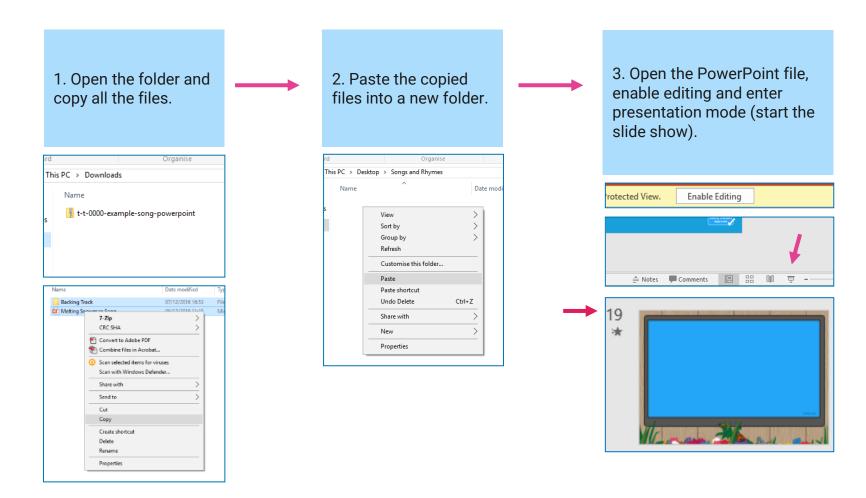




### **Guidance for Video/Audio in PowerPoints**



Please note the embedded audio may not be compatible with early versions of PowerPoint.



# Meet Quizby!

Can you spot me in the

**Lesson Presentation?** 

The questions that appear will help you to think about the key learning throughout the lesson.







### Aim

• To investigate the importance of healthy eating and hygiene.

### Success Criteria

- I can use a non-fiction eBook to find out information about healthy eating and hygiene.
- I can create a balanced meal plan.
- I can say what I think (predict) will happen when removing germs and find out whether I was correct.
- I can explain how to wash my hands and why it is important.



### Remember It



We are going to play a game of **True or False** to see how much you can remember from our last lesson.



# Health and Hygiene

Whole Class

We know that all animals have three basic needs to stay alive.



We have also looked at how important exercise is for helping humans to stay healthy.

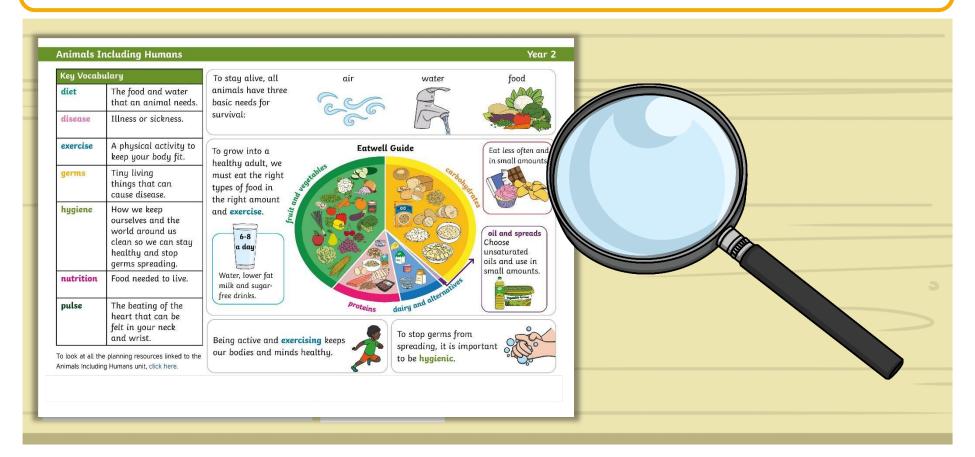
What else do you think humans need to help us to stay healthy?







Let's see if there is any information in the **Knowledge Organiser** that tells us how we can try to stay healthy. Click the magnifying glass to zoom in.





# What Do We Need to Stay Healthy?



Let's find out from our **eBook** how a **balanced diet** can help us to stay healthy.



A **balanced diet** means that each day we try to eat lots of different types of food, in the right amounts, to give us enough **nutrients** (the goodness found in food) to stay healthy.

