LULU's Lemonade

WHAT MAKES A GALLON?

- Each child will need a copy of page 4, which shows the number of cups, pints, and quarts that make up a gallon.
- Remind children that in *Lulu's Lemonade*, they learned about cups, pints, quarts, and gallons as units of measure. Say: *Now we're going to learn more about how cups, pints, quarts, and gallons are related*.
- Have children examine the table on page 4. Explain that the table shows the number of cups, pints, and quarts that make a gallon. Say: *The table also shows how many cups are in 1 pint, and how many pints are in 1 quart*.
- Tell children to use the table on page 4 to help them answer questions about cups, pints, quarts, and gallons. Then ask the following questions, giving children time to examine the table before answering.

  How many cups are in the bottom row? (16)

  How many pints are in the row above it? (8)

  What do you notice about the number of cups and the number of pints they equal? (There are twice as many cups as pints.)

Continued on page 2

- Say: *Now let's look at the row of pints and the row of quarts.* Then ask these questions:

  How many pints are shown in the row? (8)

  How many quarts are shown? (4)

  What can you say about the number of pints that equals 4 quarts? (The number of pints is twice the number of quarts.)

- Point out that the table shows that 4 quarts are equal to 1 gallon. Ask: *Is the number of quarts twice the number of gallons?* (no)

- Check to be sure that children understand that each row equals the row above it. Say: *Sixteen cups equals eight pints. Sixteen cups also equals four quarts. Sixteen cups also equals one gallon.*

- Encourage children to describe other relationships they notice about the rows in the table.

CHALLENGE: Encourage children to come up with their own questions to ask each other about the chart and how cups, pints, quarts, and gallons are related. Have them compare their answers and explain how they answered the questions.

OVERFLOW ALERT

(BEST FOR MORE THAN ONE TEAM)

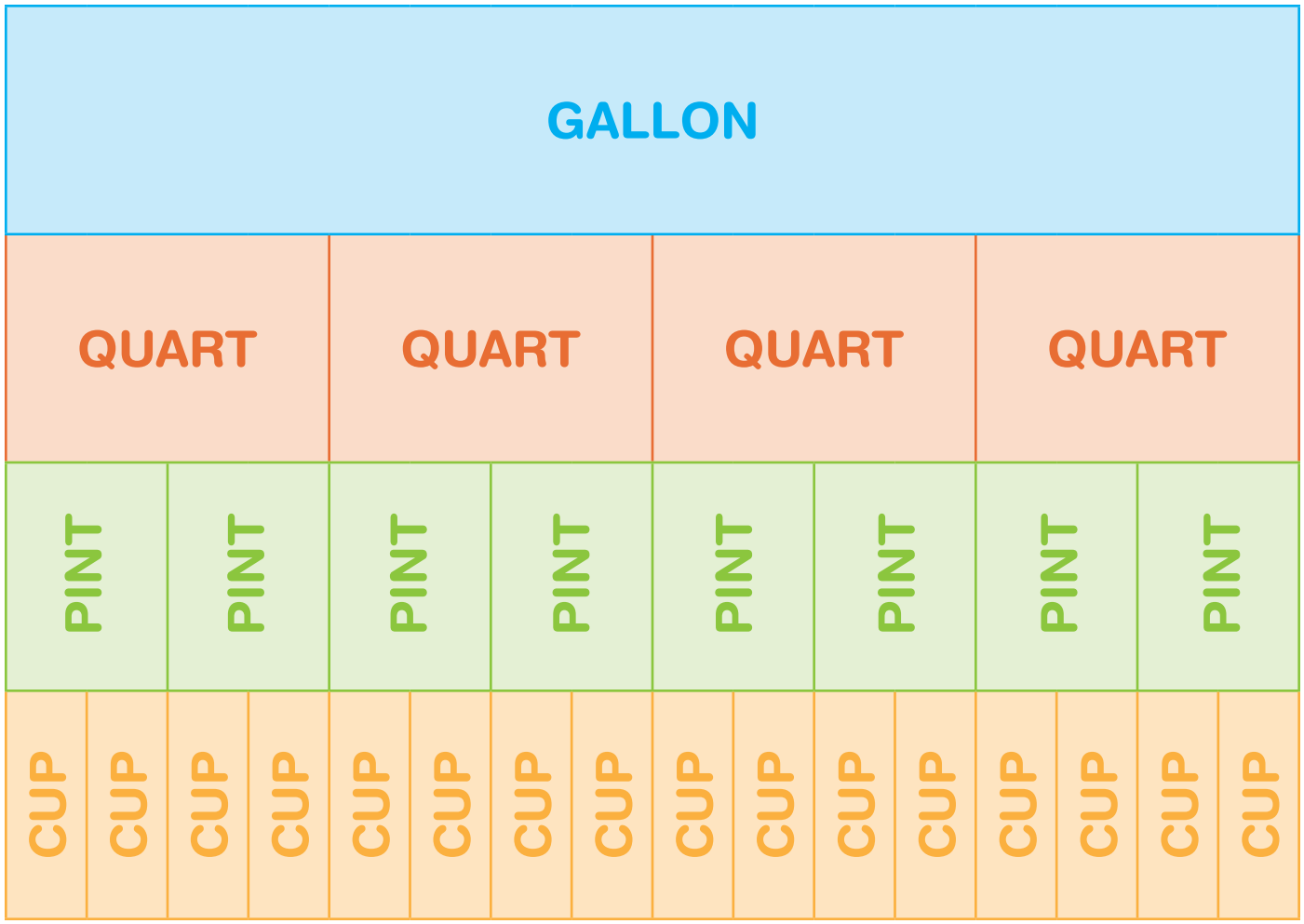
- Each pair or group of teams needs a 1-gallon container and a number cube.
- Each team needs a 1-cup measuring cup, and enough water, rice, or base ten unit blocks (1 cm^3) to fill the gallon container. (Plastic base ten blocks are less likely to result in a mess!)
- Print one copy of page 4 for each team. The chart can help children know which larger unit of measure the number of cups they are adding represents. This can help children understand how much of a gallon they are pouring into the gallon container during each team's turn.

