


## Assessment Schedule 10B 2007

/ 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
1(a)	Points plotted <b>and</b> Line of best fit <b>and</b> carpet labelled	1 mark
(b)	Repeat the experiment	1 mark
(c)	Polished wood	1 mark
(d)	Because the floor surfaces create a different amount of friction OR the increased mass creates greater friction	1 mark
2 (a)	Correct symbols used for 3 cells = 1 ; parallel circuit with straight line = 1	2 marks
(b)	parallel	1 mark
(c)	The other lamp would stay lit	1 mark
3(a)	Charges /electrons move when Mary combs her hair.-1 Opposite charges attract and so the hair sticks to the comb -1	2 mark
(b)	Both combs have the <b>same</b> charge and so repel each other	1 mark
(c)	Car shocks/ clothing/ etc	1 mark
4(a)	North pole; south pole; north pole ; south pole ; opposite	1 mark – 2-3 correct 2 marks – 4-5 correct
(b)	Left: Opposite i.e. N and S ; Right: Same i.e. N and N or S and S	1 mark
5(a)	Centre: black = proton/nucleus ; white = neutron/nucleus; Outside = electron	1 mark for 2-3 correct
(b)	Neutron	1 mark
(c)	7	1 mark
(d)	There are 4 protons and 3 neutrons in the nucleus (don't accept electrons instead of protons)	1 mark
(e)	C	1 mark
6 (a)	(i) 2, 8, 2 (ii) 2, 8, 7	2 marks
6 (b)	i. Argon/ Ar ii It is inert( does not react), as it has a stable outer shell	1 mark
7(a)	Hydrogen	1 mark

Question	Evidence	Marks	
(b)	The lighted splint would go 'pop'	1 mark	
(c)	Because hydrogen is lighter than air: so it would collect at the bottom of flask/ so it will push the heavier air out/ so if the test tube was right way up the gas would float out	1 mark	
(d)	Correctly drawn diagram with no labels = 1; with labels 2 Must work if gaps -1	2 marks	
(e)	i) Magnesium and hydrochloric acid = 1 ii) Magnesium chloride and Hydrogen = 1	2 marks	
8(a)	Rusting	1 mark	
(b)	Water and oxygen	1 mark	
(c)	Because there is no oxygen present	1 mark	
(d)	Because there is no water present	1 mark	
(e)	The paint prevents the oxygen and water from coming into contact with the metal	1 mark	
9 (a)	X = mantle ; Y = inner core	1 mark	
(b)	i. The movement of the material in the mantle/ convection currents in the mantle(2)	ii. Because there are no plate boundaries (1)	3 marks
10(a)	Gritstone	1 mark	
(b)	3 layers	1 mark	
(c)	Movement of tectonic plates/ earthquake	1 mark	
11(a)	Universal Indicator	1 mark	
(b)	i) bleach ii) rain	2 marks	
(c)	Baking soda because it is a base and will neutralize the acid sting	2 marks	
(d)	i) red ii) blue/purple iii) green iv) red v) blue – not purple	2 -3 = 1 mark 4-5 = 2 marks	

Question	Evidence	Marks								
12(a)	<p><b>Word</b></p> <p>Competition Habitat Population Carnivores Omnivores Decomposer Predator</p>  <p><b>Definition</b></p> <p>feed on both plants and animals number of organisms of the same kind living in a particular area organisms which break down dead material animals which hunt their prey organisms requiring the same resources living place of an organism consumers which eat other animals</p>	<p>4-5 = 1 mark</p> <p>6-7 = 2 marks</p>								
(b)	<p>i) direction of energy flow ii) Population of lettuce or tomato would increase/ population birds decrease iii) Carnivore iv) One correctly drawn chain</p>	4 marks								
(c)	<table border="1"> <thead> <tr> <th>Adaptive feature</th> <th>How it helps the fish survive</th> </tr> </thead> <tbody> <tr> <td>Gills</td> <td>To breathe underwater</td> </tr> <tr> <td>Stream-lined shape</td> <td>To swim quickly through the water</td> </tr> <tr> <td>fins</td> <td>To change direction in water</td> </tr> </tbody> </table>	Adaptive feature	How it helps the fish survive	Gills	To breathe underwater	Stream-lined shape	To swim quickly through the water	fins	To change direction in water	<p>2 rows – 1 mark</p> <p>3 rows – 2 marks</p>
	Adaptive feature	How it helps the fish survive								
	Gills	To breathe underwater								
	Stream-lined shape	To swim quickly through the water								
fins	To change direction in water									
13(a)	<p>Human activities (industry, transport, domestic, electricity generation) release hydrocarbons, NO<sub>2</sub> and SO<sub>4</sub>. Chemical reactions convert NO<sub>2</sub> to HNO<sub>3</sub> and SO<sub>4</sub> to H<sub>2</sub>SO<sub>4</sub>. These chemicals dissolve in clouds and fall as acid rain.</p>	<p>2 comments 1 mark</p> <p>3 comments 2 marks</p>								
(b)	<p>Collect rainfall in a container. Use an indicator (UI or litmus) to test the pH of the rain. If rain acidic the indicator would turn a red colour.</p>	<p>Indicator – 1 mark</p> <p>Named indicator – 2 marks</p> <p>Colour result – 3 marks</p>								
14(a)	All straight lines drawn correctly.	1 mark								
(b)	Solar eclipse	1 mark for both								
(c)	Lunar eclipse									
(d)	For a total eclipse to occur the Sun, Moon and Earth must be on exactly the same alignment.	1 mark								
(e)	i. Pluto has a very low density of only 500 kg/cm <sup>3</sup> . Gas has a lower density than solids.	1 mark								
	ii. Jupiter has the highest surface gravity or Pluto has the lowest surface gravity.	1 mark								
	iii. Pluto	1 mark								
	iv. Earth has an average surface temperature of 15°C but Jupiter's temperature is too cold to survive at -150°C. Earth has a gravity of 10N/kg which safely forces us towards the Earth. Jupiter's gravity is very high at 26 N/kg and this would crush us.	2 marks (one per Statement)								
15(a)	<p>i. thrust</p> <p>ii. weight / gravity</p>	1 mark for both								

Question	Evidence	Marks
(b)	Chemical potential energy, kinetic energy, sound energy, light energy, heat energy, gravitational potential energy.	3-4 = 1 mark 5+ = 2 marks
16(a)	Anticlockwise Turns faster, completes more than one revolution	1 mark each 2 marks total
(b)	Any correctly named machine e.g. bike	1 mark
(c)	i. load, pivot effort                      ii. load, pivot, effort                      iii. load, pivot, effort	3 marks (1 mark each)
		80 marks