

Year 2 Science lessons pack

What do I need to be healthy?

The Harmony Project

Year 2

Science lessons pack

ENQUIRY QUESTION

What do I need to be healthy?

LINKED HARMONY PRINCIPLE

The principle of Health

‘Looking after ourselves in lots of different ways helps us to stay healthy.’

The six lesson plans in this pack can be used to deliver the science content for the Year 2 enquiry of learning *What do I need to be healthy?*, linked to the principle of Health. This science learning builds on the foundations of the National Curriculum statutory requirements relating to animals, including humans.

Each lesson plan includes opportunities to refer to the children’s prior learning, as well as questions to use to reflect on current learning and to assess the children’s developing knowledge and understanding. In addition, lessons feature key elements that are distinctive to the Harmony approach to teaching and learning, for example: opportunities to **learn about Nature,** to **learn in Nature** and to **learn from Nature.**

A summary of these elements in relation to the six lesson plans in this pack is set out on the following pages.

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01 - Learning about Nature

The statutory requirements of the National Curriculum set out what children need to learn about Nature – although, of course, their wider learning about Nature will extend beyond this.

As children progress through their primary education, we can map the journey that their science learning about animals, including humans, takes.

By understanding their prior learning about animals, including humans in the EYFS and Year 1, and by looking ahead to the path that their learning about animals, including humans, will take in Years 3 to 6, we are better able to plan for progression.

The table below shows where the science learning about animals, including humans, covered in the lesson plans in this pack, sits within this journey.

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ENQUIRY	**Understanding the world**	**What would it be like to live on an island elsewhere in the world?**	**What do I need to be healthy?**	**How did life change from the Stone Age to Iron Age?**	**How did the Anglo-Saxons farm and how was this different from today?**	**What can we learn from the Ancient Greeks about the order of Nature?**	**How can we learn to live in peace?**
SUMMARY OF LEARNING	Children will be guided to increase their knowledge and sense of the ecologically diverse world around them. They will explore the natural world; describe what they see, hear and feel while outside; recognise some environments that are different from the one in which they live; and understand the effect of changing seasons	Children will identify and name a variety of common animals, including fish, amphibians, reptiles, birds and mammals and those that are carnivores, herbivores and ominvores	Children will learn and identify the basic needs of animals, including humans, for survival (water, food and air); describe the importance for humans of exercise, hygiene and eating the right amounts of different types of food	Children will identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food – they get nutrition from what they eat. They will identify that humans and some other animals have skeletons and muscles for support, protection and movement	Children will be able to describe the simple functions of the basic parts of the digestive system in humans and identify the different types of teeth in humans and their simple functions	Children will describe the changes that occur as humans develop to old age	Children will identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood; recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function; and describe the ways in which nutrients and water are transported around the body
KEY VOCABULARY	Main body parts including: head, neck, shoulders, arms, elbows, hands, fingers, legs, knees, toes, face, ears, eyes, hair, mouth, teeth, skeleton, backbone	vertebrates, invertebrates, mammals, birds, reptiles, amphibians, fish, herbivore, carnivore, omnivore, nocturnal, hibernate	survive, alive, thrive, exercise, heartbeat, breathing, hygiene, diet, nutrients, vitamins, (un)healthy, wellness, balance	skull, ribs, spine, joints, protein, minerals, fibre, carbohydrates skeleton, bones, muscles, support, protect	digestion, saliva, oesophagus, stomach, intestine, incisor, canine, molar, herbivore, carnivore, omnivore	puberty, gestation	circulatory system, drugs, lifestyle, oxygen, carbon dioxide, pulse, rate, pumps, blood, blood vessels, transported, lungs

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The table below sets out what the children's learning about animals, including humans, looks like over the course of the six lessons.

Week 1	Week 2	Week 3
What do humans and other animals need to stay alive?	**What is the difference between being alive and being healthy?**	**What different types of food are there?**
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, hygiene and eating the right amounts of different types of food	Describe the importance for humans of exercise, hygiene and eating the right amounts of different types of food	Describe the importance for humans of exercise, hygiene and eating the right amounts of different types of food

Week 4	Week 5	Week 6
What do our bodies need from the food we eat and why?	**What is hygiene and why is it important?**	**What changes can I make to be healthier?**
Describe the importance for humans of exercise, hygiene and eating the right amounts of different types of food	Describe the importance for humans of exercise, hygiene and eating the right amounts of different types of food	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, hygiene and eating the right amounts of different types of food



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02 - Learning in Nature

In addition to learning about Nature, a Harmony approach also provides suggestions for rich opportunities to learn in or alongside Nature, as the six science lessons in this pack demonstrate.

For example, the children will explore whether all animals, including humans, need the same key things to survive, and they will explore exercise and classification in outdoor spaces and, through a walk in Nature, the connection between human and planetary health.

