

BENCHMARKS FOR PRIMARY SCHOOLS

SCORE is a collaboration of organisations which aims to improve science education in schools and colleges in England by supporting the development and implementation of effective education policy. SCORE is currently chaired by Professor Julia Buckingham and comprises the Association for Science Education, the Institute of Physics, the Royal Society, the Royal Society of Chemistry and the Society of Biology.

SCORE has produced a set of benchmarks to provide common guidance to schools on the resourcing expectations of practical work, to ensure all pupils receive a well-rounded science education. They have been developed in consultation with teachers. The benchmarks indicate the level of resourcing that SCORE considers reasonable to enable inspirational and effective teaching in science. The intended uses for these benchmarks are as follows:

- 1. identifying resources to support the teaching of the school's science curriculum.**
- 2. reviewing science resources (equipment and consumables plus outdoor space) and identifying topics for which there is a lack of appropriate resources.**
- 3. to enable schools to compare their resources with a national benchmark, to support a rationale for increased funding for science in their school (or cluster of schools).**
- 4. planning for a rolling programme of resource replacement.**
- 5. working with the senior leadership team on the science aspects of the school development plan and forecasting future needs.**

Benchmarks have been produced in the following areas: equipment and consumables and access to outside space.

Equipment and consumables

This benchmark is available as an Excel spreadsheet¹ and is to be used as a tool to generate equipment and consumable lists for specific purposes. There is a separate worksheet for each science topic with the following columns:

- a theme within the topic;
- specific resources;
- recommendations for the quantity needed;
- a comments column suggesting how the items may be resourced and where there are links to other subjects;
- whether the items are essential or desirable.

Opportunities for learning outside the classroom

The table (*overleaf*) describes the 'habitat' access required for primary science. A brief explanation (**E**) outlines the rationale for 'habitat' access (Description: **D**), including how it relates generally to the curriculum. Access to 'local' and 'further-a-field' habitats will be variable. However, they are listed as aspirational examples highlighting the necessity for appropriate resourcing.

¹ The equipment and consumables spreadsheet can be downloaded from the SCORE website at <http://score-education.org/policy/curriculum/practical-work-in-science>

OPPORTUNITIES FOR LEARNING OUTSIDE THE CLASSROOM

	'Habitat' access Biology	'Habitat' access Chemistry	'Habitat' access Physics
<i>Primary Science</i>	<p>D: Access to a pond or natural water habitat</p> <p>E: To study animal and plant life and use classification keys. To study life cycles e.g. of frogs</p> <p>D: Access to a vegetable patch, plant containers or an allotment</p> <p>E: To grow plants, understand requirements for growth, food sources and plant structures</p> <p>D: Access to a variety of habitats, including grassland</p> <p>E: To study plants and invertebrates and their adaptations. To use classification keys and introduce simple food chains and webs</p>	<p>D: Access to a range of man-made and natural materials</p> <p>E: To observe different rock types locally in natural and/or man-made environments. To study materials, their properties, uses and effect of processes (e.g. weathering) in the outdoor environment</p>	<p>D: Access to an outside space</p> <p>E: To measure changes in the environment and observe the seasons</p> <p>D: Access to a variety of light and sound sources</p> <p>E: To observe the basic properties of light and sound</p> <p>D: Access to a range of surfaces and play equipment</p> <p>E: To experience examples of forces and motion, including friction and resistance, in everyday settings</p> <p>D: Access to outside space or a planetarium to observe the day or night sky and solar system</p> <p>E: To observe the moon, sun and stars either through modelling or star gazing</p>

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