Year 8: ASK Yourself!

Subject: Science
Unit 8.3: Motion on earth and space

	Launching 1-2	Developing 3-4	Progressing 5-6	Mastering 7-9
Skills				
	I need to use the formula: speed = distance (m)/time (s) or distance-time graphs, to calculate speed. I need to relate observations of changing day length to an appropriate model of the solar system.	I can partially describe the appearance of planets or moons from diagrams showing their position in relation to the Earth and Sun. I can partially describe how space exploration and observations of stars are affected by the scale of the universe.	I can confidently describe how the speed of an object varies when measured by observers who are not moving, or moving relative to the object. I can confidently make deductions from observation data of planets, stars and galaxies.	I can expertly suggest how the motion of two objects moving at different speeds in the same direction would appear to the other. I can expertly explain the choice of particular units for measuring distance.
Knowledge				
	I need to know that the solar system can be modelled as planets rotating on tilted axes while orbiting the Sun, moons orbiting planets and sunlight spreading out and being reflected.	I partially know why places on the Earth experience different daylight hours and amounts of sunlight during the year.	I confidently know that our solar system is a tiny part of a galaxy, one of many billions in the Universe. I confidently know that light takes minutes to reach Earth from the Sun, four years from our nearest star and billions of years from other galaxies.	I understand that explanations from different periods in history about the motion of objects and structure of the Universe.