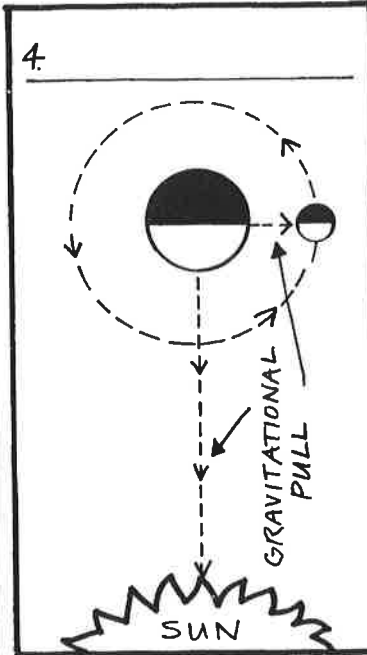
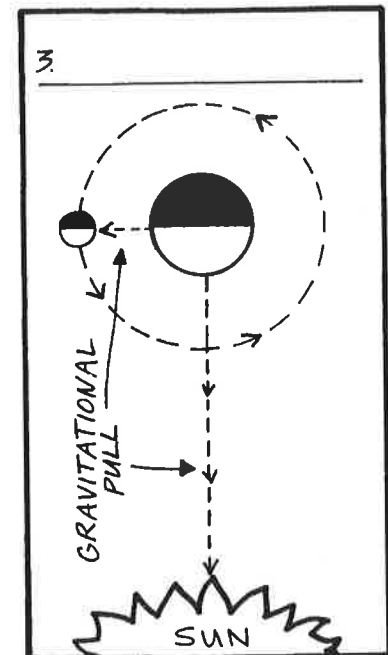
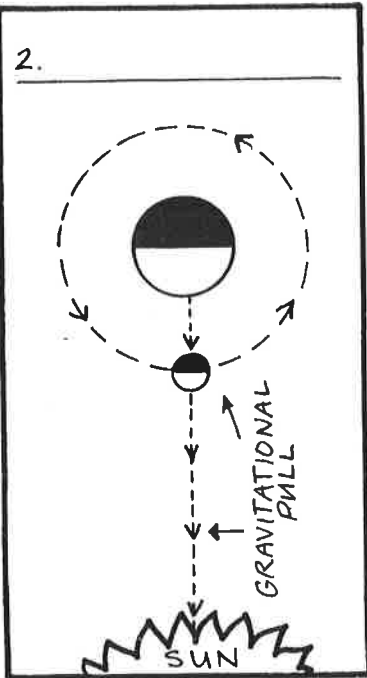
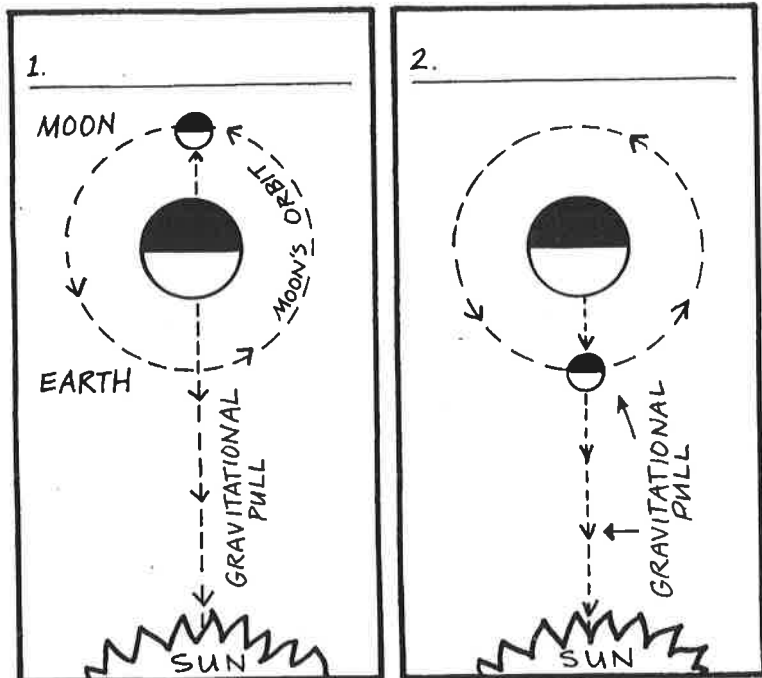


WHICH TIDE IS WHICH?

Isaac Newton discovered that everything in the universe exerts a pull on everything else. So what does this have to do with ocean water? Well, the sun and moon are both large enough and close enough to Earth that their gravitational forces pull ocean water into a bulge. This causes tides.

But . . . different locations of the sun, moon, and Earth in relationship to each other result in different kinds of tides. Show the sharpness of your TIDE IQ by telling which tide is which in the diagrams below.

Name and describe the tide caused by each position.