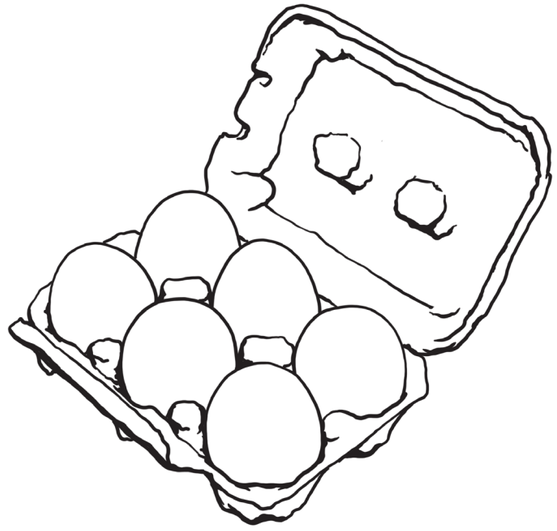
As they learn in Nature, the children will also experience opportunities to develop their skills in working scientifically. Although these skills will be developed incrementally over time (as shown in Appendix A), the coverage of these skills within the sequence of these six lessons is set out below.

Week 1	Week 2	Week 3
What do humans and other animals need to stay alive?	**Why is exercise so important to our health?**	**What different types of food make up a healthy diet?**
Identifying and classifying	Performing simple tests	Identifying and classifying
Scientific enquiry type: Identifying, classifying and grouping	Scientific enquiry type: Observing over time	Scientific enquiry type: Identifying, classifying and grouping

Week 4	Week 5	Week 6
What do our bodies need from the food we eat and why?	**What is hygiene and why is it important?**	**What changes can I make to be healthier?**
Identifying and classifying	Using their observations and ideas to suggest answers to questions	Gathering and recording data to help in answering questions
Scientific enquiry type: Identifying, classifying and grouping	Scientific enquiry type: Pattern seeking	Scientific enquiry type: Observing over time Comparative or fair testing

Working scientifically vocabulary

- classify
- sort
- group
- pattern
- observe



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03 - Learning from Nature

The third key element of a Harmony approach to learning is learning from Nature, which is linked to progression in understanding of Harmony principles. This aspect of learning supports the development of children's understanding of what it means to live sustainably.

The six lessons in this pack, and the wider enquiry they are part of, are underpinned by the principle of Health; they build on the children's prior learning in the EYFS and Year 1 and prepare them for further learning in Years 3 to 6.

The children's progression in their understanding of the principle of Health, through enquiries of learning that help us to think and live more sustainably, is shown below.

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ENQUIRY	Children are introduced to opportunities to explore and develop their initial knowledge and understanding of health (exploring when we feel well, when we grow a plant from a seed by taking care of it, when we eat good food and feel well because of it)	**What stories could our toys and games tell?**	**What do I need to be healthy?**	**How did life change from the Stone Age to the Iron Age?**	**Where does our energy come from and how much do we use?**	**How can we restore our UK habitats back to health?**	**Where do we find awe and wonder in Nature?**
PROGRESSION: CONCEPT OF HEALTH		Which toys and games do we most enjoy and why?	How many different ways of being healthy are there?	Was life in the Stone Age healthier than ours or not?	What is clean energy?	Why is it important to keep our natural habitats healthy?	When do we feel connected to Nature?
THINKING SUSTAINABLY		Why is playing in Nature good for our health?	How can we help each other to live healthy lives?	What would make our lives healthier?	What are the advantages and disadvantages of different energy sources?	How can we help restore our UK habitats back to health?	How can we be guardians of Nature?
THINKING SUSTAINABLY VOCABULARY	well happy unwell unhappy	play healthy unhealthy wellbeing imagination	mental health awe and wonder mindfulness alive survive thrive	relationships community ecosystem connection inspiration purpose	renewable fossil fuels clean energy balance depleted polluted	restore rewild heal rejuvenate harmony	connected guardian spirit creativity soul beauty

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Lesson **01**

Enquiry question:
What do I need to be healthy?

Harmony principle:
The principle of Health

What do humans and other animals need to stay alive?

NC Links

Animals including humans
Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).

Working scientifically:
Identifying and classifying

Scientific enquiry type:
Identifying, classifying and grouping

Key vocabulary

Vocabulary relating to animals, including humans, working scientifically and thinking sustainably is highlighted within the unit introduction.

You will need

A copy of Resource 1B, printed on card and cut up

Chalk (or six whiteboards and a pen)

Cones

Copies of Resource 1C (one per child)

Adapt the learning

Children requiring additional support may benefit from exploring the sorting activity in a smaller group prior to this lesson using visual reminders of the key characteristics of each group.

Challenge children to share three facts about their animal.

Link the learning

CLIMATE ACTION PLAN:
Biodiversity

What do we already know?

Share with the children an image of a child and a familar animal (see Resource 1A).

Ask: *What are the basic things we need to stay alive? What do animals need to stay alive? What is the same and what is different?*

What are we learning today?

Establish that all animals, including humans, need water, food, air (oxygen) and shelter.

Briefly revisit the children's **learning about Nature**, and specifically their learning about animals, from Year 1 by asking: *Can you remember the names of the two overall animal groups?* (vertebrates and invertebrates)

Record this vocabulary on a large piece of paper to display in the classroom. Remind the children that vertebrates are animals that have a spine (vertebral column) and that invertebrates are animals that don't. Ask: *Are humans vertebrates or invertebrates? How do you know?* Start a class list by adding the word 'human' underneath the vertebrates heading.

Working in pairs, the children think of three vertebrates and three invertebrates – or more if they can. Invite them to share their thinking and add to the class list.

