Assessment Schedule – 2007

Science: Describe aspects of astronomy (90192)

Evidence Statement

Q	Achievement	Achievement with Merit	Achievement with Excellence
1(a)	Planet revolves once (about its own axis).		
1(b)	Moons circle planets. **OR** Planets circle the Sun**.** **OR** Path of one object around another. **OR** Gravitational attraction	Explains that planets revolve around stars OR moons revolve around planets as a result of gravitational attraction.	
1(c)	Planets orbit a star **AND** Moons orbit planets.		
1(d)	Spring tides are very high or very low tides **OR** Combined effect of Sun and Moon's gravitational pull. **OR** Sun, Moon and Earth in line	Spring tides are very high or very low tides **AND** Explanation for or diagram of spring tides in terms of the arrangement of the Sun, Moon, and Earth's positions all in line. **OR** Combined effect of Sun and Moon's gravitational pull.	The gravitational pull of Moon and Sun combine, leading to a very high / very low tide. They occur when the earth, the sun and the moon are in line (this is unrelated to the season Spring).
1(e)	 Diagram with correct relative positions but no explanation. **OR** Sun and Moon perpendicular as seen from Earth (quarter Moons).	Diagram of correct relative positions **AND** Explanation that the gravitational pull is reduced.	
1(f)	Point where Earth's axis meets the night sky space **OR** Point directly above the Earth's South Pole. **OR** Effect caused by rotation of Earth (under stars).	Point where Earth's axis meets the night sky space **OR** Point directly above the Earth's South Pole. **AND** The effect due to the rotation of the Earth that causes the rotating pattern of stars when photographed.	
1(g)	The Crux or Southern Cross.		

1(h)	Moon is between the Sun and the Earth. **OR** A correctly labelled diagram.	The Moon passes between the Sun and the Earth its shadow passes across the Earth's surface (and blocks out the Sun). **OR** fully annotated diagram showing positions, converging lights rays and eclipse area.	
2(a)	States two effects. Eg space sickness, muscle weakening, bone density decreases,weakened immune system, slowing of heart, fewer red blood cells produced, balance disorders,fluid redistribution, height increases **OR** One effect stated and explained.	Two effects stated, one explained Eg muscles atrophy **because** they do not have to work against gravity OR work less OR do not have to work as much.	Relates weightlessness to two effects stated and explained Eg bone density decreases (1% per month because calcium not being laid down) due to lack of physical stress Eg space sickness (nausea, vertigo, headaches, vomiting) due to middle ear no longer subject to gravity.
2(b)	Two of • Physical data (temperature, weather patterns, surface dimensions, Moons, magnetism) • Chemical data (atmospheric composition • (High resolution) image or picture • Example of Martian Rover data.		
3(a)	AU is the (average) distance between the Sun and the Earth.		
3(b)	Any two of Radio telescopes detect radio waves. **OR** Optical telescopes detect visible light. **OR** Radio telescopes probe further into space or back in time. **OR** Optical telescopes view nearer celestial objects.	Explanation of both telescopes' uses **AND** Links one type of telescope with the electromagnetic spectrum.	Links uses of each telescope and the electromagnetic spectrum of the object being viewed.

Judgement Statement

Achievement	Achievement with Merit	Achievement with Excellence
SIX questions answered correctly. Minimum of $6 \times A$	EIGHT questions answered correctly, including at least THREE at Merit level. Minimum of $3 \times M + 5 \times A$	NINE questions answered correctly, including at least ONE at Excellence level and at least THREE at Merit level. Minimum of $1 \times E + 3 \times M + 5 \times A$