What types of food do you think are important to include as part of a **balanced diet**?



Can you use the non-fiction **eBook** to find out information about healthy eating?





Offspring

### A Balanced Diet



With a partner, can you label each section of the Eatwell Guide correctly and sort the foods into the correct place?



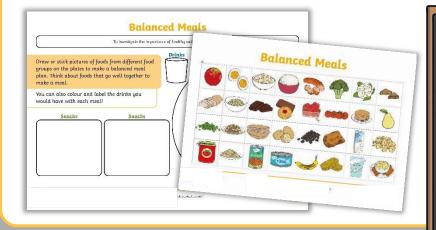


## **Healthy Meals**



Can you create a healthy meal plan for a whole day?

Use all the information you have read so far to help you with your choices. Make sure your choices will make a nice meal. After, we will share some of our balanced meals with the class!



### Include:

- breakfast
- lunch
- dinner
- drinks



## Keeping Clean

Whole Class

Let's find out from our **eBook** how being **hygienic** can help us to stay healthy.





## Keeping Clean



Why is it so important to wash our hands well?

It removes dirt and stops us spreading **germs** that can cause illnesses.

When should we wash our hands?

Before preparing food or eating

After going to the toilet

After we cough, sneeze or blow our nose

When coming in from playing outdoors

After touching animals

Can you think of any other times?





## **Removing Germs Investigation**





Germs are so small that you cannot see them without using a microscope. To learn why it is important to wash our hands to stop the spread of germs, we are going to test -

Which is the best way to clean our hands?

We are going to use glitter and pretend that the tiny pieces of glitter are germs!

The pieces of glitter are bigger than germs, so we can see them and imagine how germs spread.

We will be working in groups to investigate:

- using a paper towel
- using water
- using soap and water





# Removing Germs Investigation



Let's write what we think will happen (our prediction) on the Removing Germs Investigation Sheet.

| Removing Germs  | Removing Germs  | Removing Germs  |  |
|---|---|---|--|
| To investigate the importance of healthy eating and hygiene.                                      | To investigate the importance of healthy eating and hygiene.                                | To investigate the importance of healthy eating and hygiene.                            |  |
| Which is the best way to remove germs from our hands? What do you think will happen? (prediction) | ch is the best way to remove germs from hands?  | Which is the best way to remove germs from our hands?                                   |  |
| What do you think will happen? I think the paper towel will                                       | can use the word banks to help you to fill in sections.  Ord Bank  remove some many glitter |   |  |
| I think the water will  | not remove all germs  not do you think will happen? (prediction)                            | What do you think will happen? (prediction)  Draw a line to the answer you have chosen. |  |
| I think the soap and water will   | think the paper towel will  | I think the paper towel will remove some of the 'germs'.                                |  |
| What happened? (results) What happened? The paper towel   | think the water will  | I think the water will remove all of the 'germs'.                                       |  |
| The water   | think the soap and water will   | I think the soap and water will not remove many of the 'germs'.                         |  |
| The soap and water  | X Wha   | t do you <b>think</b> will<br>en and why?   |  |



## Removing Germs Investigation



### Instructions

Lay a piece of old paper/newspaper out on the table.

Each person take one tiny pinch of glitter between two fingers and sprinkle it onto the palm of your hand.

Each person in your group will be testing a different way to try and get rid of the glitter (germs).

- · One person needs to try using a paper towel.
- One person needs to try rinsing with just water.
- · One person needs to try using soap and water.

Look at your hands in your group, who has got rid of the most glitter (germs)?

Make a fist with your glitter hand, then spread your fingers out. Press the palms of your hands together and pull them apart. What do you notice about your hands?

Record what happened (your results) on your sheet. Then, record what you have found out (your conclusion) to answer our question - Which is the best way to clean our hands?



# How to Wash Your Hands Properly





What have we found out? (conclusion) Was it what you expected?



- ► The glitter (germs) spread very easily to anything you touched germs can too!
- ► When you used the paper towel to try to remove it, some of the glitter might have come off but most of it probably stayed on your hands. The water might have removed more of it, but not all.
- ▶ The glitter acts the same way that germs do.
- Soap and water removed the most glitter. That's why it is important to wash our hands with soap and water (or use hand sanitiser when we don't hat when we don't hat when we don't hat when we don't hat we will be spread.

