

Guidance

Schemes of learning

Reception

The White Rose Science schemes of learning

Reception guidance

The Reception science scheme of learning covers the DfE statutory framework of the EYFS and the Educational Programme for Understanding the World, specifically looking at The Natural World. The scheme of learning is called Reception Science to allow for consistency across school and because not all Understanding the World and The Natural World is scientific content.

The scheme has been designed with the EYFS statutory framework in mind and acknowledges the proportion of the curriculum that is given to Understanding the World and subsequently The Natural World. The number of adult-led activities and continuous provision ideas reflect this weighting and allows you to deliver a curriculum that embeds scientific thinking and talk, without adding undue workload pressures.

One way in which this is done is that uniquely, our science scheme of learning links directly to our Reception maths scheme. Each block is designed to fit seamlessly with the content that you are already following if you use our Reception maths scheme. The number of adult-led and continuous provision activities for Reception science remains the same regardless of the length of the linked maths block. The Reception science scheme is designed to be used flexibly, so if for example, the linked maths block is only one week, only use the number of science activities that will work best for your setting.

Our scheme supports our EYFS ethos, ensuring hands-on practical activities throughout. Similar to our maths scheme of learning, our science guidance includes key questions to encourage rich conversations in the classroom. We have also included key books and rhymes within the science scheme. These can be used to spark children's curiosity and engage them in the learning within the block.



Characteristics of a scientist

Threaded throughout the Reception science scheme are our characteristics of a scientist. These have been developed with the EYFS statutory Characteristics of Effective Teaching and Learning and KS1 working scientifically skills in mind. We believe that these characteristics will support all children to embed all the scientific skills within the Understanding the World educational programme whilst laying the foundations for working scientifically.

Yearly overview

Overview linking directly with the suggested linked Reception maths blocks.

Yearly overview

The yearly overview provides an at-a-glance progression through the science blocks and the direct links to the Reception maths blocks. The same amount of content is given for each block so teachers have more than what they need for the time to adapt this to their own children's needs and interests.

Autumn	Me and my small world Maths link: Match, sort and compare	What's in my basket? Maths link: Talk about measure and pattern	Senses Maths link: It's me 1, 2, 3	Let's go outside Maths link: Circles and triangles	What's changed? Maths link: 1, 2, 3, 4, 5	Night and day Maths link: Shapes with 4 sides
Spring	Changes in Winter Maths link: Alive in 5	Let it flow Maths link: Mass and capacity	From desert to jungle Maths link: Growing 6, 7, 8	Watch it grow Maths link: Length, height and time	Animal detectives Maths link: Building 9 and 10	Pushes and pulls Maths link: Explore 3-D shapes
Summer	Maths link: To 20 and beyond	Maths link: How many now?	Maths link: Manipulate, compose and decompose	Maths link: Sharing and grouping	Maths link: Visualise, build and map	Maths link: Make connections

Activities and symbols

An activity introduced by reading a fiction or non-fiction book.



An activity which includes a rhyme or musical instrument.



An activity that could be completed outside.



Autumn Block 1

Me and my small world

Each science block links to the corresponding block from the Reception maths scheme of learning. This allows the science learning to seamlessly be introduced to what you are already covering in maths.

→ Links to maths block *Match, sort and compare*

Teacher guidance

Teacher guidance pages are provided at the start of each block of learning.

A suggested list of both fiction and non-fiction books that can be used to support and spark learning within the block.

A list of books that are suggested in the linked Reception maths block.


A suggested list of rhymes that can be used to introduce or engage children in the learning within the block.

Suggested resources that will support children's learning throughout the block, although other resources can be used.

Reception | Autumn term | Block 1 – Me and my small world


Teacher guidance

Books and rhymes




Science books

- Look What I Found on the Farm by Moira Butterfield
- Farm Animals by Nicola Tuxworth
- Eyes, Nose, Belly, Toes: My First Human Body Book by Krupa Bhojani Playforth



Maths link books

- Seaweed Soup by Stuart J. Murphy
- The Button Box by Margarette S. Reid




Rhymes

- Old Macdonald Had a Farm
- Cows in the Kitchen
- Head, Shoulders, Knees and Toes

Useful resources

- small-world farm animals
- small-world wild animals
- labelled storage containers
- small-world set up as a farm with fields
- picture frames for photographs
- mirrors



© White Rose Education 2024

Notes and guidance

An overview of the content that outlines the key learning that will be introduced in this block, relevant subject knowledge and advice on progression.

This section indicates the statement(s) from *Development Matters* and *Birth to 5 Matters* that are covered in this block.

This section highlights key vocabulary that will be used in this block.

Key questions that can be used to develop children's scientific talk and reasoning skills.

Reception | Autumn term | Block 1 – Me and my small world

Me and my small world

White Rose SCIENCE

Notes and guidance

The first science block begins with exploring the features of animals including humans. Here children are supported to identify and name simple body parts. They do not need to fully understand the uses of each body part, as this will be covered in more detail in Year 1. However, it might be useful to talk about simple functions, such as “our eyes help us to see”.

Throughout the year, different animals and their habitats will be explored. This first block focuses on animals on the farm and supports children to identify and name these animals and where they live on the farm, for example, a pig lives in a sty.

