



Science/ Understanding the World Skills progression

EYFS: - Understanding the World statements

Science skills are reflected in the Understanding the World statements in the Birth to 5 curriculum documents.

These are developmentally appropriate in their structure for children from 0 to 60 months. The statements cross various units of the science curriculum so they are not divided up into individual scientific areas in this skills progression.

Range 1

- Moves eyes, then head, to follow moving objects • Reacts with abrupt change when a face or object suddenly disappears from view • Looks around with interest when in a room, garden, balcony or park, visually scanning the environment for novel, interesting objects and events • Smiles with pleasure at recognisable playthings • Repeats actions that have an effect, e.g. banging a rattle

Range 2

- Closely observes what animals, people and vehicles do • Watches toy being hidden and tries to find it, watches intently where a spider has scuttled away under leaves • Looks for dropped objects • Becomes absorbed in combining objects, e.g. banging two objects or placing objects into containers • Knows things are used in different ways, e.g. a ball for rolling or throwing, a toy car for pushing

Range 3

- Is curious and interested to explore new and familiar experiences in nature: grass, mud, puddles, plants, animal life • Explores objects by linking together different approaches: shaking, hitting, looking, feeling, tasting, mouthing, pulling, turning and poking • Remembers where objects belong • Matches parts of objects that fit together, e.g. puts lid on teapot

Range 4

- Notices detailed features of objects in their environment • Can talk about some of the things they have observed such as plants, animals, natural and found objects • Enjoys playing with small world reconstructions, building on first-hand experiences, e.g. visiting farms, garages, train tracks, walking by river or lake

Range 5

- Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world • Talks about why things happen and how things work • Developing an understanding of growth, decay and changes over time • Shows care and concern for living things and the environment • Begin to understand the effect their behaviour can have on the environment

Range 6

- Looks closely at similarities, differences, patterns and change in nature • Knows about similarities and differences in relation to places, objects, materials and living things • Talks about the features of their own immediate environment and how environments might vary from one another • Makes observations of animals and plants and explains why some things occur, and talks about changes
- Early Learning Goal
- Children at the expected level of development will: - Explore the natural world around them, making observations and drawing pictures of animals and plants; - Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class; - Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

EYFS: Characteristics of Effective Learning

In addition the 'Working Scientifically' skills are begun in the 'characteristics of effective learning' which are supported by practitioners in Understanding of the World and all areas of learning.

These are listed below:

Playing and Exploring

- Finding out and exploring
- Playing with what they know
- Being willing to 'have a go'

Active Learning

- Being involved and concentrating
- Keep trying
- Enjoying achieving what they set out to do

Creative and Critical Thinking

- Having their own ideas
- Making links
- Working with ideas

Key Stage 1: **Animals including Humans**

Year 1

- identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
- identify and name a variety of common animals that are carnivores, herbivores and omnivores
- describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)
- identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense
- Name and locate parts of the human body, including those related to the senses, and describe the importance of exercise, balanced diet and hygiene for humans
- Describe and compare the observable features of animals from a range of groups
- Group animals according to what they eat, describe how animals get their food from other animals and/or from plants, and use simple food chains to describe these relationships

Working Scientifically

- identifying and classifying
- using their observations and ideas to suggest answers to questions

Working scientifically vocabulary: question, answer, sort, group, compare, describe

Year 2

- notice that animals, including humans, have offspring which grow into adults
- find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
- describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene
- Name and locate parts of the human body, including those related to the senses, and describe the importance of exercise, balanced diet and hygiene for humans
- Describe the basic needs of animals for survival and the main changes as young animals, including humans, grow into adults
- Group animals according to what they eat, describe how animals get their food from other animals and/or from plants, and use simple food chains to describe these relationships

Working Scientifically

- using their observations and ideas to suggest answers to questions

Working scientifically vocabulary: identify, classify, contrast, biology

Science skills progression – living things and their habitats

EYFS: EYFS: - Understanding the World statements

- **See above**

Year 1: N/A

Year 2

- explore and compare the differences between things that are living, dead, and things that have never been alive
- identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other
- identify and name a variety of plants and animals in their habitats, including microhabitats
- describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food
 - Identify whether things are alive, dead or have never lived
 - Name different plants and animals and describe how they are suited to different habitats
 - Group animals according to what they eat, describe how animals get their food from other animals and/or from plants, and use simple food chains to describe these relationships

Working Scientifically:

- asking simple questions and recognising that they can be answered in different ways
- identifying and classifying
- using their observations and ideas to suggest answers to questions

Working scientifically vocabulary: classify, sort, group, observe, describe, question, answer, compare, contrast

Skills progression – materials

EYFS: - Understanding the World statements

See above

Year 1

- distinguish between an object and the material from which it is made
- identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- describe the simple physical properties of a variety of everyday materials
- compare and group together a variety of everyday materials on the basis of their simple physical properties

Distinguish objects from materials, describe their properties, identify and group everyday materials, and compare their suitability for different uses.

Working Scientifically

- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions.

Working scientifically vocabulary: question, answer, equipment, sort, group, record, chart, describe

Year 2

- identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

Distinguish objects from materials, describe their properties, identify and group everyday materials, and compare their suitability for different uses.

Working Scientifically

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions.

Working scientifically vocabulary: question, answer, identify, classify, chart, compare, contrast, describe

Science skills progression – seasonal changes

EYFS: - Understanding the World statement -See above

Year 1

- observe changes across the 4 seasons
- observe and describe weather associated with the seasons and how day length varies

Describe seasonal changes

Working scientifically:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions.

Working scientifically vocabulary: question, answer, observe/observing, compare, contrast, record (diagram, chart, map), describe

Year 2

Revisiting concepts as opportunities present themselves.