



In Science, assessment cycles are used to help teachers understand what students have learned so that they can decide what to do next. Accurate diagnosis of misconceptions allows teachers to provide appropriate feedback and support students to take the steps needed to overcome these. Live diagnostic feedback is provided in every lesson, and quality written feedback is given at least once for each topic studied.

Teachers use a range of formative assessment strategies to check understanding and respond to gaps in knowledge.

Diagnostics are used to identify prior conceptions and misconceptions. Evidence-based approaches such as RADAAR are used to support teachers in responding to these effectively. The Best Evidence Science Teaching (BEST) resources, developed by the University of York, are also used to support this work.

In-unit tasks are written activities linked to the current unit of work. Each task is introduced with clear knowledge goals, provided to students as “I can...” statements. Work is marked using diagnostic feedback grids that identify what went well and give actionable next steps to help students close the gap. Students then complete follow-on improvement activities (DIRT), which they self-assess.

Students in all year groups complete unit tests at planned intervals. These tests are designed to use age- and stage-appropriate language and to align closely with the knowledge and skills taught in the unit. Students receive a summative score or percentage, whole-class feedback on common issues, and dedicated lesson time to respond and re-draft answers.

Students receive regular and frequent feedback in lessons through live diagnostic feedback. This is often provided in response to questioning and retrieval activities completed on mini whiteboards or in books, such as retrieval quizzing, multiple-choice questions, two-tier multiple choice, critiquing models, PEOE activities, confidence grids, small-group discussion, focused cloze tasks, and examination-style questions. Feedback is instant, with students receiving verbal guidance and making corrections or improvements in real time.

Diagnostic feedback grids are also used to provide individual and whole-class written feedback following in-unit tasks and unit tests. This written feedback is provided once per topic.

Students receive quality written feedback when diagnostic feedback grids are used for in-unit assessments and end-of-unit tests. These grids provide structured and consistent feedback so that students know where they have been successful, what their next steps are, and how to achieve them.

Students also receive detailed question-level feedback on practice examinations. This helps them to understand which topics, working-scientifically skills, question types and assessment objectives they have been successful in, where further work is needed, and how to improve.