

# Primary Science

**PEP Revision**

# Workbook

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Judith Amery



**GRADE  
4**

**Sample  
Pages**

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# Contents

## Term 1 Unit 1: Exploring our world

Identifying a scientist .....	5
How do we find out about our world? .....	6
Methods used to gain scientific knowledge .....	9
Shaving gel investigation.....	16
Fair testing .....	19
Self-check .....	22
Performance task.....	23
Practice test.....	24

## Term 1 Unit 2: Living things

What are living things? .....	27
Living and non-living .....	28
Classifying things as living and non-living .....	31
Identifying familiar Jamaican plants and animals.....	35
Using data about living and non-living things.....	38
Practice test.....	42
Self-check .....	43
Basic needs of plants.....	44
Plants and water .....	46
Plants and nutrients.....	48
Basic needs of animals .....	51
Self-check .....	57
Performance task.....	58
Practice test.....	60

## Term 2 Unit 1: Plants and animals

Plants and animals in Jamaica.....	62
Basic structures of plants and animals .....	66
Comparing a grass plant and a shrub .....	70
Comparing animals in different habitats.....	72
Plants and their roots.....	74

How a plant grows.....	78
Vertebrates and invertebrates.....	84
Self-check .....	92
Performance task.....	93
Practice test.....	94

## Term 2 Unit 2: Sense organs

Why sense organs are important .....	97
How sense organs work together .....	99
Animals and their sense organs .....	100
The eyes.....	103
The ears.....	106
The sense of smell .....	109
Taste.....	111
Touch .....	113
Technology to improve the use of your senses.....	115
Protecting our sense organs .....	116
Looking after our eyes and ears.....	117
Quick quiz.....	121
Self-check .....	122
Performance task.....	123
Practice test.....	124

## Term 3 Unit 1: Materials

Properties of everyday materials.....	127
Natural or man-made? .....	129
Properties and uses of materials .....	131
Which is the most absorbent? .....	133
Solids, liquids and gases.....	135
Investigating the properties of water.....	140
Quick quiz.....	142
Performance test.....	144

Self-check .....	145
Performance task.....	146
Practice test.....	151

### **Term 3 Unit 2: Water and air**

Properties of water .....	154
More about the properties of water .....	158
Water and life.....	160
Practice test.....	166
Self-check .....	167
The water cycle.....	168
Water pollution .....	172
How to purify water by filtering .....	176
How to purify water by distillation.....	179
How water is purified in a water works .....	182
Water-borne diseases in Jamaica.....	184
Making water safe in Jamaica .....	186
Water conservation.....	188
Quick quiz .....	192
Self-check .....	193
What is in air? .....	194
Experiments with air.....	199
Does air have mass? .....	202
The colour of air and air pressure experiments .....	205
Sources of air pollution .....	209
Air filters .....	216
Air-borne diseases in Jamaica .....	217
Air pollution – key facts .....	219
Self-check .....	221
Water: Performance task .....	222
Air: Performance task.....	224
Practice test.....	225

**Term 1 Unit 1****Exploring our world****Identifying a scientist**

List all the things that would help you to recognise a scientist. This list can include what scientists wear, where they work and what they do.

Things to think about to help you with your list:

- Do all scientists dress the same way?
- Do all scientists work in the same place?
- Do all scientists work in the same field?

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You might have seen scientists in movies or on TV. Some of your family might work as scientists. There are many different jobs scientists can do.

List all the scientific jobs you know.

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.....	.....
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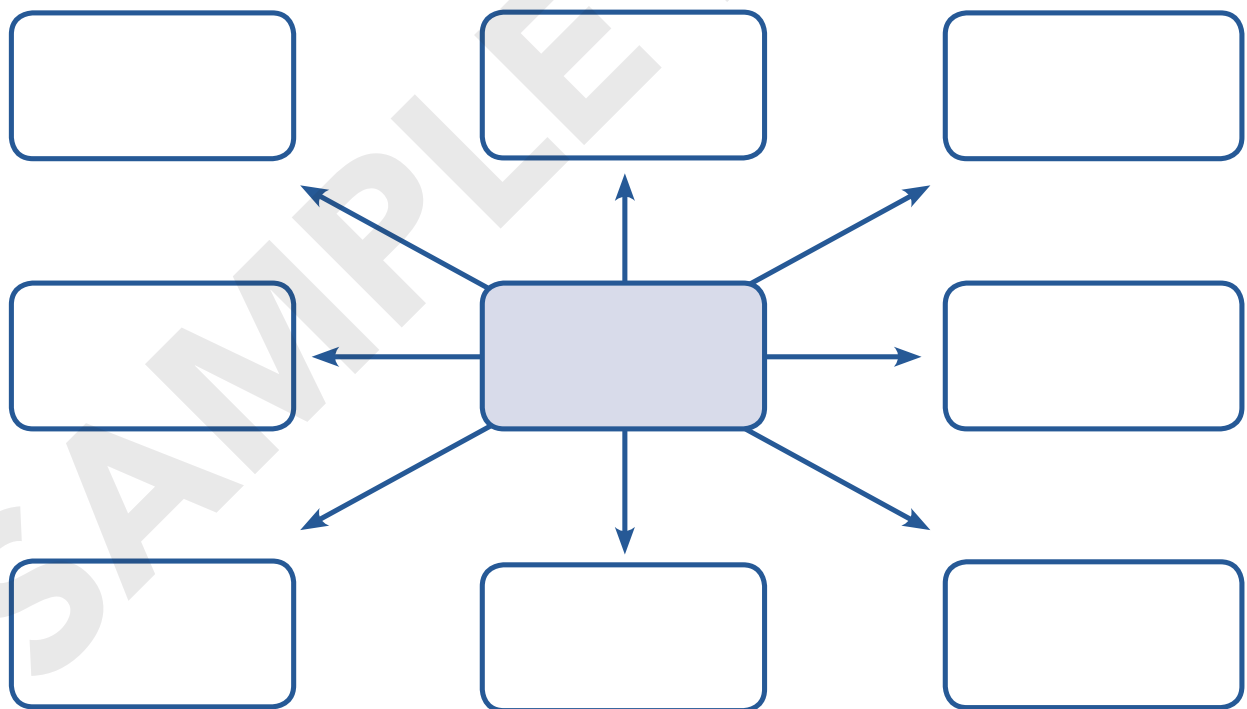
## How do we find out about our world?

