
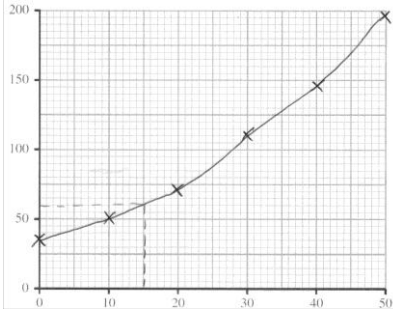


Assessment Schedule 9C 2011

/ 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)	Radiation : infrared : security light	1 mark
(b)	Light travels faster than sound (so you see it before you hear it)	1 mark
(c)	(i) Hear the (original) ring : and hear the echo	1 mark
	(ii) The first ring : some of the sound energy is absorbed/dispersed by the mountain (or equivalent idea).	1 mark
	(iii) $(3 \times 990)/330$: 9 seconds	1 mark
(d)	Any 2-3 correct statements e.g. <ul style="list-style-type: none"> • Hearing gets worse when you get older / teenagers have better hearing than 65 year olds • Teenagers hear all frequencies (12-20 kHz) equally • Older people find it harder to hear higher frequencies • Neither teenagers nor 65 year olds could hear 22 kHz frequency • Any other correct statement / trend • BUT NOT old people can't hear properly, or statements about ears not hearing, or reference to loud and quiet sounds etc 	2 correct 1 mark, 3 correct - 2 marks
(e) (f)	B B	1-2 correct - 1 mark
Two (a)	5, 7 [1] { 2, 3, 4 }, 6 Note steps 2, 3, 4 can be in any order	1 mark
(b)	(filter) funnel (and filter paper) insoluble : material / insoluble : impurities / residue salt solution / salty water / filtrate BUT NOT "water"	1 mark each – 3 marks
(c)	 is circled	1 mark
Three (a)	1 and 4	1 mark
(b)	How high (tennis) balls bounce (on dry concrete / same surface) when dropped from different heights OR effect of drop height on bounce height	1 mark
(c)	Hard to measure exactly how high the ball bounces as it is moving (fast) / the surfaces may not ALL be even/identical. Accepted some other alternatives if they were <u>well explained</u> . Did NOT accept "wind" or different "force of drop" (drop just means let it go!)	1 mark

(d)	Repeat trials : average results. Did NOT accept measures that would increase ACCURACY like slow motion camera, automated dropping devices etc.	1 mark
Four (a)(i)	Slow moving : no defences	1 mark
(ii)	It tastes unpleasant so they <u>learn</u> not to eat them / <u>know</u> not to eat them <u>in the future</u>	1 mark 1 mark
(iii)	functional / physiological	1 mark
(b) (i)	Grass roots	1 mark
(ii)	The centipedes had eaten them	1 mark
(iii)	Sample answer: 1-2 grass roots : 0-2 millipedes : <u>1 centipede</u> Prediction is well explained - e.g. some roots remain as not yet eaten by the millipedes before they met their untimely demise as the centipede ate (some of) the millipedes.... ☺ One mark only if not explained at all or limited explanation/no numbers in explanation or answer implies that centipede sat back and waited for millipedes to eat ALL the grass roots before it started to eat any millipedes!	1 mark 1 mark
(c)	$A = Nepa cinerea$: $C = Aphelocheirus aestivalis$	Both correct - 1 mark
Five (a)	No marks for a bar graph 	5-6 points correctly plotted – 1 mark
(b)	Smooth free hand curve – not point to point ruled and not double / thick (And yes mine wasn't perfect!)	1 mark
(c)	60 g \pm 5 g (as taken from student graph)	1 mark
(d)	(as temperature increases the solubility) increases/ a higher solubility	1 mark
Six (a)	C : it made a new substance / there was a colour change / it was not reversed on cooling	1 mark
(b) (i)	Plane – low density, power lines – conducts electricity, pan – conducts heat	All correct - 1 mark
(ii)	Silicon.	1 mark

(c)	C	1 mark
Seven (a) (i)	2 MW (units are needed)	1 mark
(ii)	1.1 MW accept 1.0/1.2 (do NOT penalise for omitted / wrong units here as 2 step process)	1 mark
(iii)	<ul style="list-style-type: none"> • It does NOT produce a consistent amount of electricity / there are times when it produces no / less electricity • At {specified times} 00.00 & 12.00 / every 12 hours the water current is too low to generate electricity (relates answer to tides in some way) • Allow (for max. of 1 mark) some reference to disaster e.g. tsunami 	1 mark each – max of 2 marks
(b)	Rays continue to mirror and “outside rays” cross (focus) / come together on the container	1 mark
	Arrows on reflected rays Do NOT penalise for middle ray passing through container (and straight back on itself)	1 mark
		Total = 40