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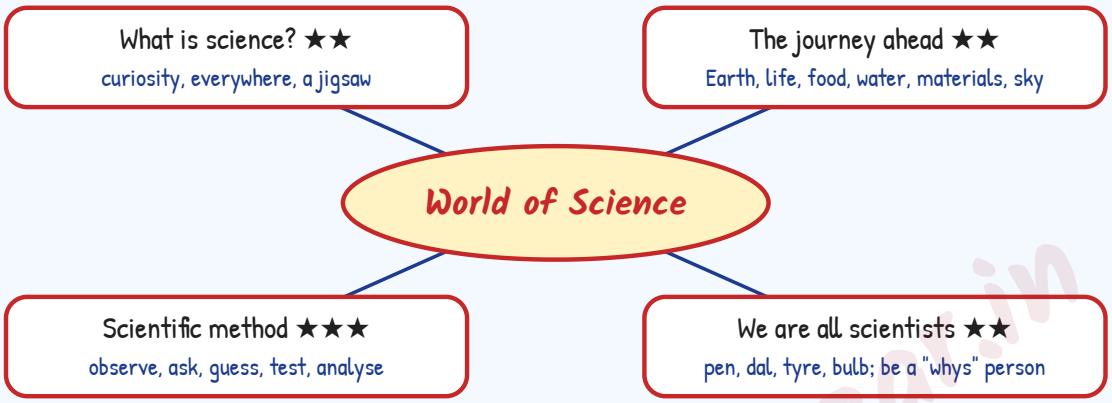
Class 6 · Science (Curiosity) · Chapter 1

The Wonderful World of Science



New NCERT Curiosity, Grade 6 · 2026-27

Chapter map (★ = important for tests)



What is inside

1. What is science? Science is everywhere
2. What will we explore in this book?
3. Finding answers on our own: the pen that stopped writing
4. The scientific method; Activity 1.1
5. Working like a scientist; Activity 1.2
6. Asking "why?"; Activity 1.3; science together
7. Toolkit and a fair test
8. Exam-style questions, 3 case studies, practice set of 48 questions, 20 MCQs, 6 A–R, answers, summary

★ **Exam tip:** Score here: define science in one line; list the five steps of the scientific method in order; apply them to a daily problem (pen, torch, flat tyre, bulb); say what you change, keep the same and observe in a test.

Must-know words: curiosity, observation, question, guess (hypothesis), test (experiment), analyse, scientific method, scientist.

Definition ✎ One-line chapter: science is a way of thinking, observing and doing things to understand our world; anyone who observes, asks, guesses, tests and analyses is working like a scientist.

Based on NCERT "Curiosity" Grade 6 (2026-27), Chapter 1. Figures redrawn and answers written by us. New book: questions are Exam-style.

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What is science? ★★

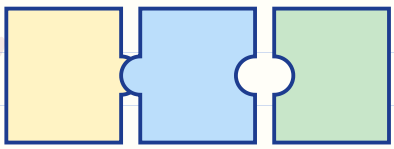
Ans. As human beings we have always been **curious** about our surroundings, from childhood. In the Middle Stage we continue this journey with a new subject: **Science**.

Definition ✎ **Science** is a way of **thinking, observing and doing things** to understand the world we live in and to uncover the secrets of the universe. It is a big adventure: we **ask questions**, **explore** the world and try to understand **how things work**. The most important thing is **curiosity**, which gives the book its name.

Science is everywhere

Place	A question science can ask
a mountainous region	How were the mountains formed?
a desert	How do plants survive with little water?
a coast	Why are there waves and tides?
under the ocean	How do fish breathe in water?
a galaxy	Why do the stars shine?
the kitchen	Why does milk boil over?
the playground	Why does a ball bounce?

Ans. From **tiny grains of sand** to **massive mountains**, a **leaf of grass** to a **vast forest**, the **depths of the ocean** to **outer space**, there is always something new to discover. Why do stars shine? How does a flower know when to open? Some of the biggest discoveries came from **unexpected places**.



Science is like a giant, unending jigsaw puzzle

Definition ✎ **Science is like a giant and unending jigsaw puzzle**: every new discovery adds a piece; there is **no limit** to what we can discover, because every new piece of knowledge leads to **more questions**. Sometimes a piece was put in the **wrong place** and must be moved: **new discoveries can change our understanding** of the world.

