Evolving 5-19 Biology

summary for
policy makers

Royal Society of Biology

What is the purpose of this **summary document?**

This summary document is an introduction of the Royal Society of Biology's **5-19 biology curriculum framework** for policy makers and is intended to be used to inform future curriculum policy, guidance and content.

Why have the Royal Society of Biology (RSB) developed a curriculum framework?

Since 2014, as a result of previous curriculum reviews across the UK, the Royal Society of Biology has been proactively engaging with the bioscience and education communities in order to develop a framework for a future 5-19 biology curriculum. The RSB hopes to use this framework as a starting point for further discussions with policy makers and curriculum designers both in the lead up to, and during, future curriculum reviews for general, technical and vocational courses. The RSB has already used the framework as part of discussions on the development of the new Curriculum for Wales, Scotland's Curriculum for Excellence as well as the new T-Level programmes.

This framework is the result of considerable time, effort and deep thinking and has been informed by research and evidence and with the involvement of a range of experts including: assessment and curriculum development specialists, bioscience higher education representatives, education researchers, initial teacher training representatives, primary teachers, secondary teachers, students and representatives from industry. This document **is** a framework for a future biology curriculum for UK schools. It is **not** a call for curriculum reform or a ready-made curriculum.

What is the Royal Society of Biology (RSB) proposing?

The framework sets out a way of exploring biology throughout 5-19 and beyond. The purpose has been to ensure that there is better progression of learning in the key ideas in biology curriculum at all educational stages. Sitting alongside the Framework is an exemplification detailing how the content of the national curriculum for ages 5-11, 11-16 and 16-19 could be organised according to the 'big questions'. The RSB's framework and recommendations have been designed to be sufficiently future-proof to reduce the need for regular updates of the curriculum and the disruption this causes in schools.

The framework suggests how the content of the biology curriculum could be organised to explore seven **big questions** of biology. Answers to the big questions are built up by developing young people's understanding of 23 key **themes** spanning three **dimensions** of biological science.

The three '**dimensions'** to the biology curriculum framework:

- **Practices of Biology** (Biology as a Science)
- **Concepts of biology** (Core concepts of Biology)
- **Applications of Biology** (Biology in the world)

To raise standards across the school biology curriculum, The Royal Society of Biology makes the following recommendations:

1. The biology curriculum should aim to develop pupils' understanding in the three dimensions.
2. The biology curriculum should aim to develop pupils' understanding of big ideas of biology to answer big questions in biology.
3. The biology curriculum content that is set out in policy and guidance documents should enable coherent learning progression from age 5 to age 19.
4. The biology curriculum should provide pupils of all ages with ample opportunities to engage in practical and investigative work, including in the field.
5. The biology curriculum should provide pupils of all ages with ample opportunities to learn about plants and other organisms, in addition to humans and other animals.
6. The development of biology curriculum policy, guidance and content should draw upon previous curriculum development work and evidence from research, where appropriate.
7. The biology curriculum content set out in policy and guidance documents should be clear, teachable and assessable, while allowing scope for innovation in delivery.
8. The biology curriculum should be contemporary yet durable.