  Why is it important to help to stop germs from spreading?





## How to Wash Your Hands Properly



Which steps to washing your hands properly are missing?





### Aim



• To investigate the importance of healthy eating and hygiene.

### Success Criteria

- I can use a non-fiction eBook to find out information about healthy eating and hygiene.
- I can create a balanced meal plan.
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### **Animals Including Humans Scientific Knowledge**

#### Introduction

As part of the new framework, OFSTED inspectors will evaluate the extent to which "Teachers have a good knowledge of the subject(s) and courses they teach". This guidance has been provided to help you develop a broader knowledge of the concepts in this area of science and not just of the content taught in year 2. This will help you to anticipate and answer questions the children may pose. Alongside this, we have also provided some examples of the possible misconceptions you may find the children have.

#### Lesson

#### Scientific Knowledge

#### Lesson 1 Animal Offspring

Animals that are viviparous give birth to live young. This is very common in mammals but also in other groups.

Oviparous animals produce eggs that develop and hatch outside of the body. Examples include birds.

Ovoviviparous animals produce eggs that hatch within the body. Examples include some fish and certain reptiles.

#### Patterns within groups:

#### **Birds**

All birds lay eggs.

#### **Amphibians**

Most amphibians lay eggs but there are a few that do not in this group. For example, many caecilians (a wormlike and limbless amphibian) give birth to live young.

#### **Mammals**

All mammals give birth to live young with the exception of monotremes (which includes the duck-billed platypus and echidnas) who lay eggs.

#### Fish

Most fish lay eggs but some do give birth to live young. For example, different species of shark can be oviparous, ovoviviparous or viviparous. The hammerhead example given in this lesson is viviparous.

#### **Reptiles**

Most reptiles lay eggs but some, such as some lizards and snakes, give birth to live young.

#### **Possible Child Misconceptions**

Animals quite often either do not seem to fit into their group or do not follow the patterns generally seen in their group. For example, dolphins and whales seem like fish but are actually mammals.

Throughout the lessons and eBook these irregularities are addressed (look out for the 'Be Careful!' slides in some Lesson Presentations throughout the unit).

Children should be encouraged to spot patterns within the different animal groups but should also be aware that biology doesn't always follow these patterns and there are often exceptions.

In this lesson, children sort animals into those offspring that do look like their adult when they are born and those that do not. Children may have the misconception that because an animal's young is a different colour or size, they do look different to their adult. However, when looking closely they should see that they do look similar to the adult. The aim of this activity is to identify the young that look drastically different to their adults (such as tadpoles) and to form the basis for understanding processes such as metamorphosis.



#### Lesson 2 Life Cycles

This lesson examines how animal offspring grow into adults through the use of life cycle diagrams.

Metamorphosis describes the process in which there are major changes in the form or structure between the young and adult forms of an animal.

Metamorphosis is commonly found in the insect and amphibian groups but is also seen in some fish. Common examples of animals that undergo metamorphosis include frogs and butterflies.

We tend to call the pupa of a butterfly a 'chrysalis'.

See below (lesson 3) for further information about the human life cycle.

Children may assume that there is a sudden leap between each of the stages given in a life cycle diagram and nothing in between. Using the example of our own human life cycle is a good way to show how there are still changes in between each stage given.

Children can access the lesson content without using the term 'metamorphosis' (although this is used in the content and may be appropriate depending on your class) but should instead identify that some animals (such as frogs) have big changes across their life cycles.

The term 'cocoon' is often misused but may be one children have heard. It tends to be used when talking about the life cycle of moths. A cocoon is a silky protective covering that forms around the pupa of certain insects such as moths.



Lesson 3 Growing Up The stages in the human life cycle used in this lesson match those suggested in the non-statutory notes and guidance of the science national curriculum: baby, toddler, child, teenager and adult.

Pupils return to the human life cycle in year 5 where they will describe more stages and learn about adolescence and puberty.

