



## ASSESSMENT IN SCIENCE

We assess learning in Science for the following reasons:

1. To check pupils' understanding in order to inform future learning.
2. To prevent pupils from forgetting what they have learned. This known as the testing effect.
3. To check that pupils have reached specific curricular goals.
4. To check that our pupils are making progress.

Pupils are assessed against the curriculum both formatively and summatively either during lessons through component assessment and at key points of the curriculum throughout the year.

### Formative assessment

Formative assessment involves providing feedback for teachers and pupils that is then used to improve teaching and learning. Below are examples that you would regularly see in a science lesson.

- A low stakes knowledge quiz
- Use of whiteboards
- Practice exam questions
- Cold calling
- Homework tasks
- Practical tasks
- Retrieval practice
- Multiple choice questions
- Listening to discussions

### Summative assessment

Summative assessment identifies whether specific curricular goals have been achieved. In science, it consists of assessment of substantive and disciplinary knowledge, including pupils' ability to carry out specific practical procedures and investigations.

End of unit assessments have been produced for most topics; all are approximately 50 marks and include the elements of working scientifically that have been developed during the unit, in addition to the specified content for that topic. Each assessment contains a mixture of different question styles, including multiple-choice questions, short answer questions, calculations, drawing and analysing graphs and extended-open response questions. The final question interleaves from a previous topic (see table below for number of end of unit assessments taken in each year and the interleaving question).

All end of unit assessments having spacing of at least two weeks. All pupils are aware of and are encouraged to use revision resources from year 7 onwards to ensure techniques are embedded in practice, resulting in them taking a greater responsibility for their own learning.

<u>Year 7</u> NONE – just spacing	<u>Year 8</u>	<u>Year 9</u>
Cells	Nutrition and Digestion Human and plant reproduction	Inheritance and Selection Cells
Principles of Chemistry	Earth and Atmosphere Separating techniques	Periodicity and Chemical reactions Acids, alkalis and indicators
Particles and solutions	Light and Sound Waves Solids, liquids and gases	Electricity and Static Forces
Energy and Forces	Magnets Digestion	Motion and pressure Light and Sound
	EMC Heating and cooling curves	Energy Transfer Breathing

End of year exams are taken by pupils in years 7, 8 and 9. These end of year exams are taken by the pupils in the testing window specified by the whole school assessment calendar.

Results from assessments are recorded on the department's internal database. Pupils overall progress is assessed based on a combination of the assessments, alongside teacher assessment.

#### KS4 Summative assessment





In Year 10 and Year 11 pupils are assessed after completion of a topic.

All assessments have a spacing of at least two weeks, this is to ensure that content is committed to long term memory rather than working memory. The end of unit assessments used are from the Pearson scheme of work. All assessments are used to measure and support pupil progress. There are two assessments per unit: one Standard (35 marks) and one Higher (35 – 45 marks).

To measure the progress of pupils in Combined Science, scores from all assessments across all three science disciplines are combined. In addition to end of unit assessments, pupils are also assessed using a summative end of Year 10 exam and GCSE mock examinations in November/December of Year 11. These assessments are based on the taught curriculum with questions generated from past Edexcel terminal exams.

#### Reporting on assessment

The work is tracked by the teacher/department using a RAG marking system which will inform teachers in deciding if pupils are on track when completing reviews. All marks are entered into the department tracking spreadsheet on TEAMS.

-  **not yet meeting** curriculum expectations - No evidence of relevant knowledge.
-  **working towards** curriculum expectations - Relevant knowledge is partially demonstrated, but in need of further development in order to achieve the expected standard.
-  **working at** - Relevant knowledge and understanding are clearly demonstrated and applied to the task.
-  working at greater depth (**excelling**) - Knowledge and understanding demonstrated at a particularly high and insightful level.