

# 10 components of the intended curriculum

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## GOALS

What does the curriculum enable students to accomplish? Science aims to develop scientific thinkers, inspire some into STEM, and achieve good qualifications. Students need to understand and transfer understanding to unfamiliar situations. They need to grasp the big ideas of science and be competent at scientific enquiry.

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## UNDERSTANDINGS

This component translates the accomplishments into a set of key concepts and understandings for big ideas, and an explicit set of skills for scientific enquiry. These objectives should be aligned with expectations at GCSE to ensure adequate coverage.

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## MAPS

A curriculum map shows its scope, where the big ideas and enquiry goals are programmed in. The sequence should show vertical alignment - a smooth progression from novice to expert understanding, and horizontal articulation - dependencies between science and linked subjects

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## ASSESSMENTS

To make curriculum goals reality means collecting evidence on whether students are meeting them. This means reliable and valid assessments for understanding and transfer, through a variety of instruments, including tests and performance assessment.

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## MONITORING

Student progress towards the goals needs to be tracked across time, to accurately reflect the understanding and transfer goals, and be consistent with the objectives at GCSE.

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## EXEMPLIFICATION

Examples of students' work on performance assessments and extended writing provide clarity for teachers and students about what is expected, for consistency of standards and marking.

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## RESOURCES

Teachers need support to turn curriculum plans into effective instruction. Pedagogy should be based on the most effective strategies for each kind of knowledge, skill or cognitive process. Activities should be selected for whether they achieve the specified outcomes.

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## DIAGNOSTICS

Pre-assessment should be available to check students' readiness for learning. Diagnostic assessments enable teachers to modify instruction, based on evidence of who needs further learning and who is ready for more challenge

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## DIFFERENTIATION

An effective curriculum responds to student differences. This component provides a justification and strategies for customising the curriculum to different abilities and interests, and special needs.

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## TROUBLESHOOTING

Unforeseen circumstances can require teachers to modify their approach. This component assembles strategies, tips and techniques teachers have successfully used.