Let's Build!

Can you build a bridge like George?
Let's Build!
Teaching Guide & Poster
GRADES K–1

The Curious George Activities
Connect to National Standards
• Math
• Science
• Engineering

pbskids.org/curiousgeorge
Welcome Teachers!
Get set for *Let's Build!*, a dynamic educational program for grades K–1. This program features the fun and entertaining children's character *Curious George*, whose second season on PBS KIDS starts in September 2007.
*Let's Build!* will develop students' skills and engage their natural curiosity to build and create!

Visit pbskids.org/curiousgeorge
Watch *Curious George* on PBS KIDS weekdays (check local listings). Then visit the Web site to extend the learning and fun! You'll find:
- Great interactive games for kids
- Recommended read-aloud books published by Houghton Mifflin Company
- More hands-on ideas for family engineering, science, and math
- Behind the scenes information
- And much more!

### Connections to K–1 National Standards

<table>
<thead>
<tr>
<th></th>
<th>Math</th>
<th>Science</th>
<th>Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Understand patterns, relations, and functions</td>
<td>Content Standard B: Physical Science</td>
<td>Standard 2: Core Concepts of Technology</td>
</tr>
<tr>
<td></td>
<td>Analyze characteristics and properties of two- and three-dimensional</td>
<td>Content Standard E: Science and Technology</td>
<td>Standard 8: The Attributes of Design</td>
</tr>
<tr>
<td></td>
<td>geometric shapes</td>
<td></td>
<td>Standard 9: Engineering Design</td>
</tr>
<tr>
<td></td>
<td>Specify locations and describe spatial relationships using coordinate</td>
<td></td>
<td>Standard 10: Problem Solving</td>
</tr>
<tr>
<td></td>
<td>geometry and other representational systems</td>
<td></td>
<td>Standard 12: Use Technological Products and Systems</td>
</tr>
<tr>
<td></td>
<td>Use visualization, spatial reasoning, and geometric modeling to solve</td>
<td></td>
<td>Standard 20: Construction Technologies</td>
</tr>
<tr>
<td></td>
<td>problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lessons 1, 2, 3, Bonus</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>

**Sources:**
*Math:* National Council of Teachers of Mathematics; *Science:* National Science Education Standards; *Engineering:* International Technology Education Association: Standards for Technological Literacy.
Lesson Overviews

1: Following Plans

Objectives: Understanding what a plan is and how it is used to build something.
Time Required: 30 minutes
Materials: Reproducible 1, pen/pencil
Steps:
1. Unfold the poster and hang it in the classroom. Ask students to describe what they see. Explain that George is building a bridge out of marshmallows, toothpicks, and cards. Write the word build on the board. Explain that to build is “to make something by putting different parts together!”
2. Tell students that an important part of building something is following a plan. Write the word on the board. Explain that a plan is “an idea or drawing that you follow when you build something.” Tell students that another word for plan is design. Write design on the board and say it aloud.
3. Distribute Reproducible 1. Explain that following a plan is like following a path. You have to know where you are going and how to get there. Instruct students to follow the paths in “Dig It!”
4. Write the word steps on the board. Explain that steps are “the things that you need to do in order to build or do something.” Ask students for examples of steps that they take every day (e.g., putting toothpaste on their toothbrush).
5. Instruct students to look at “On a Hike!” Point out the compass on the left. Write the word compass on the board and say it aloud. Tell students that a compass is a tool that tells directions on a map. Explain that the directions the compass shows are north, east, south, and west. Instruct students to use the compass to answer the questions (answers: 1. north; 2. east).
6. To reinforce vocabulary, review the terms build, plan, steps, and compass as you ask students to define them.
Extension: Help your class understand how to follow directions by building a maze in the classroom. Arrange furniture to create a path for students to follow. Create road signs that direct students left or right and over or under objects. Alternately, draw a map of the room on the board for students to follow.

2: Shapes and Tools

Objectives: Understanding how to recognize and name geometric shapes; learning counting and categorizing skills.
Time Required: 30 minutes
Materials: Reproducible 2, pen/pencil
Steps:
1. Draw a triangle, square, circle, and rectangle on the board. Write the name of each shape beside it. Point to the triangle. Say the word aloud and have students repeat it.
2. Ask how many sides a triangle has. Repeat with all shapes.
3. Tell students that it is important to know the difference between shapes when you build something.
4. Distribute Reproducible 2. Direct students to draw a line connecting each picture in “What’s That Shape?” with the matching shape.
5. Write the word tool on the board. Explain that a tool is “an object that helps you do a job.” Ask students to think of tools they know and name them. Tell students that each tool has a different job to do (e.g., a straw is used to sip drinks).
6. Direct students to count the number of tools in “Tools Count!” Point out that not all the pictures are tools. Tell students to circle the tools as they count and then answer the questions. Review the answers as a class (1. three; 2. ruler).
7. Once you have completed the activity, review the word tool and its definition.

Extension: Take a walk around your school or playground and have students point out different shapes that they see. Ask students to count the number of times each shape appears. Tell students to look for shapes at home and share them with their families.

