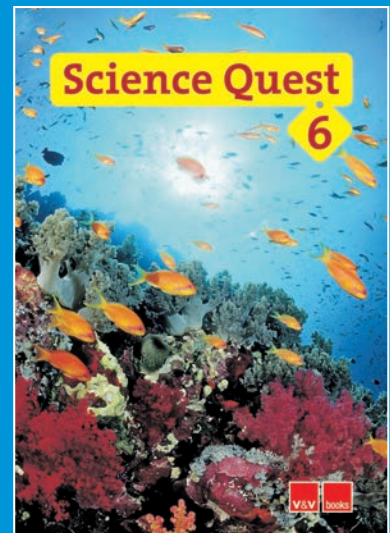
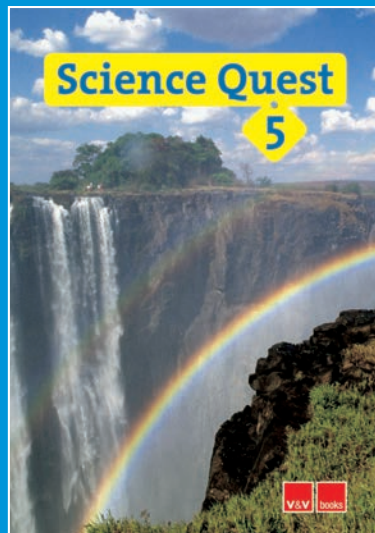
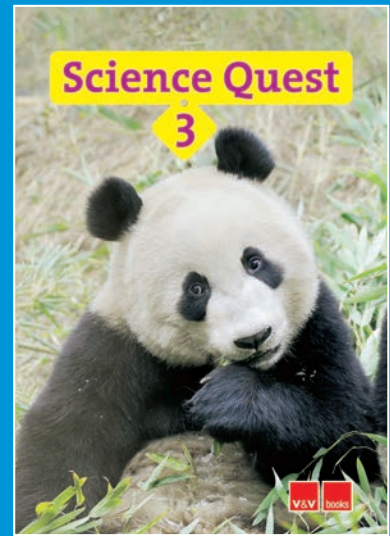


# Science Quest



# Science Quest

The **Science Quest** series reflects the changes in content, structure and teaching approaches contained in the Science component of the LOMCE Primary School Curriculum.

Each **Science Quest** activity book introduces children to basic scientific concepts, using experiments that are easy to carry out in the class-room and are adapted to the pupils' level. All experiments have been tried and tested in the classroom.

The skills of **observation, investigation** and **experimentation** are developed through carrying out the experiments and are tested in the activities that follow these. Questions are logically laid out, progressing from direct observation to analysis and understanding of the concept involved.

The aim of the **Science Quest** series is to help children develop a **practical appreciation** and **love of science**.



The skills of **predicting** and **hypothesising** are promoted in the **Check what you need** and **Prediction** sections.

**Unit 6 Materials**  
**How does it work? – The nappy**

**Introduction**  
 Have you ever asked yourself how a nappy works? How does it hold all that water? In this experiment we will open up a nappy and find out its secret.

1. Check what you need

paper bag, nappy, jar, water, scissors

**Experiment Time!**

2. Look at the pictures and fill in the gaps

a. Cut open the \_\_\_\_\_ with the \_\_\_\_\_ (box / nappy / scissors / pencil)

b. Take the soft white fluff out of the \_\_\_\_\_ and put it into the \_\_\_\_\_ (box / jar / paper bag / nappy)

Strand: Materials  
 Strand unit: Properties and characteristics of materials.  
 Objective: To teach children the workings of an everyday object — a nappy.

**SCIENCE QUEST 1**

c. Empty the \_\_\_\_\_ into the \_\_\_\_\_ (jar / nappy / paper bag / box)

3. Prediction  
 What do you think happens when you pour water into the jar?

Now, do the experiment.