★ ***Exam tip:*** **Exam tip**: "Why is science compared to a jigsaw puzzle?" Write: each discovery adds a piece, the puzzle never ends because new knowledge raises new questions, and pieces can be moved when new discoveries change our ideas.

What will we explore with this book? ★★

As we discover more and more, we realise that **all the ideas are connected**. The book starts with our home, planet **Earth**: the only planet we know that supports life, with an environment we must **protect**.

Theme in the book	Questions the chapter asks	Chapter

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variety of life	How have plants and animals survived and thrived in different regions? How do they grow (seed → plant, caterpillar → butterfly)?	2, 10
food	India has many cuisines and tasty dishes. What are they made of? How do we find out?	3
magnets	How does the magnet keep the pencil box closed?	4
measuring and motion	How do we measure length? How do things move?	5
materials	Paper, a metal key, a plastic ruler, a rubber eraser, clothes, a cup: what are they made of?	6
hot and cold	How hot is the water, or our body when we have fever?	7
water	Why and how does it rain? Why does water freeze into ice when cooled and boil into steam when heated?	8
separating	How do we separate different materials from one another (even the skin of a peanut seed)?	9
nature's treasures	Air, water, soil, forests: how do we use them wisely?	11
beyond Earth	The Sun, the Moon and the millions of stars that shine in the sky	12

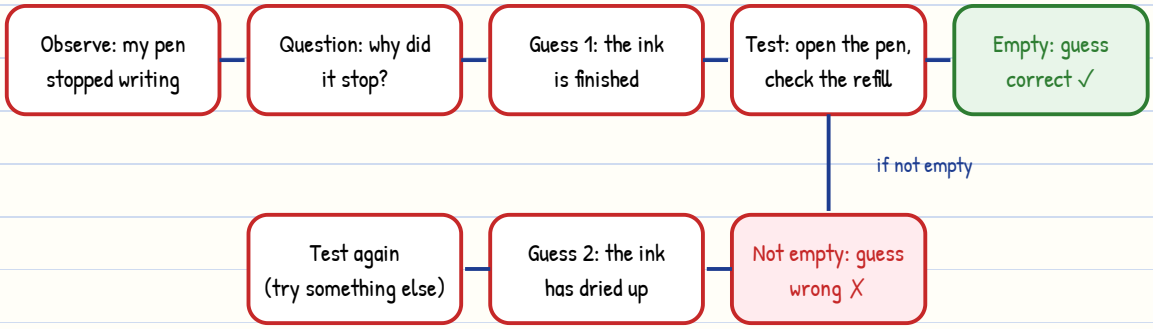
Ans. **Questions about water** from the chapter: Have you jumped in a puddle? Why and how does it rain? Why does water become ice when cooled and steam when heated? Why do we enjoy cool water in summer and a warm shower in winter?

Ans. **Questions about materials**: Are the paper, metal key, plastic ruler, rubber eraser, magnet, clothes and cup made of different materials? How do we separate different materials from one another?

Big idea: we will have an almost unending list of questions about everything on Earth, and beyond (the Sun, the Moon, the stars). Each chapter should ignite our **spirit of inquiry**.

How can we find answers on our own? ★★★

We have already been finding answers to many questions without realising it. Example from the book: **your pen stops writing**.



The way you found out why the pen stopped writing is an example of the scientific method

Ans. **How could you test guess 2?** Dip the tip of the refill in warm water for a minute, or scribble hard on rough paper; if the pen writes again, the ink had dried at the tip. If not, make another guess (the ball of

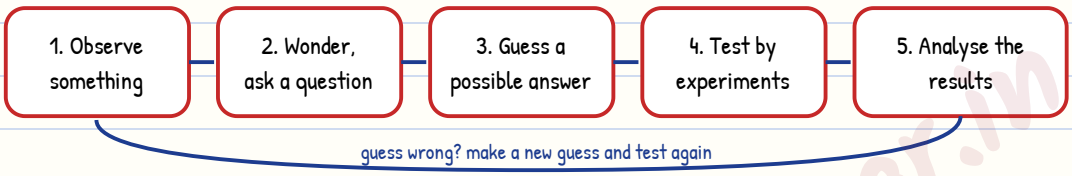
the tip is stuck, the refill is broken) and test that.