Human growth can be separated into the following stages (some content here would not be appropriate for year 2 but is provided for your scientific knowledge):

- Fertilisation: The male and female sex cells fuse together.
- Prenatal: The cells develop and grow into a foetus inside the mother's uterus. After around nine months, the baby is born.
- **Infancy:** Rapid growth and development. Children may learn to walk and talk.
- **Childhood:** Children learn new skills and become more independent.
- Adolescence: The body starts to change over a few years. The changes occur to enable reproduction during adulthood.
- Early adulthood: The human body is at its peak of fitness and strength.
- Middle adulthood: Ability to reproduce decreases. There may be hair loss or hair may turn grey.
- Late adulthood: Leading a healthy lifestyle can help to slow down the decline in fitness and health which occurs during this stage.

This lesson focuses on different activities that humans can do at different stages in their life cycles. As people are all different and may do these activities at different times or not do them at all (including things like walking and talking), this lesson has been worded carefully to acknowledge this. This can also be addressed through further discussions with children. For example, some may think that everyone goes to university after school and it is important to discuss the fact that although many people do, there are also lots of other career paths and life choices that can be made at this stage.

Children may bring up elements of puberty in discussions (perhaps voice changes or changes in skin). However, puberty isn't referenced in the science curriculum until year 5 and the lesson does not cover this topic. Any comments regarding puberty from children should be handled in line with your school's policies on this topic.

Lesson 4 Survival All animals need oxygen (although the term 'oxygen' is used in this unit, it is not essential for covering the curriculum aims). Animals use this oxygen in their cells for a process called respiration (specifically aerobic respiration).

Respiration is a chemical reaction that provides energy for an organism. In aerobic respiration, energy is released from glucose (which comes from food) by reacting with oxygen.

Note that breathing and respiration are not the same thing. Breathing is generally described as the process of getting air in and out of the lungs. However, different animals have different ways of breathing that may not involve lungs. Fish have gills to remove oxygen from the water. The amphibian group can use multiple different ways of breathing including gills, lungs and breathing through their skin.

Water, food and air are essential for us to stay alive but through discussion children should also be made aware of other things that we do need beyond these three absolute essentials (for example, education, appropriate shelter and exercise).

A misconception about fish not needing air and water is addressed in the Lesson Presentation.



#### Lesson 5 Exercise

Information in this lesson is matched to NHS guidance on physical activity.

The NHS recommends that children and young people aged 5-18 should aim to do an average of at least 60 minutes of moderate intensity physical activity a day across the week.

Please see the NHS website for more detailed guidance on exercise requirements for children and young people aged 5-18 years, including the different types it should include.

See the Awesome Offspring to Healthy Adults eBook for detail on what happens to our bodies when we exercise.

Children may think that exercise (or physical activity) only involves team sports (like football) or organised activities (like PE lessons) but actually the NHS also recommends everyday activities such as walking to school and skipping with a rope.

#### **Lesson 6** Healthy Living

Information in this lesson matches the government and NHS Eatwell Guide guidance. Please see the NHS and government Eatwell Guide webpages for more detailed information on this.

Nutrients are substances that living things need to stay alive and healthy. Children learn more about specific nutrients in our year 3 'Animals Including Humans' unit. Briefly, each group does the following:

- Carbohydrates: provide energy
- Protein: helps growth and repair
- **Fibre:** helps us digest the food that we have eaten
- Fats: provide energy
- Vitamins and minerals: keep us healthy (for example: help us grow, keep our bones strong, boost the immune system)
- Water: moves nutrients around our bodies and helps us to get rid of waste.

Food can be a sensitive issue and the lessons and eBook are worded carefully to reflect this. Adapt discussions as needed for your specific class and see the Eatwell Guide information for more detail on the current government/NHS guidance.



### Animals Including Humans: Healthy Living

#### Aim

Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Perform simple tests. Observe closely, using simple equipment.

To investigate the importance of healthy eating and hygiene.

#### **Lesson Duration**

It is estimated that this lesson will take one and a half hours.

This lesson can also be split across two sessions if more time is needed.



#### **Success Criteria**

I can use a non-fiction eBook to find out information about healthy eating and hygiene.

I can create a balanced meal plan.

