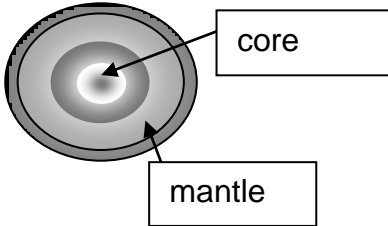
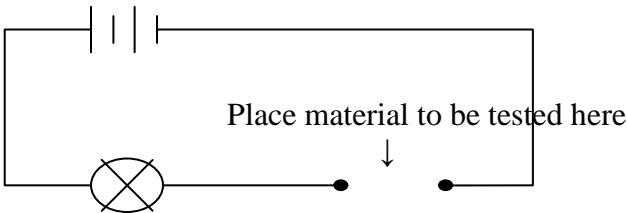
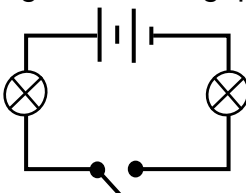
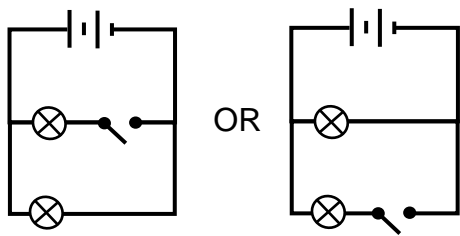


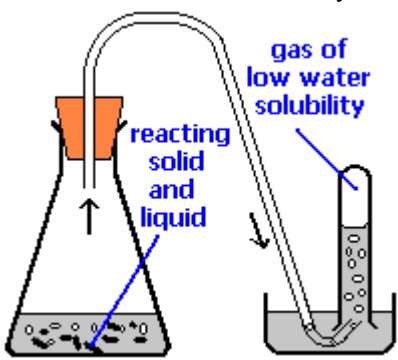
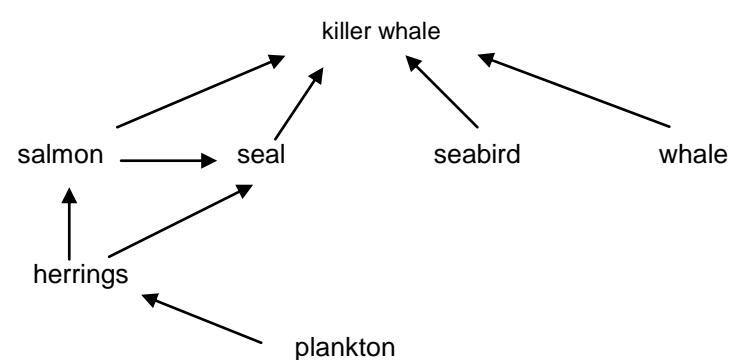
Assessment Schedule 10B 2006

/ means OR eg. green / blue – answer needs green OR blue
 () means additional, not really required eg. Gauze (mat) – gauze would be sufficient
 : means AND eg. red : hot - answer needs red and hot.

Question	Evidence	Marks
One	a) To make sure her results were accurate/not chance/to get an average Accepted “due to fluke” as meaning “due to chance.	1 mark
	b) One of each category below (these are the 4 essential conditions for this fair test, there are others): <ul style="list-style-type: none"> • amount of water • container size • initial temperature of water • water distance from candle Type of container (eg. Glass vs tin)	Max 2 marks 1 or 2 correct = 1 mark 3 or 4 correct = 2 marks
	c) Change in mass of candle (e.g., the amount of candle burnt). Did not accept “change in length/size” as it would be very difficult to measure length of candle as candles tend to melt uneven (in their length)	1 mark
Two	a) i) Red ii) Red iii) Blue iv) Blue	3 or 4 correct = 1 mark
	b) Sour	1 mark
	c) Universal indicator is more helpful than litmus because it has a range of colours which can be used to determine the actual pH value. Litmus on the other hand has only two colours and can only indicate whether the substance is an acid or a base.	1 mark
	d) 9 = weakly alkaline 7 = neutral 14 = strongly alkaline 1 = strongly acidic 4 = weakly acid	3,4 or 5 correct 1 mark
	e) Hydrochloric acid / sulfuric acid / nitric acid Also accepted ethanoic acid (? My spelling?)	Both 1 mark
	f) i) 9 ii) The drink needs to be alkaline, or have a pH above 7, so that it can neutralize the acid. But not so strongly alkaline that it would damage your mouth and stomach tissues. The other alkaline one has pH 14. which would be dangerous. It was very important that they mentioned that a ph14 would damage your mouth/stomach/body and not just say “it would be too alkaline”	9 plus acceptable reason = 1 mark
	g) <ul style="list-style-type: none"> • Take a sample of the ash and mix it with water • Add an indicator eg universal • Compare colour of indicator with chart to see colour 	1 mark for logical method and 1 mark for

