

90190



NEW ZEALAND QUALIFICATIONS AUTHORITY  
 MANA TOHU MĀTAURANGA O AOTEAROA

*For Supervisor's use only*

## Level 1 Science, 2009

### 90190 Describe aspects of geology

Credits: Three  
 9.30 am Monday 23 November 2009

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should answer ALL the questions in this booklet.

If you need more space for any answer, use the page(s) provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–7 in the correct order and that none of these pages is blank.

**YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.**

<i>For Assessor's use only</i>	<b>Achievement Criteria</b>		
<b>Achievement</b>	<b>Achievement with Merit</b>	<b>Achievement with Excellence</b>	
Describe aspects of geology. <input style="float: right;" type="checkbox"/>	Explain aspects of geology. <input style="float: right;" type="checkbox"/>	Discuss aspects of geology. <input style="float: right;" type="checkbox"/>	
<b>Overall Level of Performance</b>			<input style="width: 40px; height: 20px;" type="text"/>

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You are advised to spend 30 minutes answering the questions in this booklet.

**QUESTION ONE : FORMATION OF ROCK**

Pumice and obsidian are different types of igneous rock.

- (a) Describe the physical appearance of **both** pumice and obsidian. You should consider colour, density, and crystal size.

Pumice: \_\_\_\_\_  
\_\_\_\_\_

Obsidian: \_\_\_\_\_  
\_\_\_\_\_

- (b) Discuss how the formation of these TWO rocks leads to the physical features of pumice and obsidian described in (a).

In your answer you should consider:

- the gas content of the rocks
- the silica content of the rocks
- the density of the rocks
- the type of volcano that produces the rocks.

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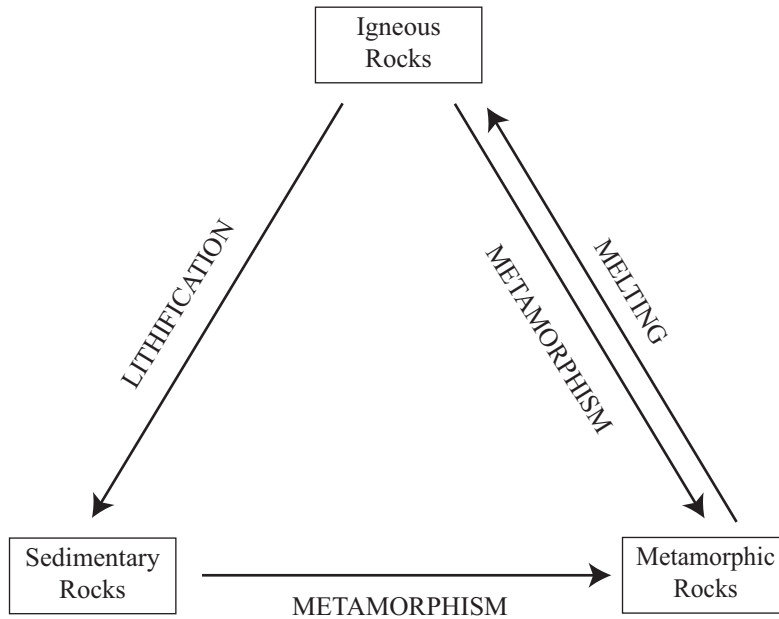
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## QUESTION TWO: THE ROCK CYCLE

Refer to the following simplified diagram of the rock cycle.



The rock cycle diagram has three processes, as labelled above.

Choose ONE of these processes to answer the parts below.

Process: \_\_\_\_\_

Using **named rocks** as examples, discuss how your **chosen** geological process operates to **change** the rock from its original form to the final form.

In your answer you should consider:

- any conditions needed for the process to occur
- where the process occurs
- the changes that occur to the original rock to form the final rock.

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