



Little Discoverers:
BIG FUN with science, math, and more!

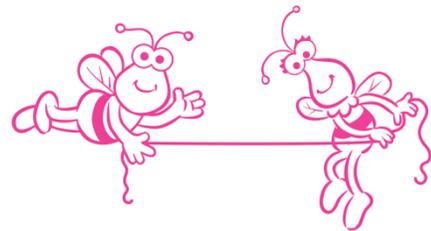


FAQs for Educators

Hello, educators! Welcome to Little Discoverers: Big Fun with Science, Math, and More! This website is designed to encourage young children and the adults in their lives to explore STEM concepts through watching videos, playing games, and doing hands-on activities together. Our goals are to build an early STEM foundation for young children, provide tools to empower educators, caregivers, and parents in facilitating STEM learning, and create excitement around awareness of STEM in the early-childhood community.

What is STEM?

STEM is the exploration and integration of Science, Technology, Engineering, and Math.



- **Science** is the process of learning about and understanding the the natural world.
- **Technology** refers to the physical tools and simple machines used to make jobs easier.
- **Engineering** is the process of using tools to design something to solve a problem.
- **Math** is the process of understanding relationships among patterns, numbers, and shapes.

By drawing connections between these four subjects and using the scientific process through which children question, investigate, analyze, and report, we can give young learners a structure by which to understand their world.

Why is STEM important for young children?

Studies show that U.S. students are being outperformed in science and mathematics. By investigating STEM concepts early, our goal is to build a foundation for and love of STEM learning that will prepare children for success in school and beyond.

Additionally, STEM exploration inspires and supports curiosity, creativity, collaboration, innovation, and critical thinking — crucial skills for preschool children.

Is STEM too complicated for preschool-aged children?

No! Young children are natural scientists, constantly asking questions about and investigating the world around them. Using scientific inquiry, children solve problems and answer questions through observation and investigation. When STEM concepts are introduced and explored in a child's familiar world and with age-appropriate language, young children can learn about and have a lot of fun with STEM. For example, preschoolers can conduct experiments with bouncing balls and learn about force and motion with blocks and toy cars.

If I don't know very much STEM, how can I teach it?

Adults do NOT need to know all the answers. In fact, adults can model being investigators by responding to questions with, "I don't know. Let's find out together!" or, "What can we do to answer that question?" Learning together is an important part of STEM. In fact, that's how engineers do it — they learn and design in teams too! Through exploring STEM concepts with children, adults have the power to transform ordinary moments into extraordinary investigations even if they don't know the answers.



How do I use this site?

Our website has six topics: Experiments, Sink or Float, Measurement, Properties of Matter, Force and Motion, and Engineering. Each topic includes videos and interactive games as well as classroom activities and home activities found in the Educator Guide and Family Newsletter at the bottom of each topic page. The videos introduce important STEM language, serving as wonderful springboards to launch class discussions and lead into the hands-on activities. The games are great tools to continue exploring these topics individually or in groups.

Do I need to show videos to do the activities?

No. All of the hands-on activities can be done without watching videos. If you are unable to show videos or play web games in your classroom, you can still conduct all of the investigations provided. We do encourage adults to watch some of the videos to hear how our characters talk about the various STEM topics in age-appropriate and fun ways.

How should I plan my lessons?

Preparation: We recommend choosing 1–2 short videos to watch as a class. Watch the videos ahead of time and pick out some of the key vocabulary words you want to reiterate with your students. Read through the Educator Guide found near the bottom of the topic page and pick an activity related to the video content that best works for your class. Set up discussion questions and materials ahead of time, and think about the role children will play in doing the activities.

During class: Pause during or after each video to point out the STEM language and have a class discussion about the topic. Conduct the hands-on activity in small groups and then reconvene as a class to record your data together and talk about what you found. If you have computers or tablets in your classroom, encourage children to play related games on the website to continue the learning.

There are many ways to use the videos, games, and activity ideas on this site. Take some time to explore *Little Discoverers* and choose the resources that work best for your classroom.

How do I watch videos and play games on a smartphone or tablet?

The website www.sesamestreet.org/stem works on computers, smart phones, and tablets. Videos can be played from any device by clicking or tapping on them. The games on smartphones and tablets are different from the ones you will find on the computer.

How can I help my students explore STEM at home?

At the end of each Educator Guide, there is a Parent Newsletter that includes vocabulary and hands-on activities to do at home. We encourage you to print these out and send them home with your students. Additionally, if parents and caregivers come into the classroom with smartphones or tablets, you can show them the website and bookmark it, and you can help them turn off pop-up blockers so that their children can play the STEM games at home and on the go.

If you have a family night, do one of the experiments with your families! It is a great way to let them know what you are doing in your classroom and get them excited about all the STEM learning to come.



Whom do I contact if I have comments or questions?

Please e-mail us at stem@sesameworkshop.org