WHEN IS MORE TOO MUCH?

- Team A rolls the number cube. The number on the cube tells how many cups Team A must fill and pour into the gallon container.
- Then Team B repeats this procedure, rolling the number cube and pouring the indicated number of cups into the gallon container.
- Teams take turns until one team predicts that the amount they must pour into the gallon container will spill over. The team says, "Overflow Alert!" If the team is correct, it wins the first round.
- An opposing team may challenge the "Overflow Alert" by pouring the amount in. If the amount fits without overflowing, the opposing team wins the round.
- Then another round begins. Children can determine how many rounds to play. The team that wins the most rounds wins the game.

For use with

WHAT MAKES A GALLON? AND OVERFLOW ALERT

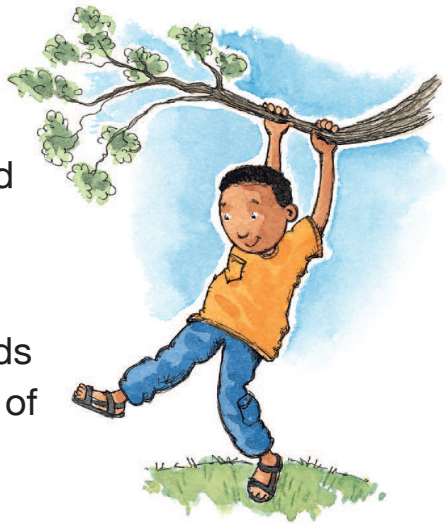


THE BEST CHOICE
(BEST FOR TWO TEAMS)

- Children will need photos or pictures of different kinds and sizes of containers. They might find these pictures in catalogs, newspapers, and magazines.
- Children also need scissors, glue or a glue stick, and blank index cards.
- Members of each team cut out pictures of containers from the catalogs, newspapers, and magazines. Children then glue each picture to an index card.
- Teams discuss and decide the best unit of measure for each container shown on their cards. They write the unit of measure on the back of the card. For example, a picture of an aquarium should have *gallon* written on the back of the card. A picture of a medium size cooking pot should have *cup* written on the back of the card.

PLAY THE BEST CHOICE!

- Teams stand in two lines at the front of the room. The teams shuffle their cards and place them in a pile, picture-side up, before the opposing team.
- The first player of Team A picks up the first card in Team B's pile and tells the best unit of measure for the container. If the response matches what is written on the back of the card, Team A scores a point. If not, no point is scored.
- Then the first member of Team B picks up the first card in Team A's pile and tells the best unit of measure for the container shown.
- Teams take turns, repeating the procedure until all cards have been played. The team with the greatest number of points wins the game.



CHALLENGE: Have children name different containers they know that could be described as the following: about a cup, about a pint, about a quart, and about a gallon. Answers might include: *juicebox, cereal bowl*, and a *small aquarium.*