

Curious George[™] Discovery Guide

**Exploring Engineering,
Math, and Science
with Young Children**



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Building stable towers and walls with boxes and blocks.

Featured episodes: *Curious George's Home for Pigeons*; *Keep Out Cows*

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Sorting ourselves and objects in different ways. Creating concrete, picture, and abstract bar graphs.

Featured episodes: *Curious George, Dog Counter*; *Curious George, Door Monkey*

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Exploring how wind moves objects.

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Get Ready to Explore with Curious George!



Watch *Curious George*
on PBS KIDS!



Active, inquiry-based learning begins with curiosity and who better than Curious George to inspire children to explore the world around them? For decades, Margret and H.A. Rey's stories of the inquisitive, mischievous monkey have delighted children. Now the *Curious George* television series from PBS KIDS offers children new opportunities to explore with George. Each 30-minute program includes two animated *Curious George* stories followed by short live-action pieces showing real kids engaged in engineering, math, and science explorations.

Simple, hands-on investigations will bring the fun and learning from the show right into your classroom! Just like George, your students will explore how things move in the wind, figure out how to build towers and "trees," and how to sort an unruly collection of dogs into logical, orderly groups. Begin your exploration by choosing one of the three thematic investigations in this guide. Watch the recommended *Curious George* episode with your students. Then try some of the ideas suggested in the *Curious George Discovery Guide*.

What's in this Guide?

- The guide contains three thematic units or investigations, which can be done in any order: Under Construction (engineering), Grouping & Graphing (math), and Blow, Wind, Blow! (science).
- Each investigation uses a *Curious George* episode as a springboard to class explorations. Or, you can use the book version of the episode or one of the picture books referenced at the end of the unit.
- An investigation contains several Curiosity Labs. Each Lab explores a different aspect of the theme through hands-on explorations. You can do all or some of these Labs.
- Reproducible activity sheets encourage students to document and reflect on their work. A Family Activity Sheet in each unit invites families to support their child's learning through related engineering, math, and science play at home.

You can record the episode off-air and use it for up to a year with your students, purchase the DVD (available 2007), or borrow it from your local library.



The *Curious George* Approach to Learning

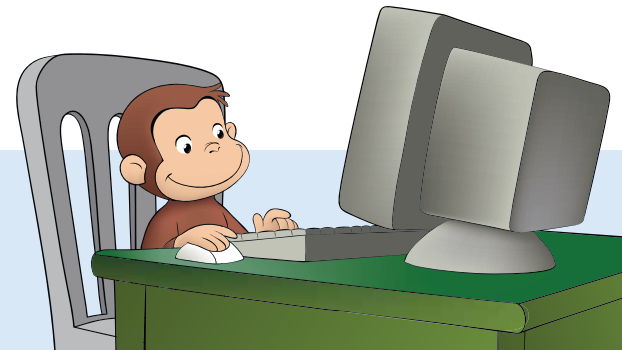
The goal of the *Discovery Guide* investigations is to provide young children with a solid experiential foundation for understanding engineering, math, and science concepts. Perhaps more importantly, the guide encourages them to be curious, to explore, be observant, ask questions, and predict outcomes. The experiences and discussions invite students to experiment, formulate theories, and make sense of the world around them. These skills and “habits of mind” establish a base for academic success and lifelong learning.

This guide uses a child-centered, developmentally appropriate, inquiry-based approach. Students

- ask questions
- plan and conduct simple investigations
- use simple equipment to gather data and information
- use data to answer questions or construct reasonable explanations
- share observations, questions, solutions, and explanations

Inquiry-based learning requires a time commitment. We suggest that you schedule blocks of 45 minutes to 1 hour for *Curious George* investigations. This allows time for introductory group time, trial-and-error exploration with the materials, and discussion and problem solving with peers. We also suggest that you extend your investigations over several weeks, allowing students to explore different aspects of the unit, make connections, and deepen their understanding of the underlying science, math, and engineering concepts.

Visit the *Curious George* Web site at pbskids.org/curiousgeorge for more engineering, math, and science fun.



Getting Started

You don't need to be an expert engineer, scientist, or mathematician to guide your students through these investigations. Following the simple steps below will help you acquire a basic understanding of the concepts and prepare you to support the classroom investigation. You can respond to your students' ideas and efforts with thoughtful questions and suggestions that encourage them to observe more closely, experiment further, and make meaningful connections.

1. Preview the guide.

Begin by choosing one of the three investigations in the guide. Watch the video. Read through the lesson plan to preview the concepts being explored, the supporting experiences, and the types of questions you might ask to further the students' investigation and understanding.

2. Try it—you'll like it!

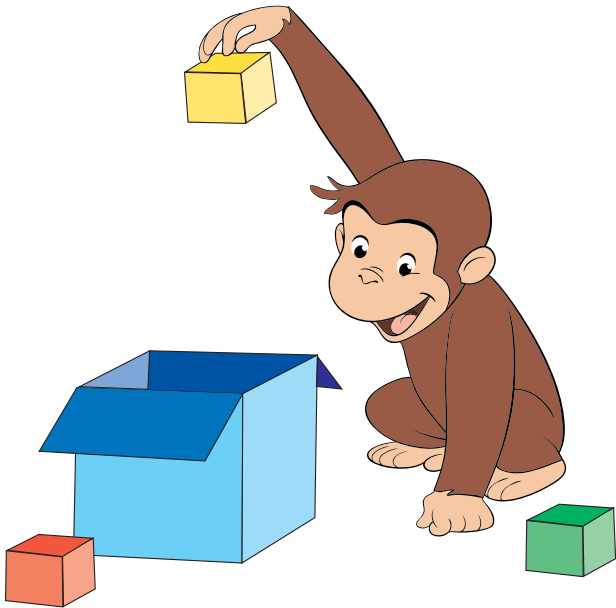
Roll up your sleeves and pull out the materials. Build towers with boxes and blocks. Empty a box of buttons and sort as many ways as you can. Make objects move by flapping a piece of cardboard. Get a feel for the appeal and possibilities of the materials.

3. Browse through books.

Collect and read the recommended picture books. In particular, the nonfiction books provide a basic overview of the engineering, math, or science concepts being explored.

4. Prepare your classroom.

Gather additional materials, write the poems on chart paper, and make copies of the reproducibles provided in this guide.



The *Curious George Discovery Guide* supports national standards in engineering, math, and science. For details, see page 34.

Customizing the Activities for Your Students

The customizing tips below may help you decide how best to introduce and integrate the investigations into your day.

Developmental Stages

Students in your class are at different developmental stages. As you preview the investigations, decide which ones best match your students' levels. You may want to explore certain investigations for a longer period of time and delay others until later in the year.

Whole Class? Small Groups?

As you read through the investigations, consider your particular students, the classroom space, the materials you have, and the management and support needed. Decide if it would be best to have all students clustered in several groups, working simultaneously, or if it would be better to rotate small groups through an activity center.

Open-Ended Questions

Open-ended questions, such as: *What did you notice when...? What would happen if...? What did you do to make ... happen? What else could you try?*, help raise students' interest, sharpen their observations, stimulate deep thinking, and encourage them to verbalize and share their ideas. These types of questions are modeled throughout the guide. What happens during each activity will vary. We encourage you to adapt and develop your own open-ended questions accordingly.



Follow your curiosity! Enjoy the adventure!