Once a list of animals has been created, ask the children: *Can you think of the names of the six animal groups that we explored in Year 1?* Use examples of animals from the class list to prompt the children and draw out the following groups, recording them for the class as you go:

Mammals have hair or fur; breathe air using lungs; are warm blooded; give birth to live young (with the exception of monotremes, which lay eggs).

Birds have beaks, feathers and wings; breathe with lungs; are warm blooded; lay eggs.

Reptiles have dry, scaly skin; lay eggs (with the exception of a few lizards and snakes that give birth to live young or live young from internally hatched eggs); breathe air using lungs.

Amphibians have smooth skin; are born with gills and develop lungs; live on land and in water; are cold blooded; nearly all lay eggs in or near water.

Fish have scales; breathe with gills underwater; live in water; lay eggs; are cold blooded.

Invertebrates (or 'minibeasts') are everywhere! This group includes insects (six legs) e.g. ants; arachnids (eight legs) e.g. spiders; and myriapods (many pairs of legs) e.g. centipedes. Some invertebrates such as slugs (gastropods) have soft bodies. Others, such as ants, have a hard outer layer called an exoskeleton.

Explain that categorising animals into these groups is called 'classification'.

How are we learning today?

Take the children to a green space or a large space outdoors or indoors and give each pair of children an animal card from Resource 1B.

Divide the area into six sections using chalk or cones and label them: mammals, birds, reptiles, amphibians, fish and invertebrates. You could write the labels in chalk or write them on whiteboards. Explain to the children that they are going to be completing a large-scale sorting activity.

Ask them to classify their animal by walking to and sitting in the correct section. Once the children have classified their animal, ask each group to stand in turn.

Ask each child to announce what animal they are or to perform what animal they are for the other children to guess.

STEM SENTENCES:
My animal is a _____.
A _____ is a _____ .

Once all the animals in the group have been introduced, ask the children to look out for any that have escaped from the correct classification! Ask: *Are there any animals in the group that shouldn't be there? Where should they go? Why?* Pose questions to address any misconceptions, such as: *I think a newt is a reptile. Am I right or wrong? Why?* Repeat for all six groups.

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Explain to the children that they are now going to play a game where they vote 'yes' or 'no' with their bodies.

Label each end of the space YES and NO. Ask the children to place their cards on the ground and to choose a different animal card from a different classification group. Pose questions and ask the children to decide whether the answer is correct or incorrect and to move accordingly.

Ask them: *Can your animal survive without water? (No) Does your animal need to breathe to survive? (Yes, but not all living things 'breathe' in the same way) Can your animal live without food? (No). What did you notice?*

Draw out that all animals, including humans, depend on water, air and food for survival.

If there is time, extend the children's thinking by asking questions such as: *Does your animal breathe with lungs? Does your animal breathe with gills?*

TIME TO EXPLAIN:
Allow the children time to reflect on and revisit the animal classification groups and what they all have in common for survival by completing Resource 1C.

STEM SENTENCES:
A _____ needs _____ , _____ and _____ to stay alive.
All animals need _____ , _____ and _____ to stay alive.

What have we learned today?

Encourage the children to reflect on their **learning about Nature** and assess their understanding by asking and discussing the learning question for the lesson: *What do humans and other animals need to stay alive?*

Highlight that the basic needs of all the animals the children have explored in the lesson are water, food, air (oxygen) and shelter. Discuss the fact that we need access to clean water and clean air to stay well. Ask the question: *What else do humans need to be healthy and feel well?*

In pairs, challenge the children to think of some of these things (e.g. sleep, shelter, love), before sharing their ideas with the class.

Assess their understanding of wellness and health as more holistic concepts in preparation for the next lesson.



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Resource 1A





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Resource 1B

UK mammals



human



cow



red squirrel

UK amphibians



toad



frog



newt

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Resource 1B

UK reptiles



grass snake



adder



lizard

UK birds



goldfinch



blackbird



red kite

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Resource 1B

UK fish



blenny



brown trout



minnow

UK invertebrates



worm



dung beetle



ladybird

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Resource 1C

Animal classification

Draw your animal here:

This animal is a _____.

It is a _____.

I know this because _____.

Write a sentence to describe each type of animal.

Mammals _____

Birds _____

Reptiles _____

Amphibians _____

Fish _____

Invertebrates _____

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Lesson **02**

Enquiry question:
What do I need to be healthy?

Harmony principle:
The principle of Health

Why is exercise so important to our health?

NC Links

Animals including humans
Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.

Working scientifically:
Performing simple tests

Scientific enquiry type:
Observation over time

Key vocabulary

Vocabulary relating to animals, including humans, working scientifically and thinking sustainably is highlighted within the unit introduction.

What do we already know?

Share with the children images of the following six animals that they explored in Lesson 1: red squirrel, frog, grass snake, blackbird, minnow and ladybird (see Resource 2A).

Display the following words on the interactive whiteboard: vertebrate, invertebrate, water, shelter, food, air.

Invite the children to talk like an expert to their partner using these words about each animal in turn. Discuss the children's thinking as a class and address any misconceptions.

You will need

Copies of Resource 2B (one per child)

Clipboards and pencils

If possible, take benches into the outdoor space

Stopwatches

Optional: The Busy Body Book by Lizzy Rockwell

What are we learning today?

