

GINA & OLLIE EXPLORE HOW SHADOWS WORK

A shadow forms when an object blocks light.

1 LIGHT SOURCE
A flashlight sends out light.

2 OBJECT
This solid shape blocks light.

3 SHADOW
A darker shape appears on the screen.

TRY IT

With a grown-up, move the object. What changes?
Point the flashlight at the screen, away from eyes.

★ GINA & OLLIE EXPLORE ★

DAY & NIGHT

Earth turns. Day becomes night.

EARTH SPINS

DAY

The side facing the Sun has day.

NIGHT

The side turned away has night.

ONE FULL TURN

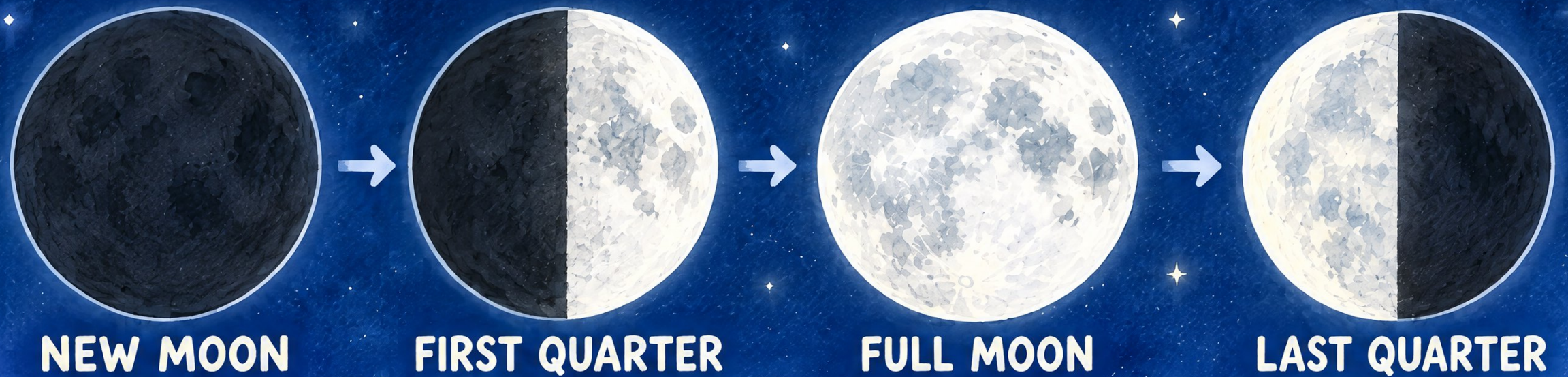
Earth takes about 24 hours to turn once.

★ **POINT & EXPLAIN** ★

Which side of Earth has day?
Which side has night?

GINA & OLLIE EXPLORE THE MOON'S CHANGING LOOK

The Moon reflects sunlight.
As it travels around Earth, we see different amounts of its sunlit half.



The cycle takes about a month.

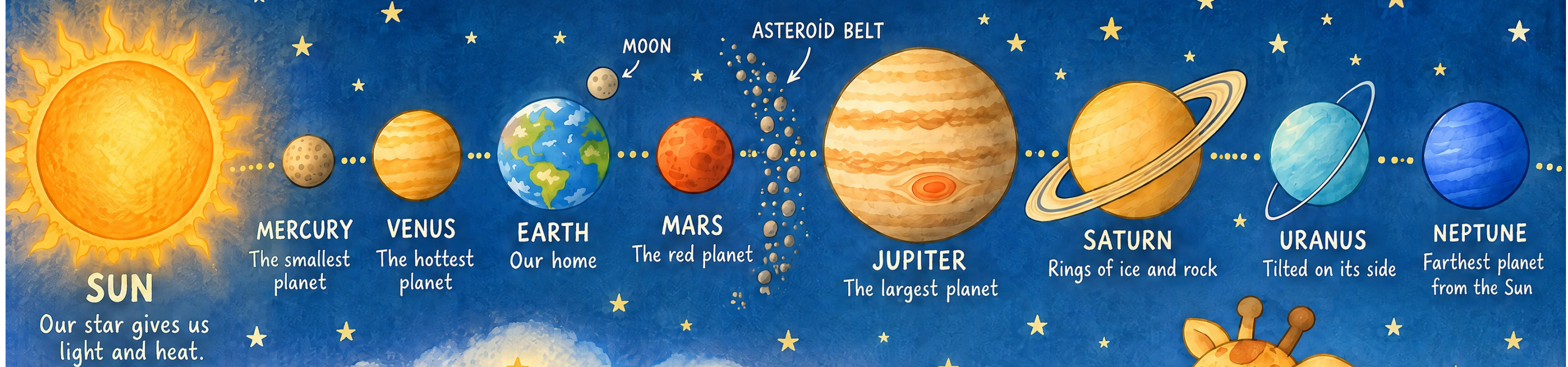
LOOK & WONDER

Which two pictures show half a bright circle?
Four main phases, shown as seen from the Northern Hemisphere.