3: Types of Things

Objectives: Understanding the difference between natural and people-made objects; learning different properties of objects and make comparisons.
Time Required: 30 minutes
Materials: Reproducible 3, scissors, glue, pen
Steps:
1. Write the words natural and people-made on the board. Say the words aloud and have students repeat them. Explain that items found in nature, such as trees, are natural. Items that are built by people, such as chairs, are people-made. Explain that people-made items are made of parts. On the poster, point out the parts that George uses for his bridge.
2. Direct students to look outside and name things that they see. Write these things on the board under either natural or people-made. Review the lists as a class.
3. Distribute Reproducible 3. Read the instructions for “Monkey Made!” aloud. Direct students to complete the activity, then review the answers.
4. Tell students that people-made things can be all sizes, from big to small. Explain that size affects how something is used and who can use it. Place a student chair next to your teacher chair in the front of the room. Have a student sit in the big chair while you sit in the small one. Students will see that you can’t quite fit in the small chair and their classmate is too small for the big chair.
5. Hand out safety scissors. Tell students to cut along the dotted lines around each image in “Size Them Up!” Then have them glue the objects on paper from smallest on the left to biggest on the right.
6. Upon completion, review the order as a class. Ask students what kind of objects these are: people-made or natural? Review the definition of each word.

Extension: Tell students that objects have many properties, such as size, weight, shape, color, and texture. Select four objects (chair, book, etc.). Ask students to determine which object is biggest, heaviest, darkest, and smoothest. Explore properties of other objects in the classroom.

Bonus Activities

Build a House! In this culminating activity, students will apply and reinforce key science and math concepts and vocabulary learned in the lessons.

Steps:
1. Demonstrate the building process by creating a tree from brown and green construction paper. Guide students to identify the paper as parts. Cut the paper into treetop and tree-trunk shapes. Guide students to identify the scissors as a tool. Hang the shapes on a wall to form the tree.
2. Distribute Reproducible 4. Review the steps at the top of the page. Point out the “Building Plan.” Ask students how they can use the plan to construct their houses. Then ask them to identify the first step in building their houses (cutting out shapes). Ask students to identify the shape of each part of the house (e.g., the roof is a triangle). Connect to real-world design by having students look outside for different roofs, windows, and doors. Discuss with students what other shapes they see.
3. Provide students with tools (scissors and tape/glue) to complete the activity. Distribute markers or crayons for students to decorate their houses. Place houses on the tree that you made earlier.

Extension: Use the poster as a model for building a bridge. Work together to build a bridge out of marshmallows, toothpicks, and cards. (Remind students not to taste the materials or lick their fingers, and not to poke or play with the toothpicks.) Encourage students to share their building ideas with each other.

Take-Home Reproducible: Reinforce math and science skills at home with the fun Bird Feeder family activity.
1. To visit the moose, George should travel:
   north   south
2. To see the lake, George should go:
   east   west

Dig It! George is trying to find his animal friends underground. Follow the path to help him find them.

1. Circle the
2. Draw an X on each
3. Draw a line from to

On a Hike! George needs to decide what path to take. Look at the compass below and then circle the correct answer.
What’s That Shape? George is taking part in the “Bag Olympics.” Help George bag groceries by drawing a line between each food and the shape it most looks like.

Tools Count! George wants to make a robot costume. He needs tools to help him build. Circle all the tools below that he can use. Then answer the questions.

1. How many tools did you circle? __________
2. Put an X next to the tool that helps you measure something.
Monkey Made!
George built a bridge, and now he wants to build something else! Help George choose his next project by circling things that he can build.

Size Them Up! George loves music, especially my instruments. Help him organize the instruments below by cutting out the boxes. Then, put them in order from smallest to biggest and glue them onto a sheet of paper.
**Build a House!** Use a plan to build your own house, just like George!

1. Use a tool (scissors) to cut out the parts of the house.
2. Follow the Building Plan on the right to see how the parts fit together.
3. Use another tool (tape or glue) to put the parts together.
4. Decorate your house to make it special.

**Try this!** Look outside for doors, windows, and roofs. What shapes do you see?

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**Building Plan:**

- **Door**
- **Window**
- **Roof**

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*Reproducible 4*

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*pbskids.org/curiousgeorge*
Dear Parents:

In school, your child has been developing math and science skills with the Let’s Build! program, featuring the beloved children’s character Curious George. The program engages students’ curiosity to build and create!

Encourage curiosity and build skills at home with this fun Bird Feeder activity. Work together to follow the plan below and build your bird feeder. Then, just like George, observe with curiosity to see what happens!

Materials:

Parts
• 2-liter plastic bottle
• 1 set of chopsticks
• birdseed

Tools
• twine or wire
• scissors/knife (only adults handle)

Directions:

1. Ask your child to help you divide the materials into parts and tools. Then, wash the bottle to remove all labels. Dry it with a towel.
2. Turn the bottle over. Ask your child which tool you should use to cut or poke two small holes in the bottom of the bottle (scissors/knife). When done, thread twine or wire through one hole and out the other. Loosely tie the twine or wire together to make a loop for hanging. The bottom of the bottle will become the top of the feeder.
3. Cut or poke two holes on opposite sides of the bottle, three inches from the bottle cap. Make the holes just large enough for a chopstick to fit through. Ask your child which part should go through the holes (chopstick). Insert the chopstick; this will serve as a perch for the birds to sit on.
4. Cut or poke one-third-inch holes two inches above the perch. This is where the birds will get the seed.
5. Turn the bottle right-side up. Unscrew the cap and fill half the bottle with birdseed. Replace the cap.
6. Turn the bottle over. Tie the twine or wire around a tree limb or hang outside a window. Watch the birds that come to your feeder.

Questions to Think About

• Look at other bird feeders. How are they different from or the same as yours?

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