Definition ✎ **Key point**: a guess is only an idea until it is **tested**. A test can show the guess is **correct** or **wrong**. If it is wrong, we do not give up; we make a **new guess** and test again.

✗ **Don't do this: Common mistake**: deciding "the ink is finished" and throwing the pen away without checking. Without a test, it is only a guess.

The scientific method ★★★

Definition ✎ Science is **not just memorising facts and figures** or doing experiments. It follows a **step-by-step process** to find answers to our questions: the **scientific method**.



The steps of the scientific method

Step	What we do	Pen example
1. Observe	notice something interesting or that we do not understand	the pen stops writing
2. Question	wonder and ask a question about it	Why did my pen stop writing?
3. Guess	think of a possible answer (a hypothesis)	the ink is finished
4. Test	check the guess by experiments or more observations	open the pen, look at the refill
5. Analyse	see whether the results answer the question	empty: yes; not empty: new guess

Activity 1.1: Let us think and write

Write about a similar problem that you tried to solve. What steps did you take?

Ans. Sample answer: **Observe**: the TV remote did not work. **Question**: why is the remote not working? **Guess**: the batteries are weak. **Test**: I put new batteries in it. **Analyse**: the remote worked, so my guess was correct. (If it had still not worked, I would have guessed that the TV sensor was blocked and tested that by removing the object in front of the TV.)

★ **Exam tip:** Any honest daily problem works: a torch not lighting, a plant drooping, a bicycle chain slipping. Write **all five steps** with a heading for each.

Working like a scientist ★★

Definition ✎ **Scientists** are people who follow the scientific method to solve problems or to discover new things. But **anyone** who follows the scientific method is **working like a scientist**. When we ask questions and find out answers, we are all, in a way, scientists!

Person	Observation	Question	Guess	Test
a cook	dal spilled out of the cooker	Why did it spill?	too much water	next time use less water, keep everything else the same

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a bicycle repair person	the tyre is flat	From where did the air leak out?	a puncture in the tube	pump the tube and dip it in water: bubbles show the hole
an electrician	a light bulb is not working	Is there a problem with the bulb or the switch?	the bulb has fused	fit the bulb in a holder that works (or a new bulb in this holder)

Activity 1.2: Let us think and write

Describe a daily-life situation where you think someone was following a scientific method.

> **Ans.** **Sample answer**: my mother noticed that the curd did not set overnight in winter (**observe**). She wondered why (**question**) and guessed that the room was too cold (**guess**). The next night she kept the curd in a warm place near the kitchen (**test**). It set well, so she concluded that warmth helps curd to set (**analyse**).

More examples: a doctor finding the cause of a fever; a farmer checking why leaves turned yellow; a mechanic finding why a scooter will not start; a teacher finding why a fan makes noise.

★ ***Exam tip:*** **Why learn science if we already use the method?** Learning science develops our ability to solve **bigger problems** and to solve more mysteries of the universe.

Be curious and ask "why?" ★★

> ***Definition*** ✎ To learn science well, the first and foremost thing is to be **curious** and **observe** our surroundings keenly. When we are curious, we pose questions: **how?** and **why?** The world is full of things we do not know, waiting to be explored.

Activity 1.3: Let us think and write

If you have to ask "Why?" about something, what would you ask? How would you try to find an answer?

My "why" question	How I could find the answer
Why do the leaves of a touch-me-not plant fold when touched?	touch different leaves, note how fast they fold and reopen; read about it; ask a teacher
Why does a wet cloth dry faster in the sun?	hang two equal wet cloths, one in the sun and one in the shade, and note the drying times
Why does an ice cube melt faster in my hand than on a plate?	time two equal ice cubes, one in the hand and one on a plate
Why do ants walk in a line?	watch them, put a little sugar nearby, see how the line changes

> **Ans.** **Science is rarely done alone**: scientists across the world work together, often in **large teams**. If you cannot find an answer yourself, ask your friends to help; it is always more fun to discover things together.

> **Ans.** **You will not find answers to all your questions in Grade 6**, and that is fine: you are starting a journey of science for the next **five years** or even beyond.

