

Year 9 Physics (AQA Sciences)

In Year 9 students begin the physics GCSE course. They will cover the two topics of the course which are 'Particle Model of Matter' and 'Energy'. Both of these topics are fundamental to a lifelong understanding of the basic principles of physics and cover the groundwork needed for the rest of the GCSE course. There are two required practicals in these topics, which are a mandatory part of the course, they are also a wonderful opportunity to develop the skills of our scientists, alongside additional experiments. This year is used to embed key scientific vocabulary into the students repertoire and encourage the important analytical skills needed for the rest of the course. In Year 9 students are taught by subject specialists in a carousel, studying two distinct blocks of work for each of the three sciences; the first block of work will be completed in the autumn term; the second block of work will then be completed during the spring and summer terms during which time students will decide whether they choose to study for **three** separate science GCSEs or **two** combined science GCSEs. The Year 9 curriculum will prepare all students for either choice.

Methods of deepening and securing knowledge:

Interleaving	Starter tasks are designed to check knowledge from not only the previous lesson, but also lessons earlier in the topic and sometimes even other topics within physics which they will have covered previously.
Checkpoints/ mini plenaries	These are used within lessons to check understanding and address any misconceptions before moving on.
Independent study	Educake questions are used as a means of low stakes testing to consolidate learning and check understanding.
Assessment for Progress	Each of the topics will have an 'Even Better If' (EBI) assessment where students are provided with bespoke tasks designed to help them reach the next level in their learning.

	Block 1 (Autumn Term)	Block 2 (Spring and Summer Term)
Topic(s)	<p>Particle model of matter</p> <ul style="list-style-type: none"> • Density of materials. • Changes of state. • Internal energy. • Temperature changes in a system and specific heat capacity. • Changes of state and specific latent heat. • Particle motion in gases. <p>Required practical: use appropriate apparatus to make and record the measurements needed to determine the densities of regular and irregular solid objects and liquids.</p> <p>Required practical: an investigation to determine the specific heat capacity of one or more materials.</p>	<p>Energy</p> <ul style="list-style-type: none"> • Energy stores and systems. • Changes in energy. • Energy changes in systems. • Power. • Energy transfers in a system. • Efficiency. • National and global energy resources.
Assessment	<ul style="list-style-type: none"> • Ongoing assessment. • Educake low stakes test. • Topic assessment. • EBI assessment review. 	<ul style="list-style-type: none"> • Ongoing assessment. • Educake low stakes test. • Topic assessment. • EBI assessment review.
CEIAG <i>(Careers that are linked to that topic)</i>	Industrial gas engineers.	Green energy researchers. National Grid engineer. Energy efficiency analysts.

Independent Study

Educake is used to set timely and relevant revision questions throughout the topic. There will be around 20 questions set and the difficulty will be tailored to the ability of the group. Students can immediately see their scores and also identify which areas are their strongest and weakest within the questions given. Senecalearning.com also provides an incredible revision resource to allow students to consolidate their learning at their own pace.