

# INVESTIGATION 1 I-CHECK

## WATER AND CLIMATE

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Name \_\_\_\_\_

Date \_\_\_\_\_

1. A family of three lives in a place that gets very little rain. They are worried that they are using too much water. The table below shows typical water use for different activities.

Water use	Liters/use	Uses/day	Liters/day
Flush toilet	20	9	180
Bath	114	3	342
5-minute shower	95	3	285
Leave water running while brushing teeth	5	6	30
Dripping faucet	10	1	10

Based on the data in the table, what would be the best way to save the most water?

*(Mark the one best answer.)*

- A Turn off the water while brushing teeth.
- B Make sure there are no dripping faucets.
- C Take showers rather than baths.
- D Flush the toilet twice a day per person rather than three times.

Name \_\_\_\_\_

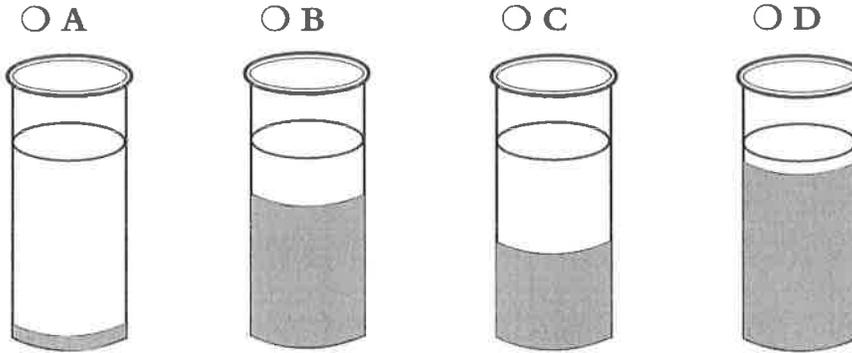
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2. Which container below best represents the amount of salt water compared to fresh water on Earth?

Fresh water       Salt water



3. Most of the water that people drink is fresh water.

Write **F** next to each word that describes a source of fresh water. Write **S** next to each word that describes a source of salt water.

\_\_\_\_\_ Rivers

\_\_\_\_\_ Lakes

\_\_\_\_\_ Ocean

\_\_\_\_\_ Ground

4. Water is the only material on Earth found naturally in three states or forms. Write the name of those three states below.

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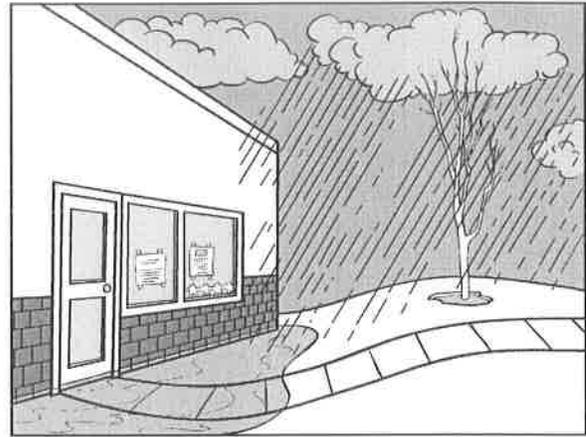
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5. A teacher complained that every time it rains, water comes in under the door to her classroom—the one that opens out onto the playground. An engineer looking into the problem took the picture you see here.



- Why is the classroom getting water under the door? What is the cause?

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- If you were an engineer assigned to redesign the schoolyard, what would you tell the school board to do?

