

# SHOLING INFANT SCHOOL

## Science Learning Journey Planning



## HOW CAN I KEEP HEALTHY AND WHY IS IT IMPORTANT?

*What does exercise do to our bodies? What would happen if we did not exercise? Which parts of the bodies get stronger when we exercise? What things do we need to do to have good hygiene? What happens if we have poor hygiene? Is all food the same? Are there foods that we should be eating lots of and foods that we should not be eating lots of?*

**PRIOR LEARNING: Children will already:** Know the different parts of the human body and be able to say which part of the body is associated with each sense (Science Year 1. Children will be able to talk about what healthy means (PSHE Year 1) Will be able to talk about how they can keep healthy e.g. diet, exercise, brush their teeth and sleep (Yr1 PSHE). They will know how to stop germs spreading and know about basic hygiene routines like washing their hands (Yr1 PSHE).

### VOCABULARY:

**Exercise** - muscles, exercise, fat, healthy, heart rate, breathing, sweat, active, strength, energy, obese. **Hygiene** - germs, bacteria, illness, sick, healthy, hygiene, clean, dirty, spread, wash, clean, teeth, hair, body, shower, bath. **Diet** - balanced diet, healthy, food, water, carbohydrates, protein, fruit, vegetables, fats, dairy, energy, vitamins, calcium, bones, food groups.

**Working scientifically:** data, record, investigation, prediction, results, conclusion

### PROJECT: Life as a Victorian exhibition

#### NC REFERENCE

##### Substantive Knowledge

Pupils will be able to

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

##### Disciplinary Knowledge

Pupils will be able to:

- Perform simple tests
- Gather and record data

#### WHAT (CONTENT)

##### Lesson 1 – What is exercise and what does it do to our bodies?

**Recap:** Last year in year 1 in health and safety week you thought about different ways to stay healthy. Talk about how to stay healthy.

**Retrieval practise:** Brain dump: What are the different ways that we can keep ourselves **healthy**? class mindmap

Explain to the children that this half term we will be learning about being healthy and staying healthy. - Assess children's current knowledge and watch Bitesize video - <https://www.bbc.co.uk/bitesize/topics/z9yyvcdm/articles/zxvkd2p>

What is **exercise**? What different exercises do we know? What exercises do you do (e.g. PE, clubs, walking to school)? Where can we do exercise?

When outside activity is complete (see 'How'), talk about how the children felt before, during and after they completed the exercises. E.g. did they feel hot, sweaty, tired or out of breath? Record some of the ideas on flipchart paper and keep ready for next lesson.

#### HOW (PEDAGOGY)

##### Lesson 1: Exercise

Make a class mindmap together about different types of ways to stay healthy. Add to this after watching bitseize video and discussion. Photo to go in books.

Outside activity – Explain that we are going to be performing simple tests – explain that scientists do this when they want to find something out. The children to do different exercises for 1 minute with a mixed ability partner. Explain that their teacher will gather the data and record the average number outside on a whiteboard. Star jump, jump and push up.

Take photos of each child doing an exercise.

Teacher to then complete average number completed for the class on IWB in classroom.

Whilst exercising, get chn to think about how their bodies feel before, during and after exercise.

Model how to use that information to write sentences.

#### OUTCOME (EVIDENCE)

**Lesson 1:** Individual photos of children completing outside activity. Children to copy the class results from the IWB.

(Lowest 20% pupils to have support with writing from their partner or an adult if necessary)

Children to then write sentences to explain which exercise they completed the most/least of in 1 minute (Lowest 20% pupils to use cloze procedure Lwest 5% to have matching).

Deepen: What happened to your body when you were exercising? Write some sentences.



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## WHAT (CONTENT)

### Lesson 2 – Why is exercise important for humans?

**Recap** – Last lesson we did some exercise and collected data. Remind them how they felt before, during and after - heart rates / breathing increased and some of us were sweating etc.