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"After all, to be a wise person, you must be a 'whys' person!" Like children enjoying the rain, science is all about joyful exploration: keep exploring and never stop wondering and asking questions.

Science toolkit ★★★

Word	Meaning	Example
curiosity	the wish to know and understand	Why do stars shine?
observation	what we notice with our senses or instruments	the pen stopped writing
question	what we wonder about something we observed	Why did it stop?
guess (hypothesis)	a possible answer that can be tested	the ink is finished
test (experiment)	a way to check the guess	look at the refill
analyse	check whether the results answer the question	refill empty, so the guess was right
scientist	a person who follows the scientific method	the cook, the electrician, you!

A fair test: does a wet cloth dry faster in the sun or in the shade? ★★

What we change	What we keep the same	What we observe
the place (sun or shade)	same kind and size of cloth, same amount of water, same squeezing, same time of starting	time taken to dry (feel the cloth every 15 minutes)

Example result: in the sun 40 minutes, in the shade 2 hours. Conclusion: in our test the cloth dried faster in the sun.

Definition ✎ Fair test: change only one thing and keep everything else the same; otherwise we cannot tell which change caused the result.

✗ **Don't do this:** Common mistakes: (1) treating a guess as a fact without testing; (2) changing two things at once (a bigger cloth in the shade); (3) thinking science is only about memorising facts or only happens in a laboratory; (4) giving up when the first guess is wrong; (5) calling an opinion ("Which colour is the most beautiful?") a scientific question.

Everyday questions to investigate: Does a seed sprout without water? Which ball bounces highest? Does sugar dissolve faster in hot or cold water? Do plants grow towards light?

Exam-style questions Exam-style

1. What is science? [1]

   Ans. A way of thinking, observing and doing things to understand the world.

2. What is the most important thing needed to learn science? [1]

   Ans. Curiosity.

3. Write the steps of the scientific method in order. [2]

   Ans. Observe, question, guess, test, analyse.

4. Give two examples showing that science is everywhere. [2]

   Ans. Why milk boils over in the kitchen; why the stars shine in the sky.

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5. Why is science compared to a jigsaw puzzle? [2]

> **Ans.** Each discovery adds a piece; it never ends; pieces can be moved by new discoveries.

6. Explain how you found why your pen stopped writing. [3]

> **Ans.** Guessed the ink was finished, checked the refill; if not empty, guessed dried ink and tested again.

7. How is a cook whose dal spilled working like a scientist? [3]

> **Ans.** Observes the spill, asks why, guesses too much water, tests with less water next time.

8. Explain the scientific method with your own example and a flowchart. [5]

> **Ans.** e.g. torch not lighting → why? → batteries weak → put new batteries → it lights: guess correct (draw the five boxes with arrows; loop back to a new guess if wrong).

Case study 1: the flat tyre Exam-style. Ravi's bicycle tyre is flat every morning.
(i) What is the observation? **The tyre goes flat.** [1]
(ii) What question can he ask? **From where is the air leaking?** [1]
(iii) A possible guess? **A small puncture in the tube.** [1]
(iv) How can he test it? **Pump the tube and dip it in a bucket of water; bubbles rise from the hole.** [2]

Case study 2: the cooker Exam-style. Dal spilled out of the pressure cooker.
(i) A question? **Why did the dal spill out?** [1]
(ii) A guess? **There was too much water.** [1]
(iii) A fair test? **Next time use less water, keeping the dal, flame and time the same.** [1]
(iv) If it does not spill now, what do we conclude? **The guess is supported: too much water caused the spill.** [2]

Practice set: test yourself *Exam-style*

Try every question before looking at the answers at the end of the chapter. 40 or more out of 48 means you are ready for the test.

A. Fill in the blanks (1 mark each)

1. Science is a way of thinking, observing and _____ things.
2. The title of our science book is _____.
3. Science is like a giant, unending _____ puzzle.
4. The only planet we know that supports life is _____.
5. A possible answer to a question that we can test is a _____.
6. The step-by-step process to find answers is the scientific _____.
7. People who follow the scientific method to discover new things are _____.
8. "To be a wise person, you must be a _____ person."