I can say what I think (predict) will happen when removing germs and find out whether I was correct.

I can explain how to wash my hands and why it is important.

#### **Standard School Equipment**

Scissors and glue sticks

Ensure that children have easy access to soap, water and paper towels for the 'Removing Germs Investigation' section of this lesson.

Large sheets of scrap paper/newspaper

#### **Resources That May Need Purchasing**

Glitter (biodegradable glitter is available, or you may wish to make an alternative) - a very small amount (no more than ¼ teaspoon per pair needed) prepared in small containers

Paper towels

#### Preparation

Eating Well Activity Sheet - per pair

Balanced Meals Activity Sheet – per child

Balanced Meals Cut-Outs - as required

Removing Germs Investigation Sheet - per child

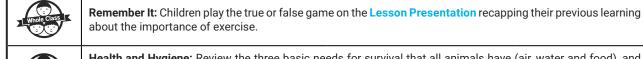
Reasoning Cards: Healthy Living - as required

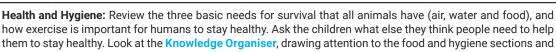
#### **Key Vocabulary**

Healthy, health, **diet**, **nutrition**, balanced, food, fruit, vegetable, dairy, carbohydrates, protein, alternatives, breakfast, lunch, dinner, snacks, sugar, fat, **hygiene**, hygienic, **germs**, illness, disease, spread, wash, clean, sneeze, cough, soap, water, what do you think will happen? (prediction), what happened? (results), what have we found out? (conclusion).

Prior Learning: In the previous lesson, children will have learnt about the importance of trying to exercise regularly to stay healthy.

#### **Learning Sequence**







What Do We Need to Stay Healthy? Discuss the meaning of the term 'balanced diet' and read pages 43-50 of the eBook. (Please see the Subject Knowledge Adult Guidance for more information on the Eatwell Guide.)

Can children use the non-fiction eBook to find out information about healthy eating?



A Balanced Diet: Discuss with the class the information they have just read about how to eat a balanced diet according to the Eatwell Guide, including the names of each of the food groups. Children work in pairs using the differentiated Eating Well Activity Sheets to label and sort some food items into the Eatwell Guide. Answers are available on the Lesson Presentation.





kev definitions.

Labels are colour coded to aid with sorting.



Labels are provided without colour coding for children to decide which group they belong in (all use the two star sheet). As a challenge, children could think of further foods that could go into each group.







**Healthy Meals:** Explain to children that they will be creating their own healthy meal plan, using the **Balanced Meals Activity Sheet**. Once finished, share a few good examples with the whole class.

Can children create a balanced meal plan?



Adult supported:
Children create a
healthy meal plan
using the Balanced
Meals Activity
Sheet and Balanced
Meals Cut-Outs with
coloured sections to
help support correct
food group choices.



Children create their meal plan using the Balanced Meals
Activity Sheet. They can use the Balanced Meals Cut-Outs or draw their food choices. Children can then complete the challenge activity.



Children create their meal plan, including snacks, using the Balanced Meals
Activity Sheet. They can use the Balanced Meals Cut-Outs or draw their food choices. Children then complete the challenge activity.

Children will be learning about hygiene for the rest of this lesson. Depending on time, you may wish to have a break between these two sections of the lesson, or split this learning across two sessions.

The 'Removing Germs Investigation' practical activity will involve children spreading biodegradable glitter on their hands and so will require easy access to soap, water and paper towels.



**Keeping Clean:** Discuss the meaning of the word 'hygienic' and read pages 51-58 of the **eBook**. Then using the **Lesson Presentation**, review the information together about why and when to wash your hands.





20 mins



Removing Germs Investigation: Explain that the children are going to be working in a small group (preferably groups of three) to investigate - 'Which is the best way to clean our hands?' Use the Lesson Presentation to explain and model the task (spreading a very small amount of glitter onto one hand to represent germs and seeing how easily they can spread) and introduce the three different ways children will be trying to remove the germs (glitter). Before starting the investigation, children make their predictions on the Removing Germs Investigation Sheet. Explain that a prediction is saying what we think will happen.