★ GINA & OLLIE EXPLORE ★

OUR SOLAR SYSTEM

Eight planets travel around the Sun.



★ **LOOK** ★ **POINT** ★ **WONDER** ★

Start at the Sun. Can you name all eight planets in order?

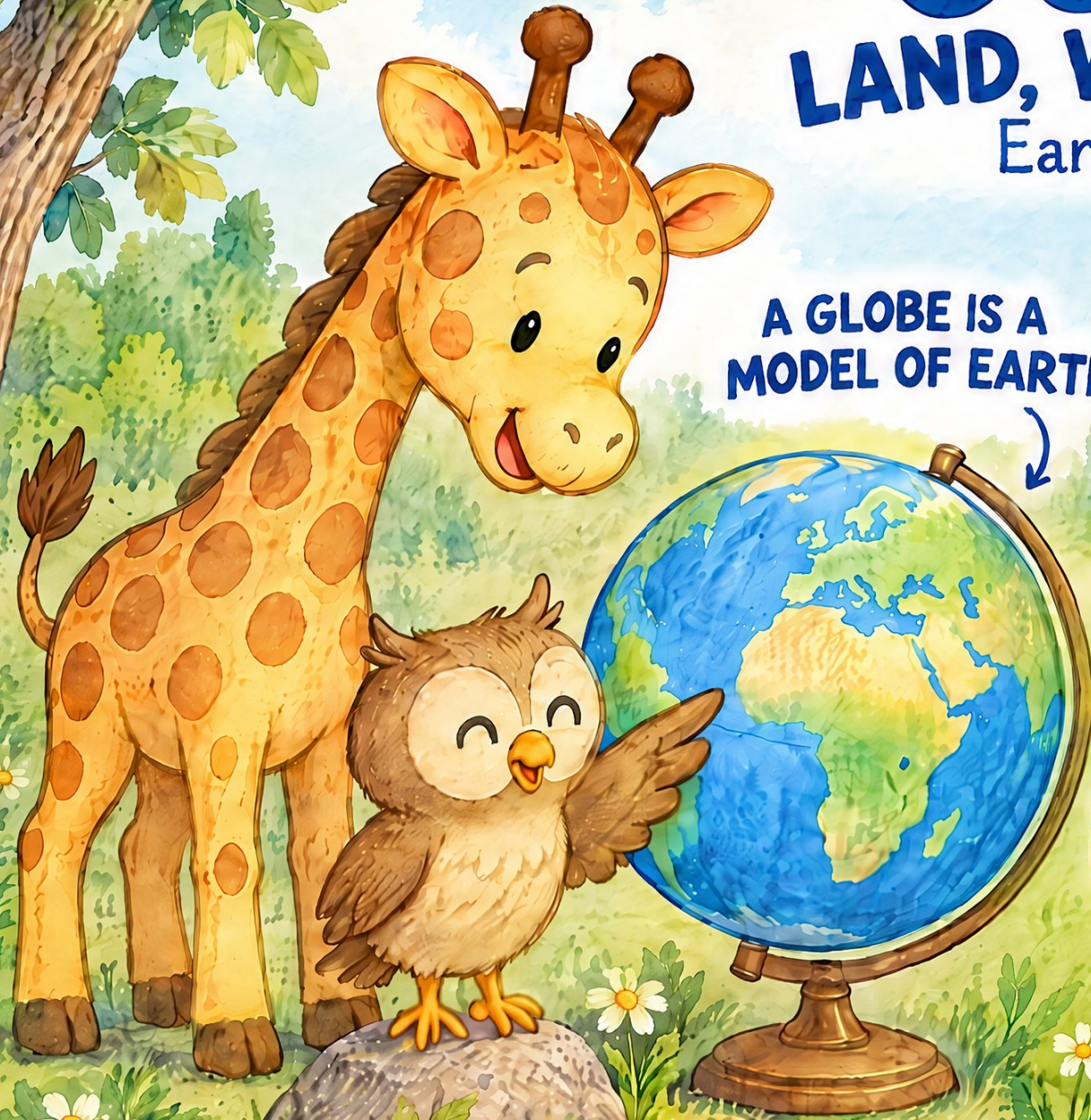


GINA & OLLIE EXPLORE OUR EARTH

LAND, WATER & CONTINENTS

Earth is our home planet.

A GLOBE IS A
MODEL OF EARTH



A MAP IS A FLAT PICTURE OF EARTH
SEVEN CONTINENTS
Continents are large regions of land.



MORE WATER THAN LAND

About 7 in 10 parts of Earth's surface are water.