B. True or false? (1 mark each)

1. Science is only about memorising facts.
2. Science happens only in laboratories.
3. A new discovery can change our understanding.
4. Only scientists use the scientific method.

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5. If a test shows our guess is wrong, we make a new guess.
6. Scientists usually work alone.
7. We will find answers to all our questions in Grade 6.
8. Observing is the first step of the scientific method.

C. Very short answer (1 mark each)

1. Name two places where we can find science.
2. Your first guess when a pen stops writing?
3. How do you test that guess?
4. The next guess if the refill is not empty?
5. Name one material in your pencil box.
6. What does water become when cooled enough?
7. What does water become when boiled?
8. What keeps some pencil boxes closed?
9. Name something beyond Earth we can ask about.
10. What do we call anyone who follows the scientific method?

D. Short answer I (2 marks each)

1. Why is science compared to a jigsaw puzzle?
2. Why may a piece of the science puzzle have to be moved?
3. List the five steps of the scientific method.
4. Write two questions about food from the chapter.
5. How does a cook work like a scientist?
6. What question and test would a bicycle repair person use?
7. Why is it good to do science with friends?
8. Write two questions about water from the chapter.

E. Short answer II (3 marks each)

1. Your torch does not light up. Use the scientific method to find out why.
2. Plan a fair test: does a wet cloth dry faster in the sun or in the shade?
3. "Science is everywhere." Explain with three examples.
4. Write three "why" questions and explain how you would answer one of them.
5. An electrician finds that a bulb is not working. Write two guesses and how to test each.
6. Why must we protect the environment of the Earth?

F. Long answer (5 marks each)

1. Explain the scientific method using the pen example, with a flowchart.
2. Describe five topics you will explore in Grade 6 Science and one question for each.
3. "When we ask questions and find answers, we are all scientists." Explain with three examples.
4. Plan an investigation: does a seed need water to sprout? Say what you change, keep the same and observe.

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G. Challenge (HOTS) questions

1. Your guess was correct in one test. Is it proved for ever? What should you do?
2. Why might two students get different results in the same test?
3. Why is curiosity called the most important thing in science?
4. Can science test "Which colour is the most beautiful?" Why?

Case study 3: the phone that will not charge Exam-style. Meena's phone does not charge when plugged in.
(i) Write the observation. [1] (ii) Write a question. [1] (iii) Give two guesses. [1] (iv) How can she test one of them? [2]

My score (fill in after checking the answers)

Section	A /8	B /8	C /10	D /16	E /18	F /20	G (bonus)	Total /80
My marks								

Rough work

20 MCQs

1. The title of our science textbook
(a) Exploration (b) Ganita Prakash (c) Curiosity (d) Malhar

2. Science is
(a) a way of thinking, observing and doing (b) only facts (c) only experiments (d) only for scientists

3. Science is compared to
(a) a story (b) a map (c) a cricket match (d) a jigsaw puzzle

4. The only planet known to support life
(a) Mars (b) Earth (c) Venus (d) the Moon

5. Water cooled enough becomes
(a) steam (b) ice (c) vapour (d) cloud

6. Water boiled becomes
(a) ice (b) dew (c) snow (d) steam

7. The first step of the scientific method
(a) observe (b) conclude (c) test (d) guess

8. After making a guess, we
(a) stop (b) forget it (c) test it (d) believe it without checking

9. Pen stops writing: the first guess in the book
(a) the hand is tired (b) the pen is broken (c) the paper is wet (d) the ink is finished

10. If the refill is not empty, the next guess
(a) the ink is finished (b) the ink has dried up (c) there is no ink (d) the paper is bad

11. A cook wondering why the dal spilled is
(a) careless (b) only cooking (c) working like a scientist (d) doing magic

12. A repair person finds a puncture by
(a) dipping the tube in water (b) painting it (c) weighing it (d) cutting it

13. The electrician's question about a bulb
(a) Is it raining? (b) Is it the bulb or the switch? (c) What colour is it? (d) Who bought it?