Move the children's **learning about Nature** with reference to human health on by explaining that in addition to the basic needs of all living things, which the children explored in Lesson 1, humans need lots of other things to help them stay healthy.

Challenge the children to think of three of these things with a partner, then share ideas as a class. Draw out in discussion that one of these things is physical activity (exercise) and another – almost the opposite of this, in fact – is good sleep, which allows our bodies and minds to rest.

To start a discussion about the importance of physical activity to our health, ask the children: *What would happen if we didn't get regular exercise? How do you feel when or after you exercise?*

Draw out in the discussion the fact that exercising isn't just important for our physical health, it's also important for our mental health and sense of wellbeing.

Move the discussion on to focus on the importance of sleep and rest by asking the children: *How do you feel when you get enough sleep? How do you feel when you don't? Why is it important to get enough sleep?*

Adapt the learning

Children requiring additional support may wish to record the challenge on a tablet so that they have the opportunity to count and record later.

Encourage children to set the challenges, establishing the links between fitness, flexibility and wellness.

How are we learning today?

Take the children outdoors to **learn in Nature** or into a large indoor space. Explain to them that they are going to begin a weekly challenge called Personal Best during which they will have the chance to improve their own fitness and wellness.

Remind them that this isn't about comparing themselves with others – the aim is to improve an aspect of their fitness or performance over the weeks and to beat their previous score.

Ask the children to have a go at each activity for one minute and record their results on Resource 2B, before moving on to the next one. Examples could include:

Flexibility: The children have a go at getting into different shapes such as a bridge or crab.

Balance: Ask the children to balance on one leg and time how long they can hold this position for (they can have several attempts and record their best time). This group will need stopwatches.

Endurance: The children see how many star jumps they can do in a minute.

Perseverance: The children place their hands on a bench and 'bunny hop' their legs from side to side, seeing how many they can do in a minute. If benches aren't available, burpees would be a good alternative.

Ask the children: *Which activity do you find the most/least challenging? How will you make sure you beat your score next time? Which one do you enjoy the most?*

TIME TO EXPLAIN:
The children record their first set of results on their copy of Resource 2B and reflect on their first attempts.

Ask them to identify which activities they will need to practise before they try them again as a class to ensure they make progress and beat their previous scores.

Encourage them to practise at breaktime and at home – they could even challenge their families to join in!

Link the learning

CLIMATE ACTION PLAN:
Biodiversity

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What have we learned today?

Reflect on the children's **learning about Nature** with reference to human health by asking how they felt during and after the challenges. Discuss the importance of exercise on both physical and mental wellbeing.

Ask them to recall all the amazing things their bodies can do with reference to the physical challenges and other physical activies they enjoy e.g. stretching, pushing and pulling, pedalling, running or moving quickly, jumping.

Discuss with the children how being active outdoors and in natural spaces makes them feel. Draw out the fact that spending time in Nature helps us to feel well and that this is an important way that we can look after ourselves and our health.

TEACHER TIP:
Either in this lesson, or at another point in the school day, you could share with the children the book *The Busy Body Book* by Lizzy Rockwell, which works well to support this learning.



Being active is important for both our physical and our mental wellbeing.

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Resource 2A



red squirrel



blackbird



frog



grass snake



minnow



ladybird

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Personal best

	Flexibility How did you feel?	**Balance** How long did you balance for?	**Endurance** How many star jumps did you do?	**Perseverance** How many bunny hops did you do?
Week 1				
Week 2				
Week 3				
Week 4				
Week 5				

Lesson

03

Enquiry question:
What do I need to be healthy?

Harmony principle:
The principle of Health

NC Links

Animals including humans
Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.

Working scientifically:
Identifying and classifying

Scientific enquiry type:
Identifying, classifying and grouping

Key vocabulary

Vocabulary relating to animals, including humans, working scientifically and thinking sustainably is highlighted within the unit introduction.

You will need

An enlarged copy of the Eatwell Guide

Chalk

Real food items (or photos) from each food group e.g. carrots and apples, packets of rice and pasta, an empty egg carton and a packet of lentils, a block of cheddar (still in its packaging) and an empty, rinsed milk carton, an empty, clean tub of spreadable butter and a small plastic bottle of olive oil (preferably, one that is unopened so the lid is secure!)

Whiteboards and pens

Copies of the British Nutrition Foundation food cards (one per pair)

Copies of the Eatwell Guide (one per pair)

Optional: Oliver's Vegetables by Vivian French and Alison Bartlett

Adapt the learning

Children requiring additional support could be provided with a selection of labels and images prior to the task.

Challenge children to identify another food item for each food group.

Link the learning

CLIMATE ACTION PLAN:
Biodiversity

What different types of food make up a healthy diet?

What do we already know?

Start by getting the children to redo their Personal Best activities and record their results. Ask: *Did you beat your previous score? How do you feel after you have exercised?*

Share with the children the same six animals that were shared at the start of Lesson 2 (see Resource 2A). Remind the children that in Lesson 2 they identified that animals need food to stay alive. Ask: *What food do these animals eat?*

Display the following words on the interactive whiteboard: herbivore, omnivore and carnivore.