Links to the curriculum

Development Matters – Reception

- Explore the natural world around them.

Birth to 5 Matters

- Range 5 – Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world
- Range 6 – Knows about similarities and differences in relation to places, objects, materials and living things

Characteristics of a scientist

- Make links between ideas
- Identify, sort and group

Foundations for Year 1

- Animals including humans

Key vocabulary

animal	farm	horse	pig	cow	sheep	body
head	arms	hands	mouth	teeth	legs	feet
field	sty	barn	stable	coop		

Key questions

- What is this body part?
- What is this animal?
- Where does this animal live?

© White Rose Education 2024

Highlights how the learning in this block supports and builds the foundations of scientific learning in Year 1

Adult-led learning

The adult-led learning section provides suggested activities that can be used when teaching this block. These activities could be delivered to the whole class or in small groups.

Reception | Autumn term | Block 1 – Me and my small world

Adult-led learning

White Rose
SCIENCE



Support children to name **farm animals** by visiting a farm, sharing images or by reading books such as *Look What I Found on the Farm* by Moira Butterfield. In pairs, play games such as 'What am I?', where one child chooses an animal, describes some of its features and the sound it makes for their partner to guess.



For example, "I live in a **field**. I have four **legs**. I have a woolly coat. I say Baaa!! What am I?"

Top tips

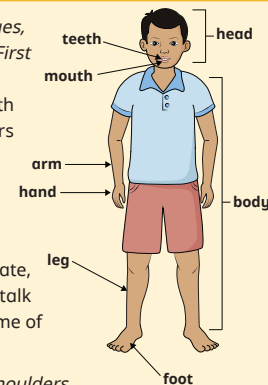
- This game could be adapted so that their partner must ask them questions to find out what **animal** they are thinking of. Children can only answer the questions with yes or no, e.g. Does the animal have a curly tail?



Read books such as *Eyes, Nose, Belly, Toes: My First Human Body Book* by Krupa Bhojani Playforth and then look in mirrors to identify **body** parts.

Discuss simple body parts and where they are in relation to each other. Also, if appropriate, encourage children to talk about what we use some of our body parts for.

Sing the song *Head, Shoulders, Knees and Toes* and prompt children to join in with the actions. Then play a game where children have to point to the body part that you name.



Top tips

- Change the lyrics to the *Head, Shoulders, Knees and Toes* song to incorporate different parts of the **body**. Or, you could point to body parts and the children fill in the words to the song.

Useful ideas to consider when teaching this activity.

© White Rose Education 2024

Continuous provision

This section provides suggested ways that continuous provision could be used or enhanced to consolidate children's learning from the block.

Reception | Autumn term | Block 1 – Me and my small world

Continuous provision

White Rose
SCIENCE

Set up a small-world **farm** area in provision using a tuff spot or a piece of green material.

Enact scenarios with children and encourage them to name the **animals**. Ask questions to support them to talk about the key features.



Provide mirrors and skin tone pencils in the mark making area. Prompt children to use the mirrors to look at and identify their features. Encourage children to talk about their similarities and differences.



Ask children to bring in photos of their family to share with the class. Encourage them to talk about their families and any similarities and differences they can see. Prompt them to point to key features.



This could be extended to looking at baby photographs and asking children to guess who it could be in the photo.

Top tips for assessment

- Observe children playing in the **farm** small-world area. Can they name the farm **animals** and talk about their key features?
- Play silly games where children are encouraged to use parts of their **body** in different ways. For example, hold the pencil with your knee. Can the children correct you?
- Observe children as they discuss class photographs. Can they talk about and point to simple body features?

© White Rose Education 2024

Provides suggestions for how children's learning from each block can be assessed. These are designed to be play-based, practical activities or things to look out for when playing alongside children in provision.

Linked maths activities

This section highlights how the science learning in this block links directly to the maths content and activities in the corresponding Reception maths scheme of learning.

Reception | Autumn term | Block 1 – Me and my small world

Linked maths activities



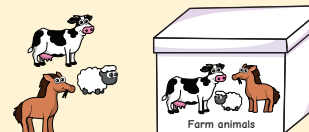
In the linked maths block children will be exploring the attributes of objects and **animals**. They will begin by matching physical objects, such as small-world animals, to pictures. Children will start to learn where things belong around the classroom and in provision.

They will also be starting to sort by key attributes such as colour, size, shape and type. Children may initially focus on sorting by one attribute only and explore that thoroughly before moving on to other attributes. For example, sorting into **animals** that live on a **farm** and animals that do not.

Children will also be talking about their own attributes and features when sorting themselves into groups. They will begin to develop a sense of self and notice common attributes, for example, we all have a nose on our face.



Support children to ensure that tidy-up time is effective. Give each child an object, and ask them to match it to the place it belongs in provision.



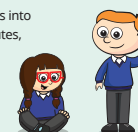
Mix up some resources in a continuous provision area. For example, muddle up the farm animals with the wild animals.

Ask children to help sort the different objects and put them back into the correct box or place on the shelf.



Encourage children to sort themselves into different groups with different attributes, for example, if you are wearing a jumper, if you have your hair tied up or if you are wearing glasses.

Discuss the fact that children may have more than one of the attributes, so may fit into more than one group.



© White Rose Education 2024