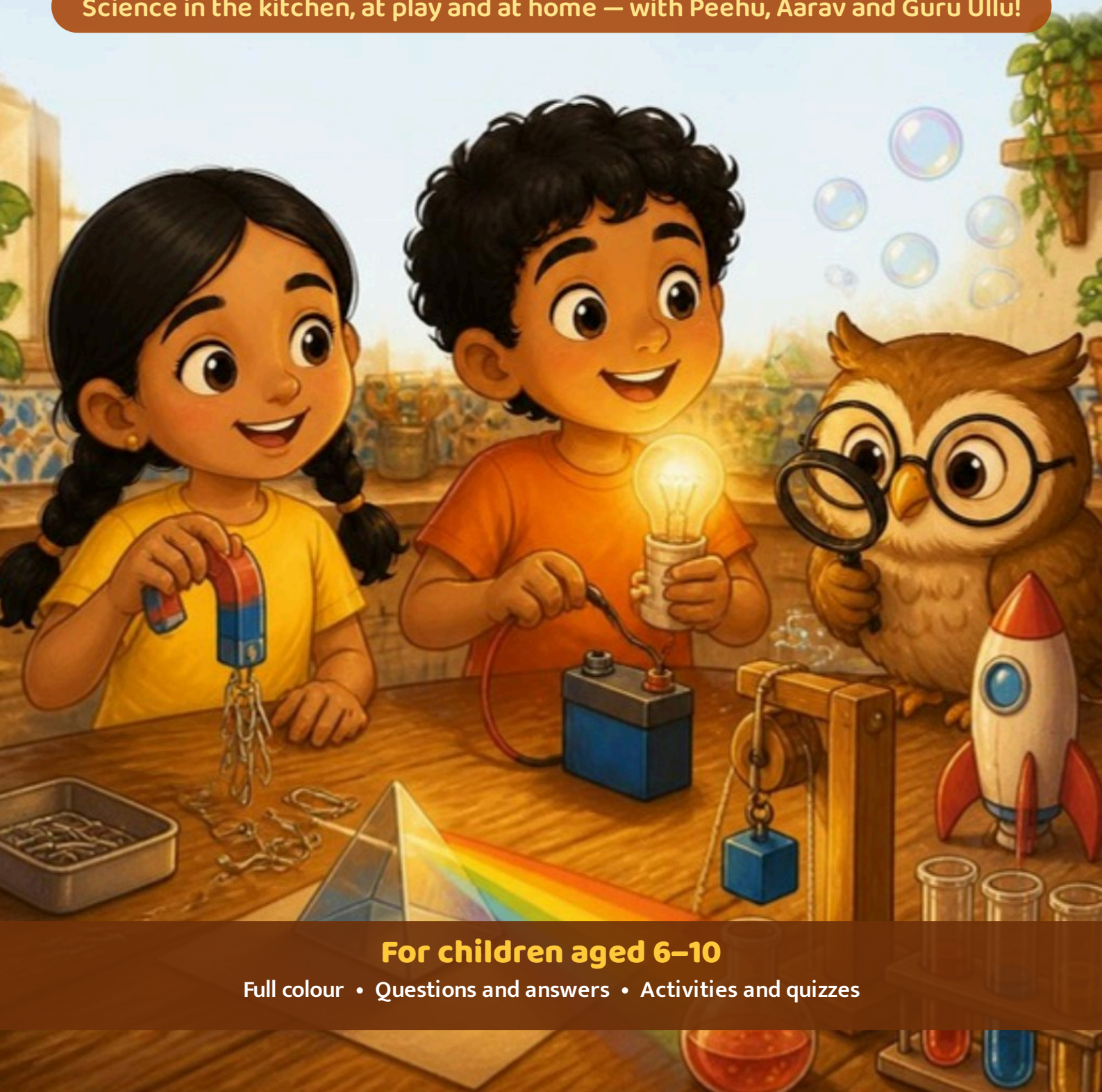


“What, Why and How?”

Everyday Science

Science in the kitchen, at play and at home — with Peehu, Aarav and Guru Ullu!**For children aged 6–10**

Full colour • Questions and answers • Activities and quizzes

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Look for the coloured boxes in every chapter — **What?**, **Why?**, **How?** and **Amazing Fact!**

Meet Your Friends



Peehu (8 years)

“I ask ‘why?’ about everything!”

Aarav (7 years)

“I want to see how things work!”

Guru Ullu

“Think first, then test — that is science!”

What the coloured boxes mean

What?

What something is — a simple meaning

Why?

Why it happens — the real reason

How?