Challenge the children to play 'Just a Minute' with their partner, sharing what they can remember about the meaning of these words with reference to the six animals.

TEACHER TIP:
Red squirrels are herbivores; grass snakes and frogs are carnivores (although tadpoles are omnivores); and blackbirds, minnows and ladybirds are omnivores.

What are we learning today?

Move the children's **learning about Nature** with reference to human health on by asking the children to discuss in pairs whether humans are herbivores, carnivores or omnivores. Share their ideas and address any misconceptions.

Explain to the children that there are five main food groups that are used to sort the foods we eat. Challenge them to work with a partner to see if they can identify any of them. Reveal the names of the food groups and write them on a large piece of paper to display in the classroom:

- Fruits and vegetables
- Potatoes, bread, rice, pasta and other starchy carbohydrates
- Beans, pulses, fish, eggs, meat and other proteins
- Dairy and alternatives
- Oil and fats

Introduce the real food items that the children will be exploring in the next part of the lesson (see 'You will need' list, left). Discuss the name of each food item and explain any foods that are unfamiliar to the children.

TEACHER TIP:
Either at the start of this part of this lesson, or at another point in the school day, you could share with the children the book *Oliver's Vegetables* by Vivian French and Alison Bartlett, which works well to support this learning.

How are we learning today?

Take the children outdoors.

Show the children the enlarged copy of the Eatwell Guide and explain that this shows the proportion of foods from different food groups that make up a healthy diet. Using chalk, draw a large circle on the playground. Divide it into five segments that are roughly the same size as the segments on the Eatwell Guide.

Ask five children to write the name of one of the food groups on a whiteboard, then place the whiteboard next to the corresponding segment on the chalk circle to label it.

Place all the food items in the middle of the circle. Working in threes, the children discuss which foods they think belong to which food group, recording their thinking on a whiteboard (they could draw their own version of the Eatwell Guide or simply use subheads).

Hold up the first of the food items and ask the children to say which food group they think it belongs to.

Choose one group to take the food item and stand on the segment of the Eatwell Guide they think it belongs in.

Ask the rest of the class: *Do you agree with them? Why or why not?* Tackle any misconceptions as you go.

TEACHER TIP:
Using as many real food items as possible in this large-scale, whole-class sorting activity gives the children a first-hand, hands-on sensory experience and contact with a variety of foods they may not have seen before. Some of the food items could be requested from home as part of a Harvest Festival or Food Bank donation.

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TIME TO EXPLAIN:
Using the resources from The British Nutrition Foundation, the children reflect on their learning by discussing, cutting out and sticking food cards on to a blank Eatwell Guide with a partner.

STEM SENTENCES:
My favourite food is _____ .
It belongs to the food group _____ .
I would like to try _____ from the _____ food group.

What have we learned today?

Encourage the children to reflect on their **learning about Nature** with reference to human health and assess their understanding by discussing their responses to the learning question for the lesson: *What different types of food are there?*

Draw out in discussion the link between this learning and the **principle of Health**: that eating the right amount of a range of different foods is one of the ways that we can look after ourselves and our health. The impact on our health of the choices we make about the food we eat is explored further in PSHE.

Play a game of 'Odd one out'. Show the children three food items from the whole-class sorting activity and ask them to state which is the odd one out, giving reasons for their choice. For example, the banana and the apple are fruits but the carrot is a vegetable; rice and pasta are carbohydrates but yogurt is a dairy item.



Tomatoes are packed with vitamins.

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Lesson

04

Enquiry question:
What do I need to be healthy?

Harmony principle:
The principle of Health

What do our bodies need from the food we eat and why?

NC Links

Animals including humans
Describe the importance for humans of exercise, hygiene and eating the right amounts of different types of food.

Working scientifically:
Identifying and classifying

Scientific enquiry type:
Identifying, classifying and grouping

Key vocabulary

Vocabulary relating to animals, including humans, working scientifically and thinking sustainably is highlighted within the unit introduction.

You will need

Five food items from the previous lesson, one from each of the five food groups

One food from each of the food groups for the children to eat in this lesson e.g. bread (cut into small pieces), apple (cut into slices), a tin of chickpeas (drained), cheese (cut into cubes), chocolate (broken into small pieces)

Five bowls

A selection of PE equipment e.g. cones, hula-hoops, hurdles

Copies of Resource 4A (one per group)

Optional: The Frog Olympics by Brian Moses and Amy Husband

Adapt the learning

Children requiring additional support or further challenge could be assigned roles so that all children are able to participate in the discussion confidently (speaker, demonstrator, investigator, lead questioner etc).

Link the learning

CLIMATE ACTION PLAN:
Biodiversity

What do we already know?

Begin the lesson by seeing if the children can beat their Personal Bests from Lesson 2. Discuss which activities they are finding the most challenging and emphasise that practice helps us to get better at things.

Revisit the children's prior **learning about Nature** with reference to human health by asking them to work with a partner to name the five food groups explored in the previous lesson (fruits and vegetables, carbohydrates, proteins, dairy, oils and fats). Hold up a food from one of the food groups and invite the children to call out the name of the food group it belongs to.

Watch the BBC Bitesize video *What are the food groups?* to consolidate the children's understanding and ask them to listen for information about what the body needs from each food group.

What are we learning today?

