

PLAN

Planning for assessment

Progression in Working Scientifically Skills for EYFS

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Nursery	Reception	Key Stage 1
Show curiosity and ask questions		**Asking questions**
Understand 'why' questions, like: "Why do you think the caterpillar got so fat?" (Communication and language) • While playing and exploring, the children demonstrate their curiosity. • While playing and exploring, the children begin to ask 'I wonder …' questions. • With support, the children think of ideas for answering their questions.	**Ask questions to find out more and to check they understand what has been said to them.** (Communication and language) • While playing and exploring, the children ask 'I wonder…' questions. • With support, the children develop their ideas for answering their questions.	• Use a range of given question stems, such as: what; what if; why; when; who; and how; to ask questions about the objects, living things and processes they are exploring. • Construct a question based on a scenario or story the teacher has presented.

Nursery	Reception	Key Stage 1
Make observations using their senses and simple equipment **Make direct comparisons** **Identify, sort and group**		**Gathering data**
Use all their senses in hands-on exploration of natural materials. (Understanding the world) **Explore how things work.** (Understanding the world) **Use one-handed tools and equipment.** (Physical development) **Choose the right resources to carry out their own plan. For example, choosing a spade to enlarge a small hole they dug with a trowel.** (Physical development) ***Make comparisons between objects relating to size, length, weight and capacity.*** *(Mathematics)* ***Compare quantities using language: 'more than', 'fewer than'.*** *(Mathematics)*	**Explore the natural world around them.** (Understanding the world) **Describe what they see, hear and feel whilst outside.** (Understanding the world) **Develop their small motor skills so that they can use a range of tools competently, safely and confidently.** (Physical development) **Count objects, actions and sounds.** (Mathematics) **Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.** (Communication and language) **Show resilience and perseverance in the face of challenge.** (Personal, social and emotional development)	• Talk about their observations of objects, materials and living things. • Talk about their observations when comparing objects, materials and living things. • Talk about their observations when describing changes. • When using a magnifying glass, adjust the position of the magnifying glass in order to see the enlarged image clearly. • When using a digital microscope, relate features on the enlarged view to the object. • Make direct comparisons of length and height. • Use bricks, lolly sticks etc. or paper strips to take non-standard measurements of length. • Use simple measuring equipment, such as teaspoons, pipettes, rulers, metre sticks etc.

Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen, or one which is suggested to them. (Personal, social and emotional development) • With support, explore the natural and made world using their senses. • With support, the children use magnifying glasses or tablets with magnifiers to make observations. • The children explore using beakers/scoops etc. • Make comparisons between objects ("This leaf is bigger than that one.") and quantities ("There are more flowers on this one."). • While playing and exploring, the children select and use resources for a particular task. • With support, the children sort and group objects.	• Explore the natural and made world using their senses. • The children use magnifying glasses or tablets with magnifiers to make observations. • The children use smaller pieces of equipment such as syringes and pipettes. • With support, make comparisons, using hands and feet and other non-standard measures e.g. building blocks and beakers. • While playing and exploring, the children, try out using resources to answer a question. • The children test things out to make comparisons e.g. Does the red car go further than the blue car? • They identify and name objects by matching them with pictures. • The children sort and group objects, sometimes using their own criteria.	

Nursery	Reception	Key Stage 1
Record their observations by drawing, taking photographs, using sorting rings or boxes and, in Reception, on simple tick sheets		**Recording data**
Talk about what they see, using a wide vocabulary. (Understanding the world) **Create closed shapes with continuous lines, and begin to use these shapes to represent objects.** (Understanding the world) **Draw with increasing complexity and detail, such as representing a face with a circle and including details.** (Understanding the world) • With support, the children talk about what they have observed. • They sometimes draw and make marks to record their observations.	***Connect one idea or action to another using a range of connectives.*** *(Communication and language)* ***Describe events in some detail.*** *(Communication and language)* • The children, sometimes, draw and write simple labels to record their observations. • With support, they record their observations and comparisons e.g. using simple prepared tables, taking photographs, using sorting rings and boxes.	• Use a camera to take photographs or videos to record their observations. • Record their observations using drawings. • Record their observations using labelled drawings. • Record their observations or comparisons in writing. • Physically group objects, materials and living things or their images by a criterion. • Physically group objects or materials according to the data they gather (classifying). • Use data they gather to physically rank objects or materials (comparative testing). • Add their data to a prepared table or simple Venn diagram.

• With support, they use sorting rings and boxes.		• Add pictures to a pictogram. • Add tally marks to a tally chart and count up the total number. • Make a physical block graph or bar chart by using bricks, lolly sticks etc. or paper strips with which they measured lengths or heights.

Nursery	Reception	Key Stage 1
Talk about what they have done and found out Use their observations to help them to answer their questions		**Drawing conclusions**
Make comparisons between objects relating to size, length, weight and capacity. *(Mathematics)* ***Compare quantities using language: 'more than', 'fewer than'.*** *(Mathematics)* • With support, the children demonstrate and talk about what they have done and noticed. • With support, the children notice how they made a difference to an outcome, e.g. "My car went further when I pushed it harder.", and answer the question, where appropriate. • With support, the children make comparisons between objects e.g. "My plant is taller than Sarah's.".	**Listen to and talk about selected non-fiction to develop a deep familiarity with new knowledge and vocabulary.** (Communication and language) ***Connect one idea or action to another using a range of connectives.*** *(Communication and language)* ***Describe events in some detail.*** *(Communication and language)* **Compare length, weight and capacity.** (Mathematics) • The children talk about what they have observed. • The children demonstrate and talk about what they have found out. • They, sometimes, talk about what they have found out from secondary sources, including non-fiction texts. • The children notice and talk about how they made a difference to an outcome e.g. "My car went further when I pushed it harder." • The children make direct comparisons or use their recorded observations to communicate what they have found out and answer the question, where appropriate.	• Use their observations and simple secondary sources (e.g. identification sheets) to name living things they find in the local area. • Recognise 'biggest and smallest', 'best and worst' etc. from their data. • Give an answer to their scientific enquiry question that is consistent with the data they have gathered either through observations, measurements or from research. • Recognise that they can answer scientific enquiry questions in different ways.