### Learning objectives

- Answer the question: What is science?
- Answer the question: Who are scientists?
- Use some of the skills and attitudes scientists use to obtain information about the world.

### What is science?

- 1 Write as many ideas as you can think of to answer this question.
- 2 Write each answer in a separate box in the diagram below.
- 3 Talk to a friend or someone at home to compare your ideas.



Complete the sentence to describe what you think science is.

Science is .....

.....

.....

### ICT opportunity



Use the internet to search for a definition of science for children. Do you agree with what you find? Ask an adult to write a definition of science and discuss it together.

### What does a scientist look like?

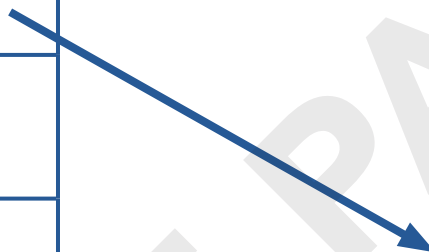
Draw a picture of a typical scientist in this box.

A large rectangular box for drawing, containing a large, light gray diagonal watermark that reads "SAMPLE PAGES".

- 1 Compare your drawing with someone else's.
- 2 Talk about the scientific skills scientists use to carry out their work.
- 3 Match the definition to the meaning: draw a line from the skill to the definition. One has been done for you.

Scientific skill
Record
Observe
Conclude
Think (predict)
Investigate
Compare (classify and group things)
Measure

Definition
Find similarities and differences between things.
Say what you think will happen.
Carry out an experiment or activity to answer a question or hypothesis.
Look at something very carefully and closely.
Collect numerical data using a variety of instruments.
Write down what happens in words or numbers.
Say what you have found out or learnt.





## Methods used to gain scientific knowledge

### Learning objectives

- Explore methods used to gain scientific knowledge.

As a reminder of what science is, watch the following video:  
<https://www.youtube.com/watch?v=Gw7Q14XYRzg>

We will now look at what science is in more detail and try out some activities to practise scientific skills to help us begin to work like a scientist.

Look back at the table on page 8 to remind you what these skills are.



Scientists study many things around them. They often begin by classifying the things they wish to study. A simple scientific classification is to classify everything around you as natural or manufactured.

## Classifying things into groups

Find a set of things around the classroom or at home. This might be real things or pictures of them, for example, animals and plants, toys, books or items of food.

Put them into different groups and explain the reasons for your groupings.

How many different groups can you make?

Ask someone else to use the same objects and to make groups of them.

Compare what you have done.

My groups (draw or write)

I grouped them like this because ...

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Are your groups the same or different?