Move the children's **learning about Nature** with reference to human health on by asking: *Why do we need to eat foods from each food group?* Return to the class Eatwell Guide from the previous lesson. Explain that foods from each group provide the body with different things:

Potatoes, bread, rice, pasta and other starchy carbohydrates are the body's main fuel source.

Fruits and vegetables contain vitamins and minerals as well as fibre for digestion.

Beans, pulses, fish, eggs, meat and other proteins build and repair muscles, bones, skin and blood.

Dairy and alternatives contain calcium to build and maintain bones.

Oil and fats store energy and contain necessary fatty acids that help the body absorb vitamins A, D and E. Fat keeps the body warm and protects the organs.

How are we learning today?

Explain to the children that they are going to take part in five 'Food Group Olympics' events. Before each event, they will eat a food from one of the five food groups, then carry out an activity that the nutrition in that food helps us to perform.

Set up five bowls, each containing an example of a food from each food group. For example, bread (cut into small pieces), apple (cut into slices), a tin of chickpeas (drained), cheese (cut into cubes), chocolate (broken into small pieces).

ACTIVITY 1 Carbohydrates (bread)
Ask the children: *Why do we need carbohydrates in our diet?* Explain that carbohydrates give us energy. The children eat a piece of bread before taking part in a high-energy relay race.

ACTIVITY 2 Fruits and vegetables (apple)
Ask: *Why do we need to eat fruits and vegetables?* Explain that the fibre, vitamins and minerals in fruits and vegetables support a healthy immune system, muscle function and strength. The children eat a piece of apple before taking part in an obstacle course that requires strength and agility.

ACTIVITY 3 Protein (chickpeas)
Ask: *Why do we need to eat foods containing protein?* Make the connection that protein helps keep our muscles strong and helps our body to repair itself. The children eat some chickpeas before taking part in a press-up challenge.

ACTIVITY 4 Dairy (cheese)
Ask: *Why do we need to eat foods containing dairy and alternatives?* Discuss with the children that the calcium in dairy foods helps keep our bones strong. The children eat a piece of cheese before taking part in the long jump or standing jump.

ACTIVITY 5 Fats and oils (chocolate)
Ask: *Why do we need to eat foods containing oils and fats?* Draw out in discussion the fact that oils and fats help our bodies to store energy. The children eat a piece of chocolate before taking part in an endurance activity such as a long-distance race or a hula-hoop-a-thon.

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TIME TO EXPLAIN:
In pairs, the children reflect on their learning by discussing and matching the food group to the aspect of our physical health that they support.

STEM SENTENCES:
My favourite sport is _____ . I need to eat lots of food from the _____ group because my body needs _____ .

TEACHER TIP:
Either in this lesson, or at another point in the school day, you could share with the children the book *The Frog Olympics* by Brian Moses and Amy Husband, which works well to support this learning.

What have we learned today?

Encourage the children to reflect on their **learning about Nature** with reference to human health by discussing: *What do our bodies need from the food we eat?*

Working in small groups, the children cut out and match the food groups on Resource 4A with their benefit to our health. Discuss their thinking as a class, reveal the correct pairings and tackle any misconceptions.

Draw out in discussion that making sure our bodies have everything they need by eating a healthy diet is another of the ways that we can look after ourselves and our health.



Sourdough bread is a source of carbohydrate.

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Resource 4A

Cut out and match the food groups with their functions.

fruit and vegetables	builds and repairs muscles, bones, skin and blood
carbohydrates	give the body energy
protein	contains calcium to build and maintain bones
dairy	help to store energy, keep the body warm and protect organs
	contain fatty acids to help the body absorb vitamins A, D and E
oils and fats	contain vitamins and minerals and fibre

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Lesson **05**

Enquiry question:
What do I need to be healthy?

Harmony principle:
The principle of Health

What is hygiene and why is it important?

NC Links

Animals including humans
Describe the importance for humans of exercise, hygiene and eating the right amounts of different types of food.

Working dcientifically:
Using observations and ideas to suggest answers to questions

Scientific enquiry type:
Pattern seeking

Key vocabulary

Vocabulary relating to animals, including humans, working scientifically and thinking sustainably is highlighted within the unit introduction.

You will need

Copies of Resource 5A (one per pair)

Selection of things we use to keep ourselves and our clothes clean e.g. bar soap, liquid hand soap, toothpaste, hand sanitiser, body wash, shampoo, clothes pegs and laundry detergent.

Adapt the learning

Children requiring additional support could use a tablet to take videos or photos on the Welly Walk. These photos can then be used to support further observation and reflection

Challenge chilldren to explore the concept of sleep hygiene and share three pieces of advice about healthy sleep habits with the class.

Link the learning

CLIMATE ACTION PLAN:
Biodiversity

What do we already know?

Begin the lesson by seeing if the children can beat their Personal Best from Lesson 2. Ask them: *Does regular practice improve our Personal Best?*

Share the image of the child on Resource 1A. Ask the children: *What keeps us healthy?*

Support the children in summarising their learning about health so far. Draw out in discussion that keeping clean is also part of staying healthy. Ask them: *What does keeping clean mean?*

What are we learning today?