**Retrieval practise:** Label the parts of the body (in books).

Go through the what is inside our bodies powerpoint. On the first slide highlight the muscles. Talk about what happens to our bodies when we exercise (ensure to make explicit reference to the parts of the body – get children to recognise where these **organs** are in their own bodies and their **functions** [recapping some of the learning about the body from Year 1]): heart beats faster and pumps more blood around the body; **strengthens muscles**; get more **energy**; breathe more quickly to get more **oxygen** into **lungs**; more flexible; helps to maintain **weight** or lose excess body weight; enhances your mood.

Discuss what might happen if we did not exercise – why is exercise so important to keep us healthy? Talk about becoming **overweight**, lack of strength, unhealthy heart etc.

### Lesson 3 – Why should humans have good hygiene?

**Recap:** Last lesson we learned that exercise is important to keep us fit and healthy. If we do not exercise we will become unfit and gain weight.

**Retrieval practise: Speak like an expert:** Tell your partner all the steps in washing your hands and why it is important in 2 minutes.

Use character of Dirty Bertie (his story on the slides) to explore what constitutes poor **hygiene** (e.g. not having a bath, not brushing teeth).

Discuss how we can make sure we have **good hygiene** (define hygiene as the way we look after our bodies and making sure they are clean) – what do children do at home to have healthy bodies?

Explore some of the different things that children do to have good hygiene and talk about why it is important to our health e.g. brushing hair, wearing clean clothes, having a bath or shower, brushing teeth, washing hands, using a tissue etc.

Discuss the consequences of poor hygiene – **germs** and **bacteria** can make us and the people around us sick. (make class mindmap)

Explain soap **experiment**: we are going to test what happens when we dip our finger into a bowl full of water (represents our hands) and sprinkled with pepper (represents germs). We will do it first without washing our hands and then with soap on our fingers. Explain that this is a comparative test because we are comparing using soap to not using soap. We are going to complete the experiment next week.

### Lesson 4 – Has hygiene in England always been the same?

**Recap** – Last lesson we looked at hygiene and why it is important to have good hygiene. Talk about the soap experiment – explain what we were trying to test. Today we are going to complete the experiment.

**Retrieval practise:** In books – List 3 types of exercise and write a sentences explaining why exercise is important for us.

## HOW (PEDAGOGY)

### Lesson 2: Exercise

As a class look at the different parts of the body and recap what these parts of the body do and how they are impacted by exercise. Model completing sheet for the different body parts and the effect exercise has on them and why this is important.

### Lesson 3: Hygiene

As a class mind map some of the things Dirty Bertie could do to help him have better hygiene and why it is important that he does this. Model writing a sentence about what Dirty Bertie needs to do to be healthy, referring to scientific vocabulary. Children to do the same in their books.

Children to prepare the soap **experiment** – lots of talk around conducting an experiment (particularly making a **prediction** and understanding the **method** of how we are going to do the experiment and what we will need). As a class write a prediction and equipment list.

### Lesson 4: Hygiene

Children to complete soap experiment. Discuss the findings as a class and talk about the science behind the results (germs stick to oil on our hands and soap helps to remove the oil so germs do not remain on our hands). Model how to write a sentence to explain results, linking back to what it tells us about the importance of good hygiene.

## OUTCOME (EVIDENCE)

### Lesson 2:

Children to complete the sheet to explain what happens to the part of the body with captions and why this is important for the body.

**Lowest 20% pupils to have cloze procedure – fill in the gaps about the importance of exercise for humans.**

**Deepen:** Why is exercise important for humans? What would happen if we didn't exercise?

**Lesson 3:** Children to write at least three sentences in their book to explain what Dirty Bertie could do to help him achieve better hygiene and why it is important that he does this.