4. Experiment results

a. Does the fluff (a) soak up the water (b) leak everywhere (c) go green? \_\_\_\_\_

b. Does the fluff in the jar (a) get smaller (b) get bigger (c) disappear? \_\_\_\_\_

c. Is the fluff bigger because it is full of (a) air (b) milk (c) water? \_\_\_\_\_

**FACT BOX 1**  
 The secret of a nappy is water gel. There is water gel powder in the fluff of the nappy. This soaks up the water and keeps the baby's skin dry.

24

SCIENCE QUEST 5

**7. Challenge 1**

Write what happens

a. When you keep a plant in the dark.

b. When a plant doesn't have water.

c. When a plant doesn't have air.

• Grow cress seeds on damp blotting paper (or kitchen towel).  
 • When they have grown into small plants, put some of them in a dark place but keep them damp.  
 • Put some underwater so they have almost no air.  
 • Keep the rest of the plants in the light but do not water them.  
 • Record what happens. Be patient!

**Challenge 2**

Your garden-in-a-jar is a mini-greenhouse. Greenhouses can become very hot when the sun shines through the glass (or plastic). This means that you can grow plants in a greenhouse that will not grow outside in the cold. Using the seeds of grapes, apples or oranges, grapefruits etc, see if you can grow any of these fruits in your garden-in-a-jar. You will need patience!

**FIND OUT MORE**  
 Use an encyclopedia or the internet to find out more about how plants make food.

14

The skill of **questioning** is promoted in the **Challenge** sections and the skills of **recording** and **communicating** are developed in the **Experiment record** sheet which appears in each unit.

Pupils are also directed to search the **Internet** for information on various topics.

SCIENCE QUEST 3

**4. EXPERIMENT RECORD**

a. Draw your experiments.

**Jar trap** **Bug catcher**

b. Make a list of what you need for the experiments.

**Jar trap:** \_\_\_\_\_

**Bug catcher:** \_\_\_\_\_

c. With a partner, talk about the instructions for the **jar trap** experiment.

Firstly, dig two holes ... Then, place ...

After that, ... Finally, ...

d. What mini beasts can you see in your **bug catcher**? Tell your partner.

I can see a mini beast with 8 legs. It's a spider.

I can see a mini beast with 6 legs and no wings. It's an earwig.

**FACT BOX 1**  
 Mini beasts use different ways to protect themselves from predators. Snails use shells, while slugs are covered in slime, which makes it difficult for birds to pick them up. Caterpillars and grasshoppers use camouflage, while ants and worms live under the ground. Earwigs and beetles have pincers to fight off their enemies while ladybirds (and beetles) have colours that warn birds that they don't taste nice!

22

**Fact boxes** put concepts into a practical and real world context and serve to challenge the pupils to think more about the concept.

Each chapter contains **Helpful Hints** for teachers to help solve any difficulties that pupils might have.

Unit 4 Animals and their vital functions

Beautiful butterflies

Introduction

Butterflies are much more beautiful than most insects but physically, they aren't very different to an ant, a fly or a bee. You can make your own butterfly in this activity.

**1. Check what you need**

tissue paper, colouring pens, pencil, pipe cleaners, glue, scissors, stiff card, stapler, toilet roll tube

**Helpful Hint**  
 If you don't have pipe cleaners, you can use straws.

**2. Before you make your butterfly**

a. Match the body parts to the insect:

abdomen, thorax, wings, legs, head, antenna(e)

b. Now, fill in the gaps:

Insects' bodies are divided into a head, a \_\_\_\_\_ and an \_\_\_\_\_.

They have \_\_\_\_\_ legs and \_\_\_\_\_ antennae.

Most insects have \_\_\_\_\_ wings, but a butterfly has \_\_\_\_\_ wings.

Strand: Living Things.  
 Strand unit: Animals and their vital functions.  
 Objective: To teach children about insects (arthropods), the life cycle of a butterfly and to encourage them to make one.

13



# Science Quest

1

ISBN: 978-84-682-2231-8

# Science Quest

2

ISBN: 978-84-682-2232-5

# Science Quest

3

ISBN: 978-84-682-2233-2

# Science Quest

4

ISBN: 978-84-682-2234-9

# Science Quest

5

ISBN: 978-84-682-2235-6

# Science Quest

6

ISBN: 978-84-682-2236-3