Then, follow the steps together on the Lesson Presentation to complete the investigation. Ensure that children can thoroughly wash their hands with soap and water immediately afterwards.

Can children make a prediction and perform a simple test?



Children complete the Removing Germs **Investigation Sheet** drawing lines to match the sentence starter and ending to make their 'Prediction'. Then, complete the investigation and match the answers to show their 'Results'. Finally, fill in the 'Conclusion' section by choosing the correct words from the word bank.



Children complete the Removing Germs Investigation Sheet filling in their 'Prediction' using the word bank provided. Children then carry out the investigation and use the word bank to help complete the 'Results' and 'Conclusion' sections, giving a reason for their answer.



Children complete the Removing Germs Investigation Sheet filling in their prediction, conducting the investigation and then completing the rest of the sheet and challenge question.



**How To Wash Your Hands Properly:** Discuss the predictions that were made prior to the experiment, the observations made during it and the conclusions reached at the end. Then, use the **Lesson Presentation** to discuss the missing hand washing steps together.



Can children explain why it is important to wash our hands and how to do it?

#### **Explore**it

Playit: Children can play the Eatwell Guide Food Sorting Game as a class, or independently on a device.

Sliceit: In small groups closely supervised by adults, children select, wash and cut fruit and vegetables to make kebabs.

Washit: Children design and make a poster to remind people when and how to wash their hands.

#### Reasonit

Children discuss Reasoning Cards: Healthy Living. Children are given an example diet and suggest how to improve it.



#### Assessment

| Scientific Knowledge   |           |
|--|-----------|
| Working Towards the Expected Level   | Children: |
| With support, children can identify some foods according to the basic food groups. They can start to explain how to be hygienic.   |           |
| Working At the Expected Level  | Children: |
| Children can identify several foods according to the basic food groups and can talk about the importance of a balanced diet. They can explain how to be hygienic and why this is important.                |           |
| Working At Greater Depth   | Children: |
| Children can identify a range of foods according to the basic food groups and can talk about the importance of a balanced diet. They can confidently explain how to be hygienic and why this is important. |           |
| Working Scientifically   |           |
| Working Towards the Expected Level   | Children: |
| With support, children can carry out simple practical tests, make careful observations and draw simple conclusions.  |           |
| Working At the Expected Level  | Children: |
| Children can carry out simple practical tests, make careful observations and draw simple conclusions.  |           |
| Working At Greater Depth   | Children: |
| Children can independently carry out simple practical tests, make careful observations and draw simple conclusions.  |           |



| Aim: To investigate the importance of healthy eating and hygiene.                                    |    |        | Date:   |        |          |   |        |          |    |
|--|----|--------|---------|--------|----------|---|--------|----------|----|
|  |    |        |         | Delive | red By:  |   | Suppo  | rt:      |    |
| Success Criteria   | Me | Friend | Teacher | Т      | PPA      | s | I      | AL       | GP |
| I can use a non-fiction eBook to find out information about healthy eating and hygiene.              |    |        |         | Notes  | /Evidenc | e |        |          |    |
| I can create a balanced meal plan.   |    |        |         |        |          |   |        |          |    |
| I can say what I think (predict) will happen when removing germs and find out whether I was correct. |    |        |         |        |          |   |        |          |    |
| I can explain how to wash my hands and why it is important.  |    |        |         |        |          |   |        |          |    |
| Next Steps   |    |        | •       |        |          |   |        |          |    |
| •  |    |        |         |        |          |   |        |          |    |
| •  |    |        |         |        |          |   |        |          |    |
|  |    |        |         |        |          |   |        |          |    |
|  |    | т      | Teacher |        |          |   | I Inde | enendent |    |

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| Next Steps   | I  | L      |         |        |         |    |      |      |    |



| Т | Teacher | I | Independent |
|---|---------|---|-------------|
|---|---------|---|-------------|

PPA Planning, Preparation and Assessment

Supply

AL Adult Led

**GP** Guided Practice

| PPA | Planning, Preparation and Assessment | AL | Adult Led       |
|-----|--------------------------------------|----|-----------------|
| S   | Supply                               | GP | Guided Practice |



#### Animals Including Humans | Healthy Living

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|--|--|
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