How it works — the steps or process

Amazing Fact

A surprising, checked fact

Think and Tell

A question for you — answers on page 42

Try It Yourself

A safe activity to try at home

If an activity is marked **with an adult**, do it only with a grown-up.

Phases of the Moon



? Why? Why does the Moon seem to change shape?

The Moon does not shine with its own light — sunlight falls on it and bounces back. Half of the Moon is always lit. As the Moon goes around the Earth, we see sometimes more and sometimes less of that lit half.

The Moon's 8 phases in a month (as seen from India)



→ one full cycle takes about 29½ days →

★ Amazing Fact

We always see the same face of the Moon — its other side can never be seen from the Earth!

? Think and Tell

Look at the Moon tonight — which phase above does it match? Draw a small picture of it every night for a month.



Peehu: Today my Moon Diary shows a 'first quarter' Moon! See page 43 to make your diary.

The Peacock



? What?

The peacock is India's **national bird**. It has a shiny blue neck and a crest of feathers on its head.

? Why? Why does only the peacock have long feathers?

Only the **male** (peacock) has the long, colourful feathers. The female (peahen) is brown. The peacock spreads its feathers like a fan and dances to attract a peahen.

★ Amazing Fact

The peacock's long feathers are not its tail but long feathers growing above the tail. They fall off every year and grow again.

★ It Flies!

Though it looks heavy, the peacock can fly — at night it roosts high up in trees.



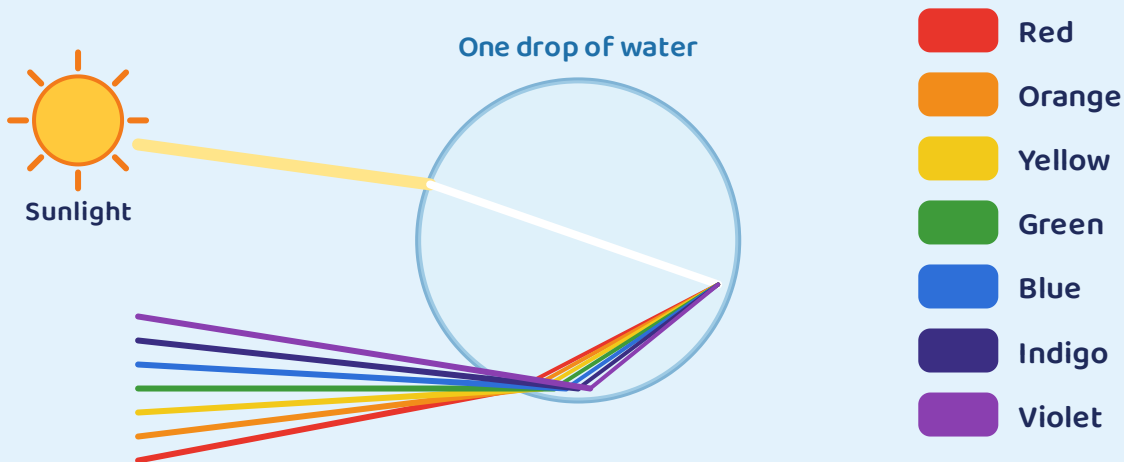
Guru Ullu: Peacock feathers fall off on their own — disturbing a peacock to pull feathers is wrong and against the law too.

The Rainbow



? What?

A **rainbow** is a seven-coloured bow in the sky. You see it after rain when the **Sun is behind you** and there are water drops in the air in front of you.



? Why? Where do the seven colours come from?

Sunlight looks white but hides seven colours. Entering and leaving a drop, each colour bends a slightly different amount — so the colours spread out.

✓ Try it with an adult

On a sunny day, stand with your back to the Sun and spray a fine mist of water from a hose — see your own rainbow!

★ Amazing Fact

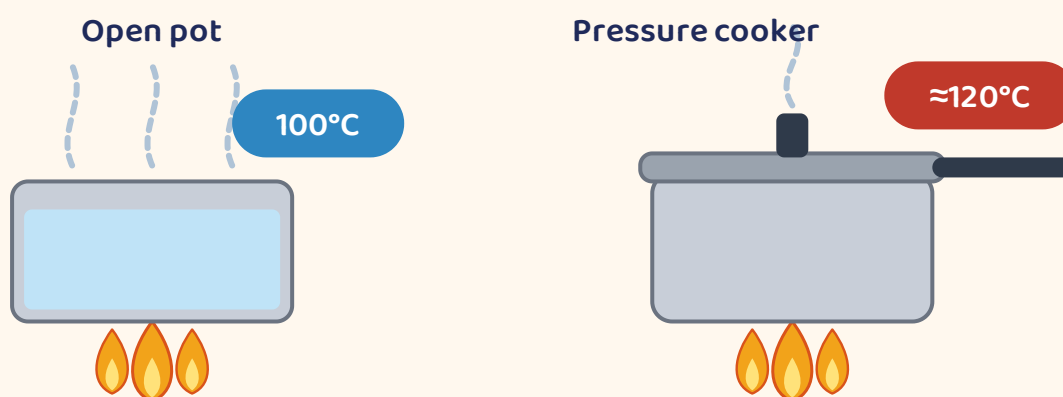
Remember the order of colours with **VIBGYOR** — Violet, Indigo, Blue, Green, Yellow, Orange, Red!

