

Estimating

One of the most important concepts that students learn through estimation activities is that it is not always necessary to find an exact answer. Help students develop basic strategies for arriving at reasonable estimates and refining their estimates. These center activities focus on estimating quantity, area, and duration of time.

A hand-drawn illustration of a student's work on 'Estimation Jars'. At the top, the name 'Rhonda' is written. Below it, the title 'Estimation Jars' is written with two small jar icons. A table with four columns is shown: 'Jar', 'My Estimate', 'Actual Number', and 'Difference'. The first row is filled with 'A', '45 bottle caps', '39', and '6'. The second row is empty. To the right of the table is a pencil.

Jar	My Estimate	Actual Number	Difference
A	45 bottle caps	39	6
B			

Estimation Jars

Teaching Tips and Extensions

- ★ Fill each jar with a different kind of object. Use a total number of objects appropriate for your students.
- As an alternative, vary the sizes of the jars but use the same objects in all the jars.
- Have an estimation contest with a jar of jelly beans or other treat.

A hand-drawn illustration of a materials list for 'Estimation Jars'. The title 'Materials' is at the top. Below it are three items with checkboxes: 'Estimation Jars reproducibles (pages 37-38)', '5 identical jars, labeled A, B, C, D, E', and 'bottle caps, blocks, toy figures, walnuts, crayons, or other objects to fill the jars'. A small jar icon is at the top right.

Materials

- Estimation Jars reproducibles (pages 37-38)
- 5 identical jars, labeled A, B, C, D, E
- bottle caps, blocks, toy figures, walnuts, crayons, or other objects to fill the jars

A hand-drawn illustration of a materials list for 'Estimating Area'. The title 'Materials' is at the top. Below it are four items with checkboxes: 'Estimating Area reproducibles (pages 39-40)', '6-8 pieces of yarn cut in various lengths, ranging from 15" (38 cm) to 40" (102 cm)', 'masking tape', and 'small cubes'. A small jar icon is at the bottom right.

Materials

- Estimating Area reproducibles (pages 39-40)
- 6-8 pieces of yarn cut in various lengths, ranging from 15" (38 cm) to 40" (102 cm)
- masking tape
- small cubes

Estimating Area

Teaching Tips and Extensions

- Make sure students securely tape the ends of each piece of yarn together.
- Have students work on a textured surface. The yarn shape tends to change on smooth surfaces.
- Ask students to describe the difference between the shape that held the most cubes and the shape that held the least cubes.

Estimating Time

Teaching Tips and Extensions

- Teach students how to operate a stopwatch. If the wall clock has a second hand, students could use it to time the activities.
- Remind students to use the most appropriate unit of time (seconds or minutes) when making estimates.

A hand-drawn illustration of a materials list for 'Estimating Time'. The title 'Materials' is at the top. Below it are two items with checkboxes: 'Estimating Time reproducibles (pages 41-42)' and 'stopwatches with second hands'. A small jar icon is at the top right.

Materials

- Estimating Time reproducibles (pages 41-42)
- stopwatches with second hands

Estimating Time

1

Work with a partner. Select an activity from the Estimating Time sheet. Estimate how long it will take (in seconds or minutes) to complete the activity. Write your estimate on your sheet.

Names <u>Ray</u> <u>Denise</u>		
Estimating Time		
Activity	My Estimate	Actual Time
	10 seconds	

2

Have your partner time how long it takes you to complete the activity. Write the actual time.



3

Take turns repeating steps 1 and 2. Each partner does 4 activities.

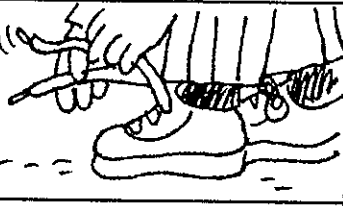
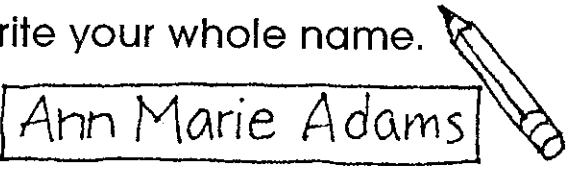
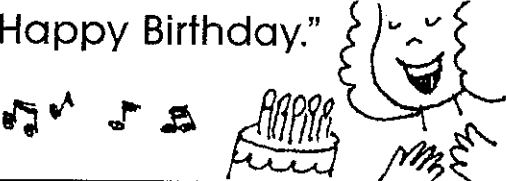
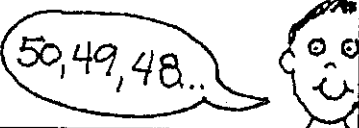


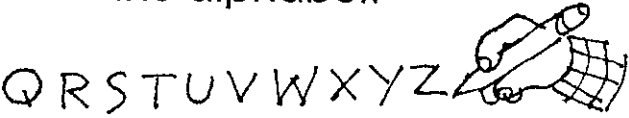


Challenge

With a partner, think of an activity that takes about 15 seconds to complete. Time each other to be sure. Then think of a 30-second or a 1-minute activity.

Names _____

Estimating Time

Activity	My Estimate	Actual Time
Tie your shoe. 		
Write your whole name.  Ann Marie Adams		
Sing "Happy Birthday." 		
Count backwards from 50 to 0. 		
Touch your toes 20 times. 		
Do 10 sit-ups. 		
Write the alphabet.  QRSTUVWXYZ		
Say the Pledge of Allegiance. 