		<ul style="list-style-type: none"> • If red, yellow the ash is acidic • Accepted : take ash and add UI (ie. Not necessarily include “add the water”) • Did not accept “ dipped litmus paper into ash” 	result
Three	a)	<p>i) </p> <p>ii) outer core iii) mantle iv) iron</p>	<p>3 or 4 correct = 1 mark</p> <p>5 correct = 2 marks</p>
	b)	<p>i) Chemical = acid rain Mechanical = frost or wind or wave</p>	Both correct 1 mark
		<p>ii) The chemicals which break down rocks and mechanical agents that break down rocks come into contact with the outside of the rock. The agents cannot penetrate to the inside of the rock. This means that only the outside surface layer gets its particles loosened by the agents.</p>	1 mark
	c)	<p>i) Ash cloud / dust / steam / rock / gases / pyroclastics (side) vent / lava</p>	Both correct 1 mark
		<p>ii) A dormant volcano has been active in the past but is not active at present Needed to indicate that a dormant volcano can erupt sometime in the future. Must also include explanation of Active Volcano</p>	1 mark
		<p>iii) Australian-Indian Plate : Pacific Plate</p>	1 mark
		<p>iv) Where plates collide there is associated volcanic activity. NZ lies on the boundary between two plates. The edge of the Pacific ocean is also where plates are colliding.</p>	<p>1 mark for Pacific plate is edge of plates</p> <p>1 mark plates colliding max 2 marks</p>
Four	a)	The present of a layer of pumice and burnt wood.	1 mark
	b)	<p>Any one of</p> <ul style="list-style-type: none"> • breathing difficulties • skin/eyes affected • crops destroyed/damaged (in fact anything reasonable except die or get burnt) • ash deposits • reduced sunlight • polluted water • weather disturbances • acid rain. 	1 mark
Five	a)	Charge is moved from the hair to the comb (or the other way round) by friction(optional) so that they become oppositely charged. Opposite charges attract so they “Stick together”	1 mark
	b)	<p>i) A circuit as shown (or similar). NO SWITCH</p> <p>All components used and correctly drawn. Must have ● and ●</p>	<p>Correct circuit = 1 mark</p> <p>1 mark for</p>

			labeling where to put material
		ii) The metals: aluminum foil, steel nail and copper wire.	2 or 3 metals correct = 1 mark (- 1 if non-metal)
		iii) 2 bulbs, battery and switch – in any order correct symbols = 1 mark drawn well – straight lines, no gaps = 1 mark 	1 mark circuit : correct symbols and 1 mark drawn correctly e.g. straight lines: joined at corners Max 2 marks
		iv)  Accept battery/cells OR power pack due to “oops” in paper.	1 mark circuit : correct symbols and 1 mark drawn correctly e.g. straight lines: joined at corners Max 2 marks
		c) The bulbs in the parallel circuit would be brighter . While the bulbs in a series circuit will be dimmer MUST MENTION CIRCUIT TYPE – series or parallel	1 mark for brighter in parallel or dimmer in series
Six	a)	(a) P (b) P (c) C (d) P (e) C (f) C (g) P (h) P	5 or more correct = 1 mark
	b)	Colour: iron is grey and silvery, rust is brown. Magnetic: iron is magnetic, rust is not. Conductivity: iron conducts electricity, rust does not Strength: Iron is strong and tough, rust is not.	1 difference = 1 mark
	c)	i) Energy was given out (heat or light), colour of magnesium changed from shiny silver to white, a new substance(white solid) formed. Must explain not just describe.	1 idea = 1 mark: Max 2 marks

		ii) Magnesium + oxygen → magnesium oxide	1 mark												
		iii) The fizzing is the release or production of a gas .	1 mark												
	iii)	<p>Diagram of displacement of water OR Diagram of displacement of air</p> <ul style="list-style-type: none"> Reactants named; An acid and any metal 	<p>1 mark correct diagram and 1 mark correct reactants max 2 marks <u>Not</u> marble chips.</p>												
Seven	a)	<table border="1"> <tr> <td></td> <td>Heat energy</td> <td>Kinetic energy</td> <td>Light energy</td> </tr> <tr> <td>Electrical</td> <td>Iron</td> <td>Blender Fan</td> <td></td> </tr> <tr> <td>Chemical</td> <td>Candle Gas stove</td> <td>Car Person</td> <td>Candle</td> </tr> </table>		Heat energy	Kinetic energy	Light energy	Electrical	Iron	Blender Fan		Chemical	Candle Gas stove	Car Person	Candle	<p>3, 4 or 5 correct = 1 mark 6 or 7 = 2 marks</p>
	Heat energy	Kinetic energy	Light energy												
Electrical	Iron	Blender Fan													
Chemical	Candle Gas stove	Car Person	Candle												
	b)	Electrical changes to kinetic + (sound + heat)	1 mark												
	c)	Chemical → electrical → light + heat	1 mark												
Eight	a)	Herbivore Omnivore Herbivore Carnivore	3 or 4 correct 1 mark												
	b)	Scavenger	1 mark												
	c)	Decomposers are necessary in all communities as they <u>remove all the dead material breaking them down</u> and they recycle its nutrients back into the ecosystem. Must state underlined bit	1 idea = 1 mark												
	d)		<p>2 marks all correct. 1 mark if one step missing. But if mistake or no arrows or two steps missing = 0 marks</p>												
	e)	i) Plankton → barnacles → periwinkle → seagull Must have arrows drawn correctly	1 mark												
		ii) barnacles, mussels, limpet,	All correct 1 mark												

