

## **How do we assess pupils' progress through the Science Curriculum?**

We believe that formative assessment is the best way to assess pupils' progress in Science:

We use formative assessment to check that curriculum content is remembered long term and what has been forgotten. At both KS3 and KS4 formative assessment is used within and through each Science lesson. We recognise that assessment can be used in a number of ways:

- Assessment of learning: e.g. summative assessments in order to monitor pupils' progress through national standardised tests (used for data drops)
- Assessment for learning: through questioning, MWB, examining pupils' work to provide analysis of pupil progress and allow real time adjustments in lessons.
- Assessment as learning: through routine quizzes and tests to build memory and automaticity in students. These low stakes assessments are central to the learning process.

### **Assessment as Learning through starter quizzes:**

Starter quizzes are designed to be used to check that students remember taught knowledge, reinforce taught knowledge and also allow teachers to address misconceptions and gaps as they appear in student performance.

There is a clear format and rationale that is utilised by the department in using formative assessment at the start of each lesson. Starter quiz assessment, for example, simultaneously allow teachers to assess what students know and remember, can be used as a way to reinforce learning of knowledge and allow students to move towards automaticity in areas.

### **Assessment as learning in KS3 Starter Quizzes:**

Starter quizzes at KS3 are used to assess student retention of key knowledge, information and skills that are required to access the upcoming lesson. We use a regular routine quiz in order to improve recall of key scientific language and ideas linked to the unit of study. These are standardised across all classes and are based on the key information provided to student in their knowledge organisers.

### **Assessment as learning in KS4 Starter Quizzes:**

Recall of knowledge and interleaving are vital elements in supporting students to commit information to their long-term memory. To that end, at The Purbeck School we have committed to beginning lessons with a, low-stakes questions in order to test and recall previous knowledge. This could be linked to work studied in the previous lesson or from earlier units. Whatever the content, it will be relevant to the lesson about to be taught. Teachers use these starter activities as a means of formatively assessing students and to address any misconceptions that arise.

### **Assessment during Schemes of learning:**

In the same way that you would not assess the progress of an amateur runner by expecting them to run a marathon, we do not assess our KS3 students by asking them to complete the same examination questions that they would face at the end of KS4 or use grade descriptors designed for summative purposes to provide formative feedback for teachers; we focus on assessing smaller areas of learning such as how to use particular punctuation or how effectively they embed a quotation. The assessments that our KS3 students undertake will include some of the composite skills required in the GCSE and therefore will be linked to and have some resemblance to the end-point goals. Our assessments develop in complexity as students' progress through the curriculum.

**Self-assessment:**

Self-assessment is an essential skill to ensure students develop independent learning habits as they progress through the Purbeck School. As students' progress through KS3 to KS5, they are encouraged to become more autonomous in their ability to self-assess. For example, in year 7, students are not expected to have the skills required to critically assess their work and improve. They are guided through assessments by their teacher and then asked to repeat an exact replica of one of the questions discussed. Whereas, by the time they are in year 11, students receive home learning exam questions and are expected to critically assess and self-improve as part of the home learning process. There is a year-on-year scaffolded approach to ensure that students gain these skills as they move through the key stages.

**What types of assessments do students complete?**

Units at both KS3 and KS4 are divided into Biology, Chemistry and Physics. At the end of each unit, students sit a formative assessment based on content covered in that unit. There could also be interleaved questions from previous units. The methodology of scientific enquiry (working scientifically) is also interwoven into all of our assessments.

**How do assessments shape the curriculum content?**

After assessments are completed curriculum plans are adjusted based on the common errors of students that are discovered by the department. Schemes of learning are regularly reviewed based on the outcomes of assessments and adapted for future teaching.