## Make a note

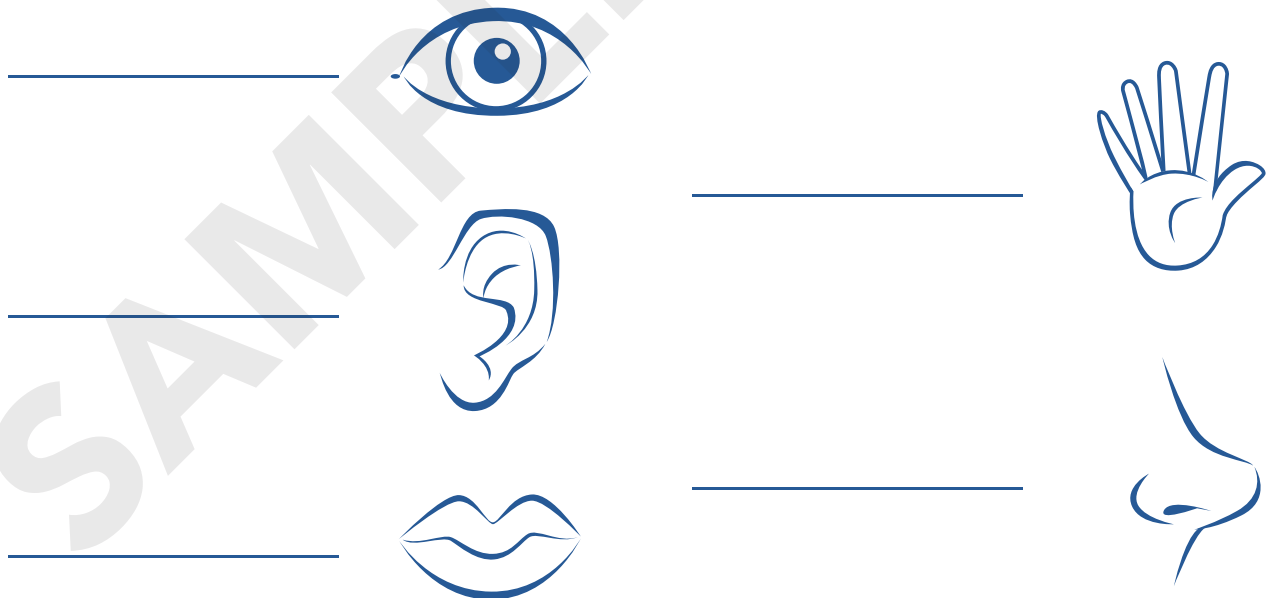
Grouping, classifying and making comparisons are some of the many ways scientists try to find out about things.

## Making observations

When scientists make observations, they look at things very closely over time, but they also use all of their senses to help them work out what might be happening.

## Do you remember?

What are our five senses? (Look at the pictures to help you remember).  
Label the diagram.



As you carry out the following activities, think about which senses you have used each time.

## 1 Burning candles

In class you might have observed a candle burning.

Now, repeat the activity with a different kind of candle you might have at home, for example, a night-light, a votive, pillar candle or a candle you might have on a birthday cake.

<b>My candle</b>	<b>Things I noticed that were the same:</b>
	<b>Things I noticed that were different:</b>

The senses I used during this activity were ...

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## 2 How many sounds?

Set a timer for 30 seconds or 1 minute.

Close your eyes and listen carefully for everything you hear in that time.

Quickly write down as many things as you can remember.

Share your answers with your friends and/or family.

Sounds I heard

Put a tick (✓) next to the answers you share with your friends.

Is there anything you heard that they did not? ☐ Yes ☐ No

If so, why might this be?

.....

.....

.....

The senses I used during this activity were ...

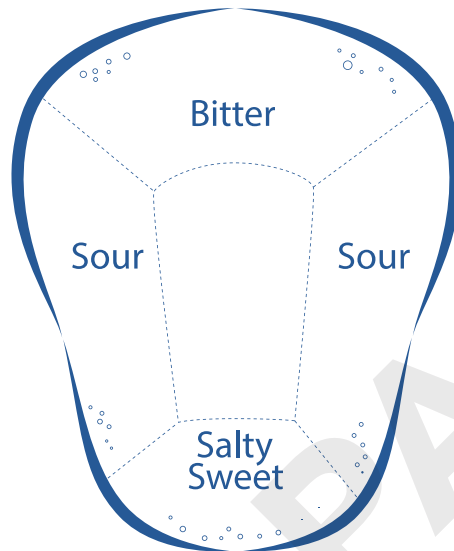
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### 3 What's that taste?

Your tongue helps you to taste things because it has taste buds all over its surface.



Use a mirror to look at your tongue.

Can you see the taste buds on there?

Work with a partner.

Use a blindfold or ask them to close their eyes tightly (some people do not like to be blindfolded).

Give them things to identify by taste only. Help them to taste a small piece of food or a sip of something to drink to see if they can identify what it is. Choose from things such as salt, sugar, lemon juice, vinegar, water, coffee or chocolate.

Swap places.

Talk about the things you could taste easily.

Were these things the same or different?

How might that help when you are working scientifically?

The senses I used during this activity were ...

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#### 4 Magic fingers!

Make a collection of objects from around the classroom or at home with different textures, for example, smooth, cold, hard, soft, rough, etc.

Blindfold a friend (or ask them to close their eyes tightly) and give them the objects one by one to identify by touch.

Which were easy to identify? Why?

How might this help when you are working scientifically?

The senses I used during this activity were ...

.....

.....

.....

#### 5 How efficient is my nose?



#### Safety

- Use the blindfold again (if allowed) and present a selection of strong-smelling substances from around the classroom or at home to your partner. Choose about five or six substances, mainly foods, and don't use cleaning fluids, which might contain nasty chemicals.

Which were easy to identify? Why?

How might this help when you are working scientifically?

The senses I used during this activity were ...

.....

.....

.....

#### Make a note

Scientists need to use a combination of senses when they are making investigations. You might have noticed that if one of your senses is excluded, some of the other senses appear to work more strongly.

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# Workbook

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Enhance learners' confidence as they prepare for PEP Performance Tasks and Curriculum Based Tests with a science workbook series crafted around NSC learner outcomes and designed to support both teacher-led instruction and independent learning.

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