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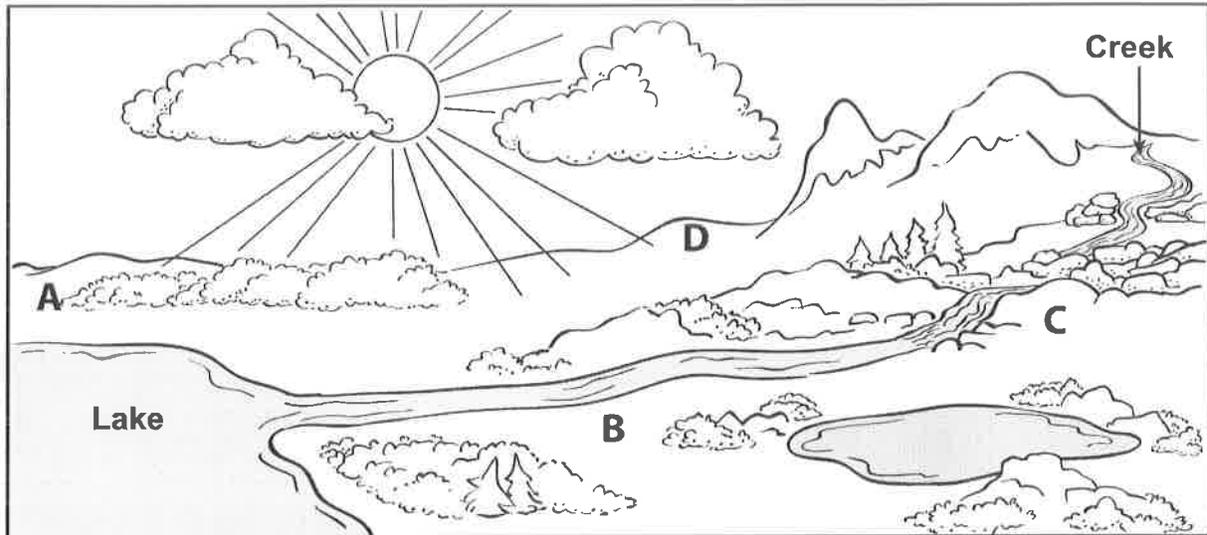
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6. Study the picture above. It shows open campsites labeled A, B, C, and D. As you check in to choose a campsite, you notice a sign that says, “Caution: creek can flood during rainstorms.” The forecast for the night you plan to camp is rain.

- a. If you want to be close to the creek so it’s easy to fetch water and you can go swimming, where would you pitch your tent?

*(Mark the one best answer.)*

- A** Location A
- B** Location B
- C** Location C
- D** Location D

- b. Explain why that would be the best location and why the others would not be as good.

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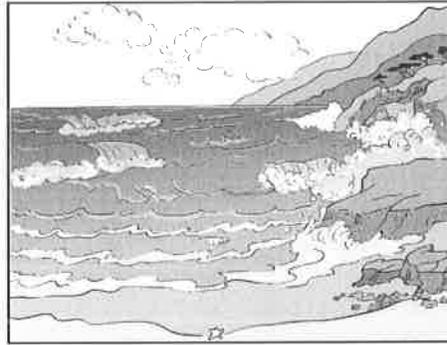
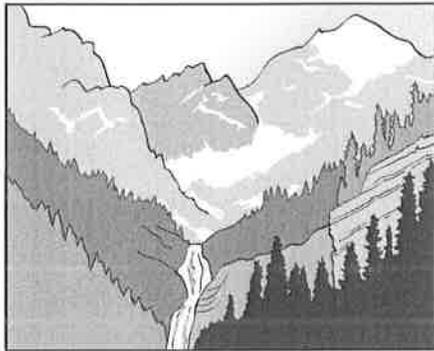
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7. Imagine you are a drop of water falling on a mountain. Number the pictures 1–4 to show the order of your journey to the ocean.



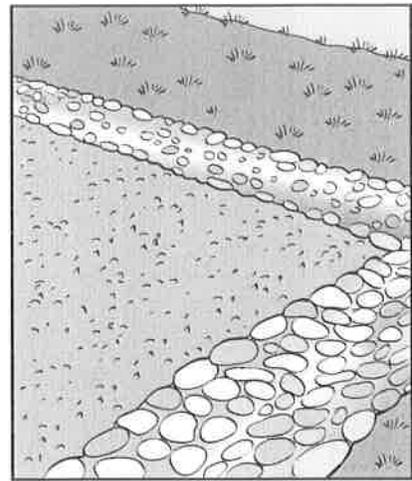
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8. Engineers have developed ways to reduce flooding from water that runs off paved areas after big rains. One solution is surface materials that absorb water. Another is to build places for water to drain, called swales, around the edge of paved areas.

The data in the table show how much of the rainwater still runs off with different designs.

Surface materials	Swale	Water runoff per 100 liters (L)
Asphalt	No	51
Asphalt	Yes	34
Pavement that absorbs water	Yes	10
Cement	Yes	32



swale

A builder is deciding what design is best to lower the chance of flooding from a new driveway. Based on the data in the chart, mark which design would be best.

*(Mark the one best answer.)*

- A Asphalt with no swale
- B Asphalt with a swale
- C Pavement that absorbs water with a swale
- D Cement with a swale