner's description. The speaker is not allowed to use the name of the object. The listener may add word labels. Once the drawing is complete the speaker shows the listener the object and pairs compare the specimen with the drawing.

How well drawn was the fossil? How could it have been better? Were the instructions and descriptions too vague? Perhaps they were misinterpreted or badly drawn. What did you learn about ordering descriptions?

Switch roles and repeat. Is the result any better?

Adaptations

- Try this with any mystery object.
- You could provide a worksheet including a box for a key, or a scale bar. Encourage use of symbols to illustrate areas of certain texture or colour and make a map of the object.
- Providing rulers, scales will allow more detailed describing.



Sorting, grouping and classifying fossils activity

1. Give each group of children a varied collection of fossils.
2. Ask them to think about ways in which they could sort the fossils.

What features (criteria) did they use to sort their fossil? Why? How else could you have grouped them?

Fossils have all sorts of criteria by which to sort, which can include size, shape, patterns as well as identifying whether it is a "whole" fossil eg a complete shell as opposed to a part of a fossil eg a single bone or a fragment of a shell.

Can you draw up a classification key for the fossils samples so that others can classify them in the same way? Swap the set of fossils and the key with another group to find out.



Making fossils

New types of fossils are still found quite regularly. Ask the children to predict and reconstruct a complete fossil animal or plant that has not been discovered yet. This can be a drawing, a collage, or a model. There are all sorts of things you can do with this basic concept.



Think about the process of fossilisation and ask them to think about whether the whole animal or plant would be preserved as a fossil. Could they draw/make what the fossil that scientists will study might look like?

Create a museum catalogue of the animals and plants they have discovered. Give a catalogue sheet (a simple data sheet with space for a written description, a drawing if applicable, and simple measurements) to each child. Each sheet needs its own number in a sequence. Ask each child to complete the data sheet. You could use either a sticker or a parcel tag to attach the number to each drawing or model. Place all of the catalogue sheets into a file in order of their number so that the children can look up information about each other's discoveries.

Introduction to classification keys – design a key activity

This is a useful starting activity before trying to classify rocks, minerals or fossils. Provide children with pots with containing about ten different objects, such as pasta, a paper clip, a drawing pin, rice etc.

Aim

1. In small groups children must produce a key for that set of objects
2. First divide objects into two groups by asking a question such as “Is it metal?” or “Is it edible?”
3. Then the group continues to divide or classify the objects until they are isolated as individually identifiable objects.
4. Now test the key, by swapping keys with other groups to see if it works (a nice example of peer assessment)

KS2 Extension

Hand out 2 or 3 new objects e.g. a plastic ruler, different types of existing objects e.g. differently shaped pasta. This not only tests key but starts to intro the idea of natural variation at species level.

KS3 Extension

Have different types of screws (or same objects to classify from start) – this requires really detailed observation noting both similarities and differences at different classification levels.



Class museum display

Ask children to look for, and bring in, geological samples they may include things they've found like pebbles or fossils (if you're lucky) from the beach or garden or that they have bought.

Display these along with hand lenses for close observation work. Tell the children that they are curators, and that it is their job to help other people to learn from their objects. Ask the children to design and complete their own display cards which include useful information about the specimen. This could include: name, a brief description, where it came from (encourage them to find out the area/country rather than writing "a shop"), and a paragraph about why they find it interesting/beautiful/strange etc. Include the name of the collector (their name) on the card.

If you get a really good display you could invite other classes to visit your mini-museum. Use this as a way in to learning about museums and collecting, and also caring for objects.

Visit a geology museum

Visit a museum and make use of their viewing, handling and loan collections. Many local museums have geological collections. For information about the Sedgwick Museum contact the Education Coordinator: museumeducation@esc.cam.ac.uk or www.sedgwickmuseum.org

