

Assessment Schedule – 2007**Science: Describe geological processes affecting New Zealand (90731)****Evidence Statement**

Question	Achievement	Achievement with Merit	Achievement with Excellence
1(a)	ONE of: <ul style="list-style-type: none"> high silica content or 65 – 75% Si very sticky, very viscous, or high viscosity relatively low temperature acidic can contain a lot of gas less Mg. 		
(b)	ONE of: <ul style="list-style-type: none"> The rock or ground shattered by the explosion and collapses Empty magma chamber collapses. The crater or hole or caldera fills up with water from rain or seepage or rivers or over time forming a lake. 	The rock or ground above the magma chamber is shattered by the explosion and collapses into the empty magma chamber (which also collapses) and fills up with water over time forming a lake.	
(c)	<ul style="list-style-type: none"> Pressure builds up. Gas(es) build up. Magma contains lots of gas(es). One of above.	<ul style="list-style-type: none"> Gases or water vapour trapped or held in the sticky / viscous / high silica magma Gases or water vapour in magma puts pressure on the magma chamber. Gases or water vapour bubbles expand as the magma rises 	Gases or water vapour trapped or held in the sticky / viscous / high silica magma put pressure on the magma chamber , when the eruption occurs the pressure is released very suddenly. Gases or water vapour bubbles expand as magma rises increasing the volume which puts pressure on roof of magma chamber.
(d)	Andesite, plus one of: <ul style="list-style-type: none"> sticky lava, 55–65% Silica content. 800–1000°C (Intermediate values for silica content and temperature are acceptable.)		
2(a)	At least part of the line drawn must go close and parallel to the west coast roughly from Westport to Jackson's Bay (along the west side of the Southern Alps).		

(b)	<p>One explained:</p> <ul style="list-style-type: none"> The focus is the place under the ground where the fault first moves OR the earthquake first occurs OR the seismic waves start. The epicentre is where the earthquake waves first reach the surface/ OR the epicentre is directly above the focus. <p>Or accurate diagram backing up loose statement: eg “epicentre above focus”, but diagram may show it directly above focus.</p>	<p>The focus is the place under the ground where the fault first moves OR the earthquake first occurs. The epicentre is where the earthquake waves first reach the surface OR the epicentre is directly above the focus.</p> <p>Or accurate diagram (see Achievement).</p>	
(c)	<p>ONE OF:</p> <ul style="list-style-type: none"> The crust either side of the Alpine Fault or of both plates is continental. There is no subduction in this area The plate boundary is a transverse fault or has lateral movement along it The two plates are colliding causing mountain building. 	Two of the points linked from the Achievement answer.	The crust either side of the Alpine Fault is continental , which is buoyant. This means that there is no subduction which would cause deep earthquakes. One of: there is lateral movement along the Alpine Fault (which is a transform fault) OR collision of the 2 plates is causing mountain building.
(d)	In the NI the Pacific plate is subducting under the Australian plate; in the bottom of the South Island the Australian plate is subducting under the Pacific plate. Okay to say in south or the north the opposite is happening.	In the NI the Pacific plate is subducting under the Australian plate – pushing this land to the west; in the bottom of the South Island the Australian plate is subducting under the Pacific plate pushing this land to the east OR in opposite directions.	

Judgement Statement

Achievement	Achievement with Merit	Achievement with Excellence
<p>FOUR opportunities answered at Achievement level or higher</p> <p>4 × A</p>	<p>FIVE opportunities answered with at least TWO at Merit level or higher.</p> <p>2 × M + 3 × A</p>	<p>SIX opportunities answered with at least ONE at Excellence level and TWO at Merit level or higher.</p> <p>1 × E + 2 × M + 3 × A</p>