Nine		<ul style="list-style-type: none"> Black colour of Polar bears skin absorbs heat so the bear keeps warm. Polar bear has a thicker layer of fat which insulates/keeps it warm Polar bears fur is thicker so it keeps it warm Polar bear has a low surface area compared to body size so less area to loose heat. 	1 mark each max of 3 marks Must state advantage of the feature listed								
Ten	a)	Solar	1 mark								
	b)	New moon	1 mark								
	c)	<table border="1"> <tr> <td>For an eclipse of the Sun to happen, the Moon has to ----</td> <td>----- moving over the surface of the Sun.</td> </tr> <tr> <td>During an eclipse of the Sun, the Moon -----</td> <td>----- passes between the Sun and the Earth.</td> </tr> <tr> <td>Where the Moon casts its shadow on the Earth -----</td> <td>----- casts its shadow on part of the Earth.</td> </tr> <tr> <td>When you watch an eclipse of the Sun, the Moon appears to be -----</td> <td>----- we cannot see part or all of the Sun.</td> </tr> </table>	For an eclipse of the Sun to happen, the Moon has to ----	----- moving over the surface of the Sun.	During an eclipse of the Sun, the Moon -----	----- passes between the Sun and the Earth.	Where the Moon casts its shadow on the Earth -----	----- casts its shadow on part of the Earth.	When you watch an eclipse of the Sun, the Moon appears to be -----	----- we cannot see part or all of the Sun.	2 or 3 correct 1 mark
For an eclipse of the Sun to happen, the Moon has to ----	----- moving over the surface of the Sun.										
During an eclipse of the Sun, the Moon -----	----- passes between the Sun and the Earth.										
Where the Moon casts its shadow on the Earth -----	----- casts its shadow on part of the Earth.										
When you watch an eclipse of the Sun, the Moon appears to be -----	----- we cannot see part or all of the Sun.										
	d)	Meteor Comet Satellite Asteroid	3/4 correct = 1								
Eleven	a)	Protons Electrons Neutrons	3 correct = 1 mark								
	b)	Beryllium (NOT Be)	2 or 3 correct = 1 mark								
	c)	4									
	d)	8									
	e)	P Chlorine O Na Potassium	3, 4 or 5 correct = 1 mark								
	f)	i) Argon (NOT Ar) ii) has a full outer shell /so does not react.	1 mark 1 mark/2mark								
	g)	B	1 mark								
	h)	Carbon: Helium: Magnesium (any other circled, even with these three = 0)	1 mark								
	i)	CO CaCO H ₂ SO ₄ MgO : 3 or 4 correct = 1 mark (each incorrect one negates a correct one)	1 mark								
Twelve	a)	Newton (various spellings accepted)	1 mark								
	b)	Book is being pushed to the right as this force is greater than friction OR Book is moving as forces are unbalanced ie greater force moving to right	1 mark								
	c)	4N (to right)	1 mark								
	d)	Moving. Accepted "Yes"	1 mark								

	e)	A = effort B = pivot C = load	2 or 3 correct = 1 mark
	f)	e.g. of answers Machines magnify forces eg crowbar moves a heavy rock using just a little force Machines change direction of forces eg pulling up a sail the pulley at the top changes the direction Machines speed up objects eg an egg beater which you turn the handle a little and the beater moves faster. Must make the link about "how it works"	1 mark each max 2 marks
Thirteen	a)		Plotted correctly 1 mark (only the location of the points was considered)
	b)	30,000 (NOT 30.) Answers accepted from their graph as long as they used a ruler to draw the line.	1 mark
	c)	It will drop, less will be trapped	1 mark
	d)	Lynx is the predator which feeds on showshoe hares their numbers have dropped so there is less food for the Lynx, less food so less chance of them breeding less around so less to be trapped. OR similar answer	1 mark
	e)	A predator is an animal which hunts and kills other animal for food. Accepted "hunts other animals" and "hunts prey" did not accept "hunts for its food" (seed eating birds and similar do that as well) or "eats other animals" (scavengers do this as well)	1 mark
			80