**Lowest 20% pupils to have a selection of pictures of different activities – they need to choose which pictures show good hygiene practises to stick in their books. They need to label the pictures (can be supported with the writing as long as own ideas) – can also get an adult to scribe why they think we need to do these things.**

**Lesson 4:** Children to fill in the results table from the soap experiment and then write sentences to explain the result. **Lowest 20% to have ideas scribed.**

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## WHAT (CONTENT)

Teach what **hygiene** was like in the Victorian times (e.g. sharing bath water, dirty hospitals, working up chimneys, no running water etc.) Discuss why it is better now than in Victorian times.

Watch video and stop it to discuss information (<https://www.bbc.co.uk/iplayer/episode/b012mhv3/horrible-histories-series-3-episode-10>)

### Lesson 5 – Is all food the same?

**Recap:** Last lesson we learned about hygiene in the Victorian times. It was much worse. Talk about reasons for this.

**Retrieval practise:** pose the question why and how should humans have good hygiene? Multiple choice quiz in books.

Remind children that **diet** is what we eat. We must make sure we eat a variety of food – this is called a balanced diet. Show video to help children better understand why we need food and why a balanced diet is important - <https://www.youtube.com/watch?v=mMHVEFWNLMc> What type of diet is best for us – lunchbox activity (see ‘How’)? Is it really good for us to just eat fruit and vegetables? Emphasise the need for a **balanced diet** as we need different foods to help our bodies with different thing. Address misconceptions that just eating healthy foods is the best diet.

Introduce the five different **food groups** (carbohydrates, protein, dairy, fruit and vegetables, fats) and their role in the body (see video: <https://www.twinkl.co.uk/go/resource/tgv2-sc-11-food-groups-30-second-video> ). Discuss the proportions of the food groups using the concept of the food pyramid.

## HOW (PEDAGOGY)

Watch video then in mixed ability groups/pairs, sort the hygiene statements as to whether you think it represents hygiene in Victorian times or hygiene in England now. Discuss as a class whether they think Victorians kept very clean and healthy.

### Lesson 5: Diet

Show children trio of lunchbox pictures (one full of fats, one full of fruit and veg and one with a mix of food) – which one do you think represents the best diet? Discuss how a balanced diet is better than purely eating fruit and veg. ( on the board as a class)

Sorting activity in mixed ab groups – sort pictures of food into the correct food group.

Model drawing a food item in the correct place on the food pyramid and discussing whether this food item would be something you should eat lots of or not very much of.

## OUTCOME (EVIDENCE)

Photo evidence of the hygiene in England sorting activity.

**Deepen:** Children to write sentences in their books to explain how hygiene now is different to what it was like in Victorian times e.g. in Victorian times they had to wash in cold, dirty water but now we have hot baths and showers to keep clean. **Lowest 20% to sort pictures into Victorian hygiene and hygiene now.**

**Lesson 5:** Photo evidence of sorting activity. **Capture some lowest 20% pupil comments during this activity if possible (e.g. “we should eat lots of this”).**

Children to complete blank food pyramid – draw and label pictures of food that go into each of the food groups. **Lowest 20% children to have larger food pyramid and pictures to stick on.**

**Deepen:** Children to write sentences explaining which foods we need lots of and not much of and give explanations as to why. Children must refer to the impact different food groups have on the body in their responses e.g. you should eat lots of fruit and vegetables because they provide your body with vitamins and minerals. They also should be using the vocabulary provided.

### Lesson 6 - Assessment (in addition to usual end of unit quiz):

- Children to create a poster in their books to show some of the things humans can do to keep healthy
- They need to draw a picture in their book of one thing humans can do (e.g. doing exercise, having good hygiene, eating a balanced diet) and write a sentence underneath explaining. Then, do another picture etc.
- Lowest 20% – take photos of them doing the activities and then scribe the ideas they say about why it is important that humans do that

### Sticky Knowledge - All children will be able to

1. Know at least three examples of exercise and know some reasons why it is important for humans.
2. Know at least three ways that we can have good hygiene and explain simply what would happen if we had poor hygiene.
3. Know that we need to eat different foods to have a balanced diet and know that we need to eat more of certain food groups than others.