

Cosmic Size Lineup

Compare diameters to see how space objects differ in size.

4.5.c “the sizes of the sun and planets can be compared to one another.”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each sentence that compares the size of space objects. Circle the names of the objects in those sentences so you can track each comparison.

Measuring Space Sizes

- ① Scientists compare the widths, called diameters, of round space objects. Earth’s diameter is about 12,700 kilometers. The Sun’s diameter is about 1.39 million kilometers, so about 109 Earths could fit across the Sun’s width. The Sun is a star, but this size comparison helps show how enormous it is beside planets.
- ② Among the planets, Jupiter has the largest diameter, about 143,000 kilometers. Saturn is next, about 121,000 kilometers across. Uranus and Neptune are each close to four times Earth’s diameter. The four giant planets are much wider than Earth, while Jupiter is a little wider than Saturn.

APPROXIMATE DIAMETER COMPARED WITH EARTH

Object	Diameter in Earth Diameters
Sun	109
Jupiter	11.2
Saturn	9.5
Earth	1

- ③ Closer to the Sun, the rocky planets are smaller. Venus is nearly Earth’s size. Mars is about half as wide as Earth, and Mercury is less than half as wide. When comparing sizes, use the same measure, such as diameter. A size drawing must use one scale, or a tiny planet might look wrongly huge.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 About how many Earth diameters equal the Sun's diameter?

2 Which is wider, Jupiter or Saturn? About how much wider is it?

3 Which two planets are each close to four times Earth's diameter?

4 Which rocky planet is less than half as wide as Earth? What detail tells you this?

3 YOUR TURN _____ Your own words

Choose the Sun, one giant planet, and one rocky planet named in the passage. In the table, rank the three objects from 1, largest, to 3, smallest, and record a size fact for each.

RANK, 1 LARGEST	OBJECT	SIZE FACT FROM THE PASSAGE

PART 1 • READ AND MARK

Underline each sentence that compares the size of space objects. Circle the names of the objects in those sentences so you can track each comparison. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	About how many Earth diameters equal the Sun's diameter?	About 109 Earth diameters.
2	Which is wider, Jupiter or Saturn? About how much wider is it?	Jupiter is wider by about 22,000 kilometers.
3	Which two planets are each close to four times Earth's diameter?	Uranus and Neptune.
4	Which rocky planet is less than half as wide as Earth? What detail tells you this?	Mercury. The passage says Mercury is less than half as wide as Earth.

PART 3 • YOUR TURN (SAMPLE ANSWER)

RANK, 1 LARGEST	OBJECT	SIZE FACT FROM THE PASSAGE
1	Sun	about 109 Earth diameters
2	Saturn	about 9.5 Earth diameters
3	Venus	nearly Earth's size

Accept equivalent size language and reasonable rounding for Jupiter and Saturn. For Part 3, accept any correctly ranked Sun, one giant planet, and one rocky planet, with accurate passage-based size facts.