Move the children's **learning about Nature** with reference to human health on by asking the children: *What do you think the word 'hygiene' means?*

Present the class with a selection of things we use to keep ourselves and our clothes clean e.g. bar soap, liquid hand soap, hand sanitiser, body wash, toothpaste, toothbrush, shampoo, clothes pegs and laundry detergent.

Working in pairs, the children use the items as clues to answer the question *How do we keep ourselves clean?*, thinking of as many different ways as they can. Invite them to share their ideas and establish that personal hygiene includes:

Cleaning our **teeth** in the morning and before bed, and visiting the dentist.

Washing our **hair and bodies** - for example, by having a shower or bath regularly.

Changing and washing our **clothes** regularly.

Move the discussion on to focus on the importance of personal hygiene to our health. Ask the children: *What could happen if we didn't wash our hands before we ate or after we went to the toilet? What would happen if we didn't wash our bodies? Or if we didn't change and clean our clothes?* Draw out in the discussion the fact that good hygiene prevents harmful bacteria from entering our bodies.

How are we learning today?

In pairs, ask the children to discuss when in the day we might carry out tasks such as cleaning our teeth, washing our hair and body, changing our clothes and washing our hands. Invite them to share their ideas, then ask: *Why do we wash our hands more times each day than we wash our bodies?*

TIME TO EXPLAIN:
Working in pairs, the children write or draw on Resource 5A when in the day we might carry out the personal hygiene tasks they discussed with their partner.

Extend the children's thinking, broadening out the discussion to focus on how other animals keep themselves clean.

Watch the BBC Class Clip *How do badgers keep clean?*. Invite the children to share any other examples they know about how other animals keep themselves clean (e.g. cats and rabbits wash with their paws, pigs roll in mud and elephants have dust and mud baths). Ask: *Do animals and humans keep themselves clean in the same way?*

What have we learned today?

Encourage the children to reflect on their **learning about Nature** with reference to human health and assess their understanding by asking the learning question: *What is hygiene and why is it important?* and discussing the children's responses.

Draw out in the discussion the role that hygiene and cleanliness play in keeping us healthy and well, in keeping other animals safe and well and in keeping the natural world healthy and well.

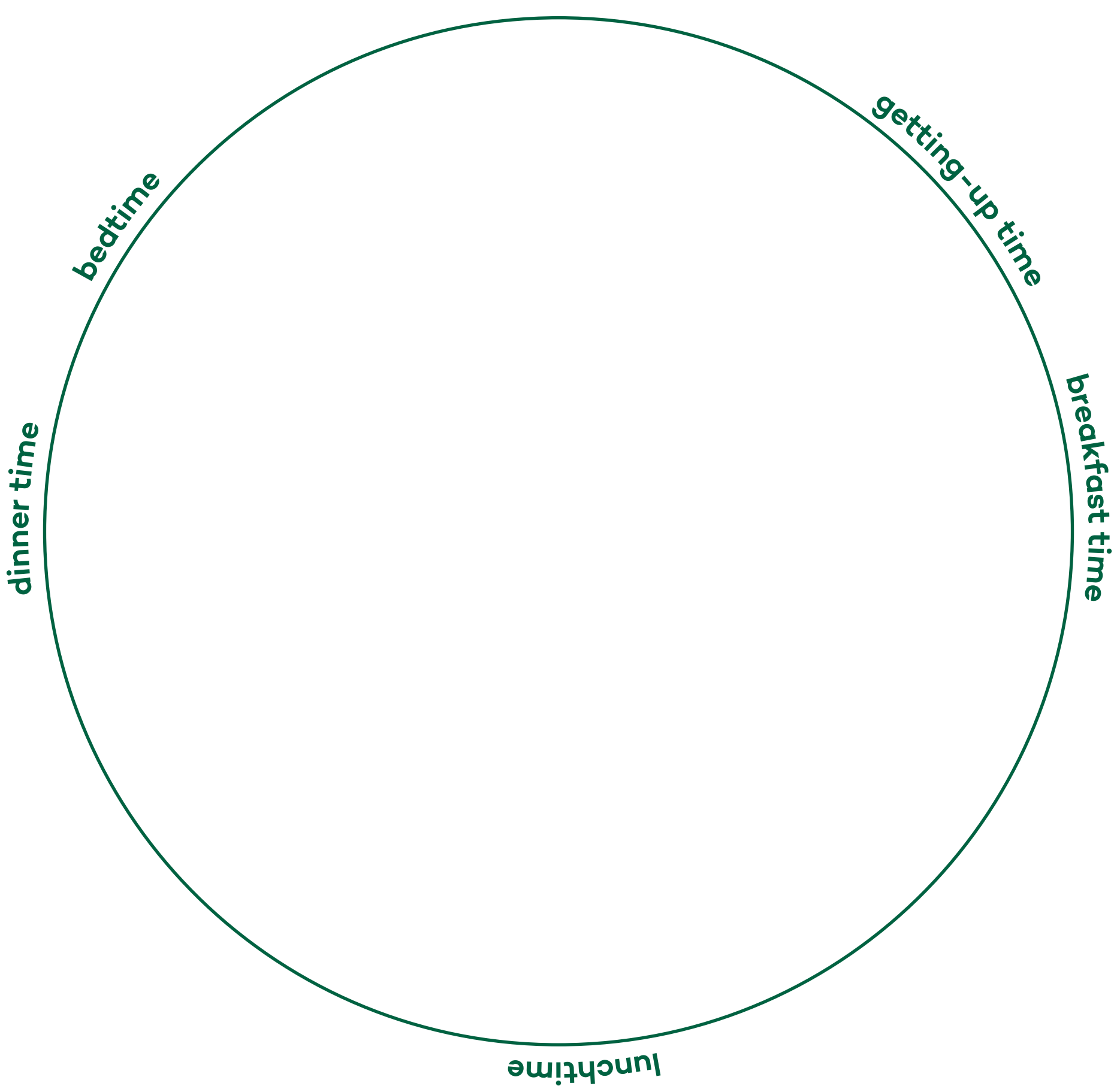
Ask: *How clean is the world around us? What is our role in keeping it clean and healthy?*

