

The big questions of biology



Mapping the biology curriculum

The Royal Society of Biology's curriculum committee developed a framework for a coherent 5-19 biology curriculum by mapping the statements pertaining to biology subject knowledge from the current National Curriculum in England into five big questions, with identified themes within each.

The map presented here is the result of our review of existing content statements, with a particular focus on improving progression within 5-19 and beyond, and coherence across the themes. We have also taken into account the differing transition points and content currently covered in Scotland, Wales, Northern Ireland and as part of the International Baccalaureate.

Alongside this mapping process, the committee is considering other essential aspects of learning about biology and the endeavour of biological science including understanding the process of science, mathematical skills, practical competencies, and investigative skills.



ages 5-7

ages 7-11

ages 11-14

ages 14-16

ages 16-19

What are organisms and what are they made of?

Structure and function of organisms

Tissues, organs and systems

Requirements for life

Biochemistry

Cell structure and function

How do organisms grow and reproduce?

Growth, development and inheritance

Growth and development

Reproduction

Inheritance and the genome

How do organisms live together?

Organisms and their environment

Interdependence of organisms

Environmental interactions and processes

Biodiversity and human impacts

How do organisms stay healthy?

Health and disease

Health and non-communicable disease

Communicable disease

Treating disease

Animal and plant defence against disease

Why are organisms so different?

Variation, classification and evolution

Classification

Adaptation

Adaptation and evolution

Variation, adaptation and evolution