Boiling and the Pressure Cooker



? What?

When water gets hot enough to form big bubbles and turn into steam, we say it is **boiling**. In an open pot, water boils at about **100°C**.



Lid closed → steam can't escape → pressure rises → water boils hotter → food cooks faster

? Why? Why does food cook faster in a cooker?

In a pressure cooker the steam is trapped, so the **pressure** inside rises. Under higher pressure, water boils at about **120°C** — and at that higher heat, dal and rice cook much faster.

! Be careful!

Never touch a whistling cooker or open its lid — the steam can burn badly. Only adults should handle it.

? Think and Tell

Why does the lid of a pot rattle when tea is boiling?

Two Fun Experiments



✓ Experiment 1: watch sprouts grow

You need: moong beans or chickpeas, a glass jar, wet cotton wool or cloth.

- 1 Soak the beans in water overnight.
- 2 Spread wet cotton in the jar, put the beans on it and keep the lid slightly open.
- 3 Look every day and draw what you see — first a root, then a shoot and then leaves will appear!

✓ Experiment 2: the colour-changing flower with an adult

You need: white flowers (like chrysanthemums), two glasses of water, food colouring.

- 1 Mix a different colour into each glass.
- 2 Ask an adult to cut the bottom of the stem at a slant, then stand it in the coloured water.
- 3 Look after a day — the petals will change colour, because water climbed up through the tubes in the stem!

! Rules

Adults should do the cutting. Ask an adult before eating any sprouts from the experiment.

Quiz and Puzzles

A. Tick ✓ the right answer

1. When was the weather department set up?

☐ 1875 ☐ 1947 ☐ 2000

3. Which instrument measures rain?

☐ thermometer ☐ rain gauge ☐ barometer

5. How many colours in a rainbow?

☐ 5 ☐ 6 ☐ 7

7. Which warning means the biggest danger?

☐ yellow ☐ orange ☐ red

2. In which layer does weather happen?

☐ troposphere ☐ stratosphere ☐ thermosphere

4. Where does the monsoon usually arrive first?

☐ Kashmir ☐ Kerala ☐ Rajasthan

6. Why do seasons change?

☐ axis tilt ☐ the Moon ☐ wind

8. How many arms does a snowflake have?

☐ 4 ☐ 6 ☐ 8

B. True or false?

9. We see lightning before we hear thunder.

True ☐ False ☐

10. Summer comes when Earth moves close to the Sun.

True ☐ False ☐

11. Fog is a cloud near the ground.

True ☐ False ☐

12. It is safe to stand under a tree in a storm.

True ☐ False ☐

C. Instrument and job

13. Thermometer

•• rain

14. Rain gauge

•• air pressure

15. Wind vane

•• temperature

16. Barometer

•• wind direction

D. Season and sign

17. Kharif

•• koel, flowers

18. Rabi

•• loo, mangoes

19. Grishma

•• rice, maize

20. Vasant

•• wheat, mustard

★ E. Odd one out — circle in each line (21–23)

(a) Rain, hail, snow, rainbow

(b) Cyclone, flood, drought, dew

(c) Cumulus, stratus, cirrus, monsoon



Everyday Science

“What, Why and How?” • Book 7

Why does food cook faster in a pressure cooker? Why does a balloon pull your hair? Why is the sea blue? Discover the science hidden in the kitchen, the playground and at home with Peehu, Aarav and Guru Ullu — in simple English, with colourful pictures and fun experiments.

Inside this book

- ★ Solids, liquids, gases, dissolving, boiling, setting curd
- ★ Force, friction, gravity, levers, floating and sinking
- ★ Light, shadows, mirrors, lenses and Raman's story
- ★ Sound, echoes, magnets, compass, bulbs and safety
- ★ Heat, air, waste, bicycles, experiments and a certificate

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A School in Every Home

For children aged 6–10