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Resource 5A

Write or draw when in the day we might do these things to keep ourselves healthy.

brush our teeth	wash our hands
change our clothes	have a shower or bath



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Lesson

06

Enquiry question:
What do I need to be healthy?

Harmony principle:
The principle of Health

NC Links

Animals including humans
Describe the importance for humans of exercise, hygiene and eating the right amounts of different types of food.

Working scientifically:
Gathering and recording data to help in answering questions

Scientific enquiry type:
Observing over time.
Comparative or fair testing.
Research using secondary sources

Key vocabulary

Vocabulary relating to animals, including humans, working scientifically and thinking sustainably is highlighted within the unit introduction.

You will need

Copies of Resource 6A (one per child)

Adapt the learning

Children requiring additional support could be provided with a healthy/unhealthy option before deciding on their healthy pledge.

Challenge the children to research the diet and healthy habits of their favourite sporting icon.

Link the learning

CLIMATE ACTION PLAN:
Biodiversity

What changes can I make to be healthier?

What do we already know?

The children can begin the lesson by completing the activities for Personal Bests, recording their results and reviewing their progress.

Ask: *How do you feel now that you have completed the challenges? What do your results tell you? Which challenge have you made the most progress in? How will you continue to progress or maintain your fitness?*

Revisit the children's prior **learning about Nature** by asking the children the enquiry question: *What do I need to stay healthy? What have we learned so far?*

What are we learning today?

Move the children's **learning about Nature** with reference to human health on by discussing with the children the meaning of the word 'balance'. They may understand this word in relation to steadiness or the even distribution of weight, so it is important to discuss with them that balance can also refer to things being present in equal or correct proportions. Ask: *What does 'a balanced diet' mean?*

Explain that a balanced diet is a diet that provides the body with all the nutrients needed to function and includes the correct amount of food from the food groups in the Eatwell Guide.

Explain that when our diet isn't in balance, or when we don't have a good balance of exercise and more restful activities, we don't feel well. Watch the *Keeping my body healthy* video by BBC Teach.

How are we learning today?

Explain to the children that in this part of the lesson they will be reflecting on their learning from the entire unit of learning by writing a health pledge (Resource 6A). Ask: *Do you know what a pledge is?* (a promise or undertaking). Working in pairs, they discuss ideas for their pledges with a partner before sharing them with the class. Model how they could write these.

TIME TO EXPLAIN:
The children complete the *My healthy habits pledge* sheet on Resource 6A.

STEM SENTENCES:
My exercise pledge is to _____ .
To have a healthier diet, I pledge to _____ .
To maintain good hygiene, I pledge to _____ .
To look after my wellness, I pledge to _____ .

TEACHER TIP:
The pledges could be written on seed paper and planted. Children can be tasked with nurturing their seeds and metaphorically watching their pledges grow.

What have we learned today?

Invite the children to share the pledges they have made that will help them to lead healthier lives.

To bring together the children's **learning about Nature**, ask them: *What are the different things we can do to keep ourselves healthy? What changes can I make to create a healthier me? What does Nature need to be healthy? What can I do to help the natural world stay healthy?*

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My healthy habit pledges

My exercise pledge is to _____

_____

To have a healthier diet, I pledge to _____

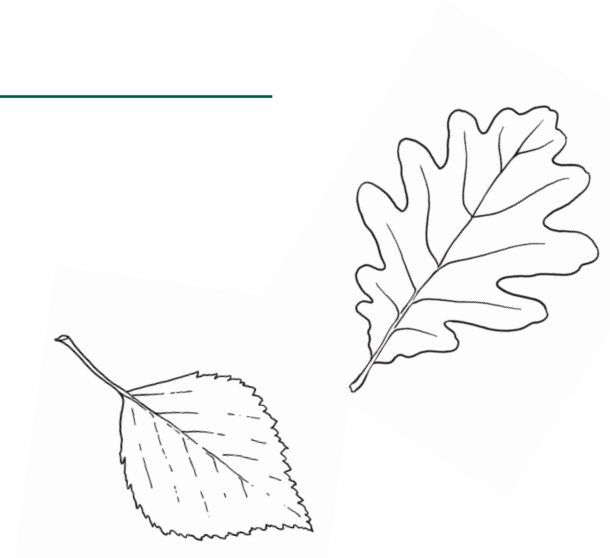
_____

To have good hygiene, I pledge to _____

_____

To look after my wellness, I pledge to _____

_____



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