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14. Scientists usually work
(a) alone (b) only at night (c) in teams (d) only in India

15. "To be a wise person, you must be a ___ person"
(a) quiet (b) strong (c) fast (d) "whys"

16. An object in the pencil box from the chapter
(a) a magnet (b) a robot (c) a rocket (d) a satellite

17. The science journey continues for the next
(a) 5 years or more (b) 1 year (c) 2 months (d) 10 days

18. A new discovery may
(a) stop all questions (b) never change anything (c) end science (d) change our understanding

19. Science is found
(a) only in laboratories (b) everywhere (c) only in books (d) only in space

20. Analysing results means
(a) guessing without testing (b) throwing them away (c) checking whether they answer our question (d) copying a friend

1 (c) · 2 (a) · 3 (d) · 4 (b) · 5 (b) · 6 (d) · 7 (a) · 8 (c) · 9 (d) · 10 (b) · 11 (c) · 12 (a) · 13 (b) · 14 (c) · 15 (d) · 16 (a) · 17 (a) · 18 (d) · 19 (b) · 20 (c)

Assertion–Reason (6)

(a) Both true, R explains A. (b) Both true, R does not explain A. (c) A true, R false. (d) A false, R true.

1. A: Everyone can work like a scientist. R: Anyone who follows the scientific method is working like a scientist.
2. A: Science is only about memorising facts. R: Science follows a step-by-step process to find answers.
3. A: New discoveries can change our understanding. R: Sometimes a piece of the puzzle has been put in the wrong place.
4. A: Scientists often work in large teams. R: The Earth is the only planet known to support life.
5. A: We must protect the Earth's environment. R: The Earth is the only planet we know that supports life.
6. A: We will answer all our questions in Grade 6. R: Science is a journey that goes on for years and beyond.

Key: 1 (a) · 2 (d) · 3 (a) · 4 (b) · 5 (a) · 6 (d)

Answers to the practice set

A. 1. doing 2. Curiosity 3. jigsaw 4. Earth 5. guess (hypothesis) 6. method 7. scientists 8. "whys"

B. 1. F 2. F 3. T 4. F 5. T 6. F (often in large teams) 7. F 8. T

C. 1. e.g. the kitchen and the night sky 2. the ink is finished 3. open the pen and check the refill 4. the ink has dried up 5. plastic (ruler) / rubber (eraser) / metal 6. ice 7. steam 8. a magnet 9. the Sun, the Moon or stars 10. (working like) a scientist

D. 1. every discovery adds a piece; it never ends
2. new discoveries can show that an old idea was wrong
3. observe, question, guess, test, analyse
4. What are our dishes made of? How do we find out?
5. observes the dal spilling, asks why, guesses too much water, tests with less
6. Where did the air leak? Dip the pumped tube in water
7. friends help when we are stuck; discovering together is more fun
8. Why and how does it rain? Why does water freeze when cooled?

E. 1. observe (no light) → why? → guess weak batteries → put new ones → lights: correct; if not, guess a fused bulb and test
2. change the place; keep cloth, water and time the same; observe drying time

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3. e.g. waves at the coast, plants in deserts, stars in a galaxy
4. e.g. Why do ants walk in a line? Watch them with and without sugar nearby
5. bulb fused (try it in a working holder); switch faulty (try a good bulb in this holder)
6. it is the only planet known to support life; plants, animals and we depend on it

F. 1. p. 4–5 2. p. 3 3. p. 6 (cook, repair person, electrician) 4. change: water or no water; keep the same: seeds, soil, light, place, time; observe: which seeds sprout in a week

G. 1. no: repeat the test, let others check; new results may change it 2. tests were not fair, measurements were careless, or things changed (weather) 3. it makes us ask questions, which start every investigation 4. no: it is an opinion and cannot be tested or measured

Case study 3. (i) the phone does not charge (ii) why is it not charging? (iii) the charger or cable is faulty; the socket has no power (iv) try another charger/cable, or plug a lamp into the same socket

Last-night summary

- Science is a way of thinking, observing and doing things to understand the world; curiosity (the book's title) is the key.
- Science is everywhere: from sand to mountains, the ocean to galaxies, the kitchen to the playground.
- Science is a giant, unending jigsaw: every discovery adds a piece and raises new questions; pieces can be moved.
- Scientific method: observe → question → guess → test → analyse (and a new guess if needed). The pen example.
- Anyone using it works like a scientist (cook, repair person, electrician); science is done together; be a "whys" person.

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