CURIOUS GEORGE: PIGEON PERCH
Lesson Plan

During this lesson, children explore the following engineering concepts:

- A pole can be made stable by "planting" its base in the ground or adding supports to the base.
- The engineering design process involves a series of steps, including: planning, building, testing, and modifying as needed.

As children go through the activities, they will be using the following science skills:

- Asking questions
- Planning and conducting experiments
- Making predictions
- Testing and retesting
- Drawing conclusions
- Making, sharing, and documenting their work

Materials

- ☐ Tall objects (e.g., wrapping paper rolls, yardsticks)
- ☐ Objects for base and supports (clay, play dough, sand, pebbles, plastic containers, cardboard tubes, Popsicle sticks)
- ☐ Poster paper, markers (if needed)

Directions

1. Watch the *Curious George* video, "Curious George's Home for Pigeons."
Explain to students that George is determined to build the "perfect perch" for Compass, the homing pigeon. Most of his experiments don't work—the pipe cleaner tree is too small and the clay tree is too soft—but finally he realizes he must find something that will stay upright and be stable, just like a tree. (Note: you may want to preview the term "homing pigeon" with students.)

2. Introduce and explore the topic.

- Ask students: *How do you think engineers make flagpoles, telephone or cable poles, and street signs stand up? How did George get his "tree" to stand up?*
- Gather ideas and write them on chart paper.
- Go outside to investigate.
- Test to see if the poles and street signs that you find are stable. Look for playground equipment and other structures.
- Ask: *What do you think helps all these things stand up? Why do you think they don't fall over?*
- Look at trees and discuss what keeps a tree from falling down.

3. Choose materials.

- Back in the classroom, revisit the chart with students' ideas. Make corrections as needed.
- Tell students that their challenge will be to make an object stand upright.
- Give each group a tall object (wrapping paper roll, yardstick, etc.) to start.
- Ask: *What classroom materials do you think could help you make your object stand up?*
- Gather suggested materials and add some objects of the your own (e.g., clay, play dough, sand, pebbles, plastic containers, cardboard tubes, Popsicle sticks).

4. Design and build.

- Have each group look at the materials and plan a design. As the groups build, they can modify their design as needed.
- Circulate and engage the groups in problem-solving conversations. Ask, *Why do you think your pole is wobbly? What can you do to make it more stable? Do you want to start over or can you add or change something?*

5. Reflect and compare.

- After groups have completed the task, provide time for students to look at the work of their classmates.
- Ask: *What do all of these structures have in common? What do you think helps them stand up? Which objects were the hardest to make stand up? Which objects were easier? What do you think make the difference?*
- Post children's observations on the chalkboard, whiteboard, or on poster paper.

6. Document the work.

- Distribute the "Curiosity Lab" handout.
- Take photos of students' creations or have them draw pictures. Have students write about (or dictate) what they did to make their pole stand up.
- Displace the completed "Curiosity Lab" handouts so the class can continue to study and compare the different engineering solutions.

Extend with Books

Encourage students to use these books as they continue to learn about building and construction.

Building a House by Byron Barton (Mulberry, 1990)
From the foundation to the walls to the roof, simple pictures and text tell how a house is built.

Curious George Builds a Home by H.A. Rey (Houghton Mifflin, 2006)
When Curious George meets a pigeon, he decides that his balcony would be the perfect place for the bird's home. (Available with companion DVD.)

Dreaming Up: A Celebration of Building by Christy Hale (Lee & Low, 2012)
Children from all over the world build their own versions of the world's famous buildings.