

Independent Learning Project

Department:	Science	Start Date:		Due Date:	
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Title of Task: Rock Types and Cycles

Aims/Learning Outcomes: • Sort rocks into different types using their properties • Use the idea of the rock cycle to explain how rocks can change and how each type is formed. • Research and explain the theory of continental drift.		My Target Level:	Useful Topic Related Words	
			Properties Crystals Sediment Sedimentary Metamorphic Igneous	Lava Magma Tectonic plates Continual drift Convection Currents
L3	1) Make simple observations using good practical skills. 2) Use several key words correctly. 3) State who came up with the theory of continental drift and when.			
L4	1) Identify some rock types using simple observations. 2) Used a variety of scientific key words correctly. 3) Describe how some rock types were formed. 4) State the evidence used for the theory of continental drift.			
L5	1) Identify all three rock types using their common properties. 2) Describe how all rock types were formed and correctly explain some of the processes involved. 3) Explain how tectonic plates move.			
L6	1) Apply knowledge of rock properties to a situation (Jurassic coast question). 2) Describe in detail how all rock types were formed, with a detailed explanation of the processes involved. 3) Explain why other people may disagree with certain theories.			
L7	1) Linking ideas together and applying knowledge to a larger context (extension question). 2) Evaluate the evidence for the theory of continental drift.			

What steps can I use to help along the way? These steps will be helpful when completing the project.	Supporting documents – PowerPoint's, images, pictures, website links, etc?	Equipment
Checkpoint 1 (due in ? weeks) Class work Looking at Rocks. Practical and worksheet.	Work sheet Practical equipment	These will be provided for you. Books and computer for extension research.
Checkpoint 2 (due in ? weeks) Class work or Homework Imagine you are a particle of sediment travelling through the rock cycle. Create a story of your journey through the rock cycle. This scientific project can be presented in your own creative way. Make sure you include all the key terms.	Task sheet.	Computer, textbook 3 page 202 Other equipment of your choice.
Checkpoint 3 (due in ? weeks) Homework. Research the theory of continental drift. Present your findings in any written form of your choice.	See task sheet.	Computer

Please remember to plan out your time carefully and ask your teacher if there is anything that you do not understand.



Looking at rocks

Task 1: Rock properties (Levels 3–4)

Your task is to examine the rock samples.

Take your first rock sample and look at it with the hand lens. What is the appearance of the rock? What colour is it? Can you see any grains or crystals? Are these grains or crystals all the same size, shape and colour or are they different? How are they arranged?

What is the texture of the rock? Hold the sample in your hand. Is it very rough or smooth? How hard is the rock? You can use the nail to try and scratch it.

Next place your sample into a beaker of water. Can you see any air bubbles coming from the rock?

Name of rock sample e.g Granite	Has it got Crystals or grain?	Moh's Test: How hard is it?	Observations when rock is placed in water	Reaction with Hydrochloric Acid (HCL)	Rock Type Sedimentary, Metamorphic, Igneous.

Task 2: Rock types (Levels 4–6)

- 1 You now have several clues about how your rocks were formed. Your rock samples can be divided into three different groups. Complete the table to show how you would divide the samples and decide what they have in common.

	Group 1	Group 2	Group 3
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Rock Cycle Task Sheet

Imagine you are a particle of sediment travelling through the rock cycle. Create a story of your journey through the rock cycle. This scientific project can be presented in your own creative way.

Make sure you include all the key terms.

You should describe how all the different types of rock are formed, including key words and descriptions for all the processes involved.

You need to describe how different crystal sizes form in igneous rock.

Key words

