

Round or Flat?

Compare two tools for showing Earth.

SS.3.G.1.5 "Compare maps and globes to develop an understanding of the concept of distortion."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the two sentences that begin with "A globe" or "On a globe." Circle the two sentences that begin with "A map" or "On a flat map." These sentences help you compare what each tool can show.

Showing Earth Two Ways

- ① People use maps and globes to learn about Earth. A globe is a small, round model of Earth. Because it is round, a globe can show oceans and continents in shapes that are close to their real shapes. You can turn a globe to see different parts of Earth, but you cannot see the whole planet at one time.
- ② A map is a flat picture of all or part of Earth. To make a round Earth fit on flat paper, mapmakers stretch, squeeze, or cut parts of the surface. This change is called distortion. A map may be useful because it can show the whole world at once. Yet its shapes, sizes, distances, or directions may not look exactly the same as on Earth.
- ③ On a flat map, Greenland may look very large because places near the top or bottom can be stretched. On a globe, Greenland looks smaller compared with Africa, more like its real size. The globe also has limits: it is harder to carry and cannot show as many tiny details. Comparing both tools helps you notice distortion and choose a useful view.

2

ANSWER WITH EVIDENCE

Use the passage

1

Why can a globe show continent shapes that are close to their real shapes?

2

Why do mapmakers sometimes stretch, squeeze, or cut parts of Earth’s surface?

3

How might Greenland look different on a flat map and on a globe?

4

Name one useful thing a globe can do and one useful thing a flat map can do.

3

YOUR TURN

Your own words

Choose two places that are not named in the reading. Complete the table to compare how each place might appear on a globe and on a flat map, then explain what comparing the tools can tell you.

PLACE	ON A GLOBE	ON A FLAT MAP	WHAT COMPARING TELLS YOU

PART 1 • READ AND MARK

Underline the two sentences that begin with “A globe” or “On a globe.” Circle the two sentences that begin with “A map” or “On a flat map.” These sentences help you compare what each tool can show. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Why can a globe show continent shapes that are close to their real shapes?	A globe is round, like Earth.
2	Why do mapmakers sometimes stretch, squeeze, or cut parts of Earth’s surface?	They must make round Earth fit on flat paper.
3	How might Greenland look different on a flat map and on a globe?	On a flat map, Greenland may look very large. On a globe, it looks smaller compared with Africa and closer to its real size.
4	Name one useful thing a globe can do and one useful thing a flat map can do.	A globe can be turned to see different parts of Earth. A flat map can show the whole world at once.

PART 3 • YOUR TURN (SAMPLE ANSWER)

PLACE	ON A GLOBE	ON A FLAT MAP	WHAT COMPARING TELLS YOU
Canada	Its shape and size are close to its real shape and size.	It may look larger because it is far north.	A globe can help me notice that the map may stretch Canada.
Australia	Its shape is close to its real shape.	Its shape or size may look a little different.	Comparing both tools helps me check for distortion.

Accept reasonable places and comparisons that state a globe is round and a flat map can change shapes, sizes, distances, or directions. Flat-map statements should use may or can because different map projections show distortion in different ways.