1. _____

2. _____

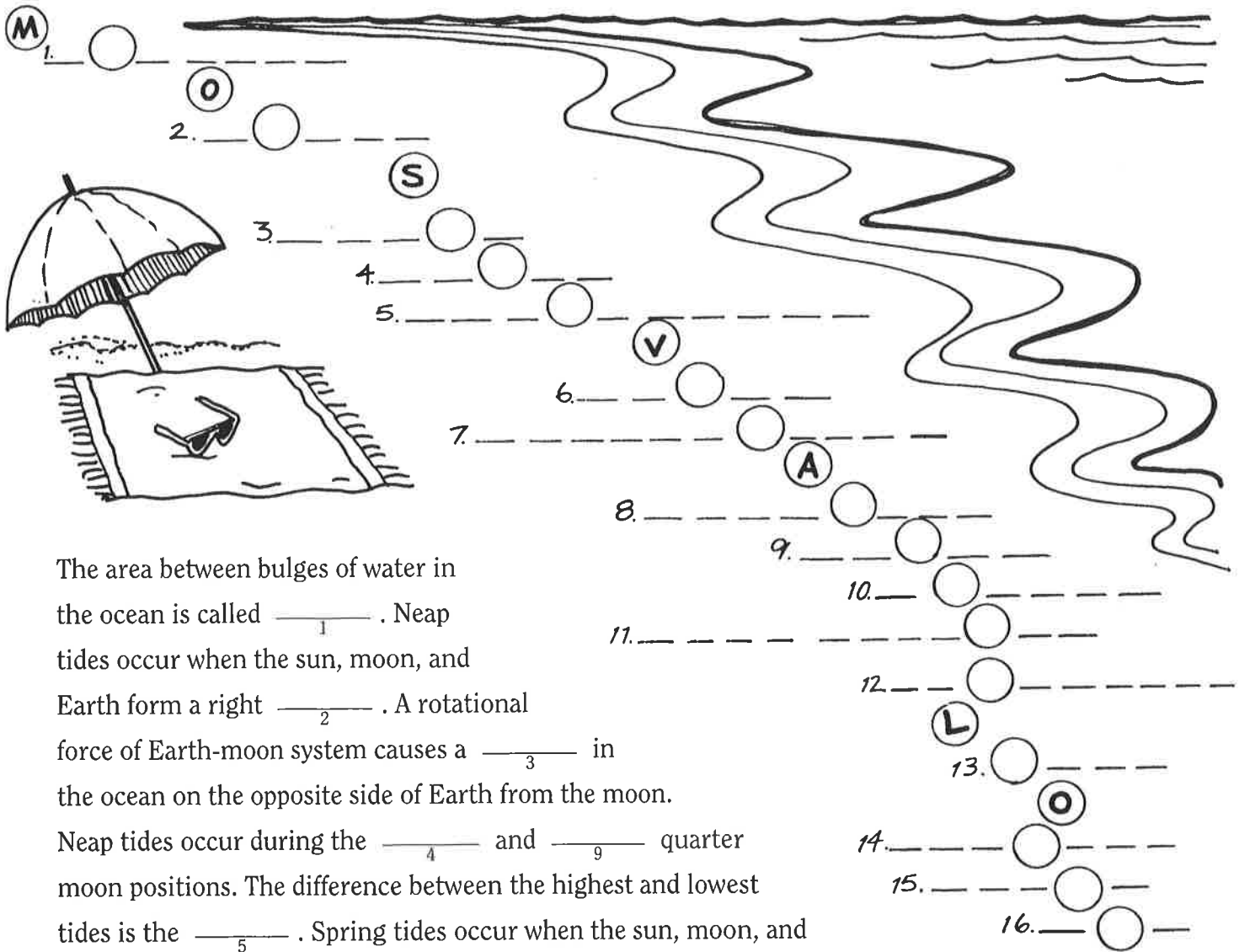
3. _____

4. _____

Name _____

TIDE TALK

If the tide is out, is this a good place to set up your beach blanket? See if you know enough about tides to solve the puzzle. Supply the missing word beside each number. Then use the letters in the circles to fill in the name of the process described at the bottom of the page.



The area between bulges of water in the ocean is called 1. Neap tides occur when the sun, moon, and Earth form a right 2. A rotational force of Earth-moon system causes a 3 in the ocean on the opposite side of Earth from the moon. Neap tides occur during the 4 and 9 quarter moon positions. The difference between the highest and lowest tides is the 5. Spring tides occur when the sun, moon, and Earth 6. These occur when high tides are highest and low tides are lowest: 7. Bulges of water in the ocean are 8. During neap tides, tidal range is at its 10. Two high and two low tides a day: 11. Minimum tides are 12. Spring tides occur when the moon is in a 13 or 16 position. One high and one low tide a day: 14. Spring tides occur 15 a month.

Ocean bulges are caused by: _____

Name _____