Assessment Schedule 2008

Science: Describe aspects of astronomy (90192)

Evidence Statement

Q	Achievement	Achievement with Merit	Achievement with Excellence
ONE (a)	**Correct statement** Eg. • Moon's surface reflects sunlight / illuminated / lit up by sunlight so that it can be seen (full moon). OR • Moon's surface receives no sunlight (new moon) that can be seen from Earth. OR • Diagram (annotated) showing fully lit up or in shadow.	**Explains** • relative positions of moon, Earth, sun. PLUS • Relates this to their chosen phase, ie. that there is no reflected light for the new moon and fully reflected / illuminated / lit up for the full moon. (May show this with diagram). (In Diagrams for full moon if the view is looking down then the moon must be behind the Earth and it must be stated that the moon is above or below the Earth. For side view the moon must be just behind the Earth and above it. The view must be stated).	
(b)	**Correct statement** OR • Moon rotates at same rate as its revolution / orbital time around Earth. OR • Moon's day is the same length as its month. OR • Tidally locked.	**Explains** • Moon rotates on axis at same rate as its takes for Moon to revolve round Earth, therefore the same side of the moon always faces Earth. PLUS Diagram which must show rotation of moon.	
(c)	States gravity.		

(d)	• NZ's position is below the equator and therefore receives different amounts of radiation / sunlight at different times. OR • Because Earth axis is on a tilt different parts receive different amounts of radiation. OR • Mentions The effect of Earth's axis being on a tilt and that NZ's position is below the equator. OR • Due to the tilt or position of NZ (southern hemisphere could be closer to or further from the sun).	• Explains how the tilt and position causes seasons. Eg because of NZ's position below the equator when the southern hemisphere is tilted towards the sun (because of the tilt of the Earth's axis) it receives more radiation and so it is summer. Vice versa for winter. OR • Has a diagram showing this tilt and how this affects amount of radiation with NZ's position showing.	• Has **all** ideas linked (discusses how the tilt and position with radiation causes seasons). **must** have a diagram. AND • mentions summer, winter, and some explanation of autumn and spring being in between summer and winter (in terms of distance from the sun or radiation received) **O**R • revolution / orbit around the Sun (related to tilt i.e. because of tilt the suns radiation is more straight on in summer compared to winter where it is at more of an angle OR • In summer days are longer and so more radiation is received and vice versa for winter). This is linked to NZ's position.
TWO	• States that the sun, moon and earth are in line (can be shown in diagram) Correct sequence needed.	• Explains that a partial eclipse occurs when the sun and moon are not exactly in line OR the moon only partially obscures the sun. • Also explains that in a total eclipse the moon fully blocks the sunslight or is in a direct line. • Labelled diagram can only get a maximum of merit	Merit PLUS • Labelled Diagram showing difference between partial and total eclipse. • Cannot just use jargon words of umbra and penumbra (must discuss)
THREE (a)	TWO judgements that describe a medical effect: Eg: • Muscle wastage • Space sickness / loss of balance • Radiation sickness • Bone density problems • Blood pressure problems • Psychological problems due to confinement / isolation • Sleep deprivation • Stress • Space anemia		
(b)	Describes two challenges OR One challenge, explains it and how it is overcome.	Describes two challenges explains one and gives a solution to overcome it.	Relates Two challenges fully, links the two challenges with the explanations and how they are overcome.

Judgement Statement

Achievement	Achievement with Merit	Achievement with Excellence
Total of FIVE opportunities answered at Achievement level (or higher) OR Two at Achievement level plus two at Merit level (or higher). $5 \times A$ or $2 \times M + 2 \times A$	Total of SIX opportunities answered with THREE at Merit (or higher) and THREE at Achievement level. $3 \times M + 3 \times A$	Total of SIX opportunities answered with TWO at Excellence, THREE at Merit and ONE at Achievement level. $2 \times E + 3 \times M + 1 \times A$