

### Assessment Schedule 10C 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.

Q	Evidence	Marks
1	D	1 mark
2(a)	A	1 mark
(b)	Friction/air resistance <b>or</b> Gravity.	1 mark – both needed
(c)	Gravity <b>or</b> Friction/air resistance.	
[Note: answers for b) and c) are interchangeable.]		
3	<p><b><u>Main energy transformations: (2 marks)</u></b></p> <p style="text-align: center;">Chemical potential → kinetic → gravitational potential</p> <p style="text-align: center;">/      Elastic potential → kinetic → gravitational potential.</p> <p><b><u>OR: Other transformations which miss one of the above transformations      (= 1 mark only)</u></b></p> <p>e.g. Chemical potential → kinetic + heat + light</p> <p>or      Elastic potential → gravitational potential + sound</p>	2 marks
4 (a)	<p><b>Produces own food (using photosynthesis)</b> For example:</p> <p>They don't eat anything because they produce their own food by photosynthesis. They provide energy for others further up the food chain without taking energy from another but making its own.</p>	1 mark

Q	Evidence	Marks
4 (b)	<p>There is <b>more light</b> for photosynthesis in summer, so plankton can <b>gain more energy to breed</b>.</p> <p>For example:</p> <p>"Because there is more light, they can produce more energy from photosynthesis."</p>	1 mark
4 (c)	<b>Krill numbers drop because there is less plankton for them to eat</b>	1 mark
4 (d)	Arrows represent the <b>flow of energy through the food web</b>	1 mark
4 (e) (i)	<p>2 marks: All arrows except plankton → krill are marked with a cross</p> <p>OR 1 mark: At least 3 arrows from krill to penguins, fish that eat krill and sea birds are crossed. (some higher up missing) but still NOT plankton → krill marked with a cross.</p>	2 marks
4 (e) (ii)	<p>One for direct link:</p> <ul style="list-style-type: none"> <li>• Krill are eaten by fish, seabirds and penguins. Food source decreases therefore their numbers will decrease.</li> </ul> <p>One for indirect link:</p> <ul style="list-style-type: none"> <li>• This has a flow on effect further up the food chain. Less fish, seabirds and penguins as a food source for the seals, sea leopards, baleen whales and killer whales.</li> </ul>	2 marks
5 (a)	5	1 mark
5 (b)	1540	1 mark
5 (c)	A	1 mark
5 (d)	<p>Any 1 of:</p> <ul style="list-style-type: none"> <li>• Trap a number of possums and from this calculate the percentage of each coat colour.</li> <li>• Find/calculate the annual rainfall of the area and compare this with previous data to work out coat colour percentages.</li> </ul>	1 mark
5 (e)	A	1 mark
6 (a) (b)	5 3, 1, 7	1 mark - if 3 out of 4 positions are correct.
6 (c)	<p>At any one time <math>\frac{1}{2}</math> the moon is illuminated</p> <p>As the moon moves around the earth/ changes it's position, we see different amounts/views of the lit up side.</p>	1 mark for each idea.

Q	Evidence	Marks
7 (a)	Bulbs are in series with each other	1 mark
7 (b)	C	1 mark
7 (c)	Bulb one gets brighter Bulb two goes out	1 mark – both required.
7 (d)	Bulb 1 gets dimmer.	1 mark
8 (a)	Farmer C	1 mark for farmer <b>and</b> reason.
8 (b)	The volcanic ash contains acids which dissolve in the saliva and burn the cows tongue	
8 (c)(i)	(i) <u>Debris from a volcano</u> that is mixed <u>with water</u> that <u>flows</u> down the volcano/mountain/ flow of mud and water out of volcano NOT lava or magma NOT just mud and water because where is the mud and water	1 mark for description  1 mark for <b>two problems or dangers.</b>
(ii)	(ii) any two problems or dangers from..... undercut banks, causing cave-ins, erosion. bury/destroy man-made structures, e.g., roads, buildings, bridges. leave a lot of debris. move quickly. travel long distances. transport very large boulders. Add other acceptable answers to this list.	
9 (a)	(i) true (ii) false (iii) false	1 mark = 2/3 correct
9 (b)	Hydrogen	1 mark
10 (a)	(i) sodium sulfate	1 mark
10 (b)	(i) hydrochloric acid	1 mark
10 (c)	(i) copper carbonate	1 mark
10 (d)	(i) zinc chloride (ii) hydrogen	2 marks
10 (e)	(i) sulfuric acid (ii) sodium hydroxide	2 marks

Q	Evidence	Marks
11	<p><b>3 marks:</b> The aim of the student's test is to see the effect of changing the age of insecticide on the number of flies which are killed. (you can tell that this is the intent of the test even if they haven't stated it)</p> <p>Fair test in which <b>three variables</b> (type of flies, amount of insecticide used, and exposure, age of flies?) <b>are controlled</b></p> <p>eg. Compare the results from a new batch of the insecticide with results from the old batch on two groups of flies of the same species that have not been previously exposed to the insecticide. Spray with the same amount of insecticide.</p> <p><b>2 marks:</b> The aim of the test is to see the effect of changing the age of insecticide on the number of flies which are killed. (as above)</p> <p>Fair test in which <b>two variables</b> (type of flies, amount of insecticide used, or exposure, age of flies?) are controlled</p> <p>eg. Compare the results from a new batch of the insecticide with the results from the old batch on the flies of the same species in the barn.</p> <p><b>1 mark:</b> Attempts to carry out a test which looks at the effect of changing the age of insecticide</p> <p>eg. (Chemically) analyse samples of the insecticide at regular intervals to see if it changes over time</p> <p>OR</p> <p>(biologically)... by seeing how many flies it kills over time. (But other variables are not controlled)</p> <p>OR</p> <p>Comment about buying new spray and spraying flies with new spray count how many die</p>	<p>3 marks in total</p>
		40 marks