High Tunstall College of Science Curriculum Intent

Subject: Science (Physics) Year: 9

Waves and Space

	Physics Thread	Progress		
Topic	**Key ideas**	**R**	**A**	**G**
Waves and space	**I can draw and label wave features and calculate using formula.**			
	I can calculate wave speed of a wave in a ripple tank.			
	I can order and identify the uses and dangers of electromagnetic waves.			
	I can investigate how much radiation is given out by a material			
	I can Create ray diagrams of reflection and refraction			
	I can draw and labelling a longitudinal wave, and analyse how loudness and pitch are linked to eave features.			
	I can compare and contrast transverse and longitudinal waves.			
	I can order the planets by distance from the sun and explain how the solar system formed			

Lesson	Learning Focus	Assessment	Key Words
1	Understanding wave features and calculating wave speed.	Drawing and labelling wave features and calculating using formula. Formative questioning, exam questions and summative tests.	Frequency, Wavelength, amplitude, wave speed.
2	Required practical investigating wave speed in liquids.	Observation and formative assessment of students completing a safe and accurate practical. Exam questions .	Frequency, Wavelength, amplitude, wave speed.
3	Exploring the electromagnetic spectrum.	Ordering and identifying uses and dangers of electromagnetic waves. Formative questioning, exam questions and summative tests.	Electromagnetic, wavelength, radiation, frequency, wave speed.
4	Required practical investigating radiation of different materials.	Observation and formative assessment of students completing a safe and accurate practical. Exam questions .	Infrared, radiation
5	Understanding reflection and refraction	Create ray diagrams of reflection and refraction	Reflection, refraction, incidence, normal line
6	Understanding sound as a longitudinal waves.	Drawing and labelling a longitudinal wave, analysing how loudness and pitch are linked to eave features. Formative questioning, exam questions and summative tests.	Longitudinal, pitch, loudness
7	Comparing and contrasting transverse and longitudinal waves.	Formative questioning, exam questions and summative tests.	Transverse, longitudinal,
8	Exploring the formation of the solar system.	Ordering the planets by distance from the sun and explaining how the solar system formed. Formative questioning, exam questions and summative tests.	Gravity, solar.