



KS3 Science

Chemistry - Information for Teachers

National Curriculum objectives:

Working Scientifically

- Ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience.
- Make predictions using scientific knowledge and understanding.
- Make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements.
- Present observations and data using appropriate methods, including tables and graphs.
- Interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions.

Earth and Atmosphere

- The rock cycle and the formation of igneous, sedimentary and metamorphic rocks.

Chemical Reactions

- Representing chemical reactions using formulae and using equations.

Activities:

1) Mother Shipton's science trail, to be used as students walk through the park:

- * Students first look at the River Nidd and learn about the transportation of rocks
- * Students learn about the rock cycle and the three types of naturally forming rocks: sedimentary, igneous and metamorphic.
- * They then learn about the process of petrification and write the chemical formulae for the process.
- * They also learn about the formation of the cave and write a concluding paragraph about what they have learnt.

2) PowerPoint presentation. The presentation can be used back in the classroom as a follow-on activity as students:

- * Revisit terms and ideas learnt through a recall task.
- * Look at the grain formation of rocks and determine how porous they are through an experiment.
- * Review what they know about the three naturally forming rock types.
- * Describe the rock cycle to a partner.

Mother Shipton's

- * Look in more detail at the three rock types.
- * Complete the KS3 Bitesize quiz: <https://www.bbc.co.uk/bitesize/guides/zgb9kqt/test>
- * Further ideas provided.

Resources needed:

- *Pencils*
- *Rubbers*
- *Water*
- *Rocks*
- *Measuring jugs*