WATER

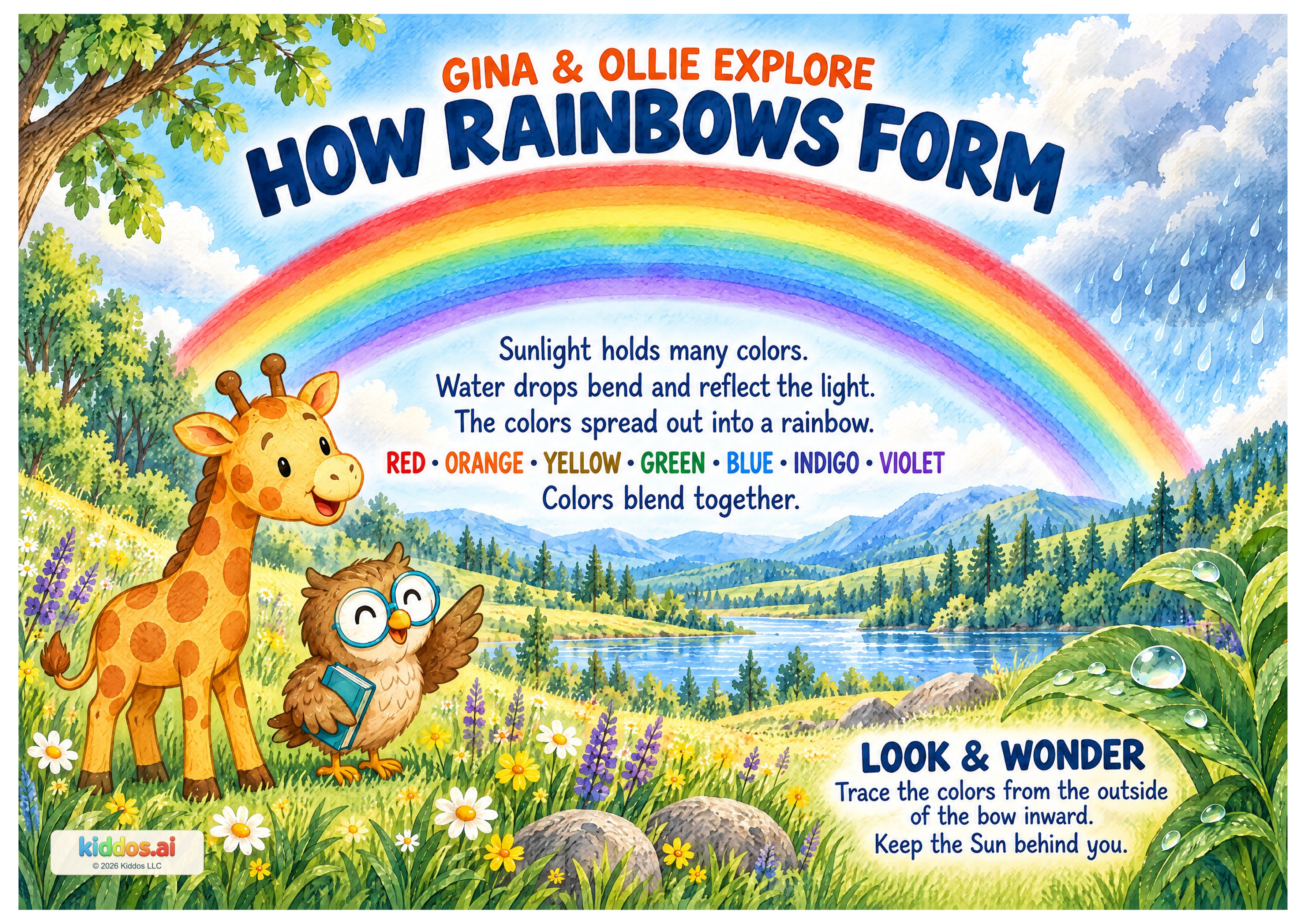
LAND

Antarctica is land mostly covered by thick ice.

This map uses the
seven-continent model.

LOOK & WONDER

Find land. Find water. Which continent do you live on?



GINA & OLLIE EXPLORE HOW RAINBOWS FORM

Sunlight holds many colors.
Water drops bend and reflect the light.
The colors spread out into a rainbow.

RED • ORANGE • YELLOW • GREEN • BLUE • INDIGO • VIOLET

Colors blend together.

LOOK & WONDER

Trace the colors from the outside
of the bow inward.
Keep the Sun behind you.

GINA & OLLIE EXPLORE

LIGHT IN THE OCEAN

The deeper we go, the less sunlight reaches us.

Surface

SUNLIT ZONE

Most sunlight is near the surface.
Algae use light to make food.



About 200 m

TWILIGHT ZONE

Only faint sunlight reaches here.



About 1,000 m

DARK ZONE

No sunlight reaches here.
Some animals make their own light.



LOOK & WONDER

Which zone has
the most light?

Depths are approximate.
Picture not to scale.

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