

PEEP and the Big Wide World™



Exploring Ramps

This hands-on event will help children explore the following science concepts:

- **When placed on a ramp, some objects roll, others slide, and others stay put.**
- **The shape of an object and its placement on a ramp affects how the object moves.**
- **The steepness of a ramp affects how far and fast an object will roll.**

Materials

- *Peep and the Big Wide World* episode, “The Whatchamacallit”

Introduce

Show the *Peep* episode “The Whatchamacallit” and the live-action video that follows it (11 minutes). “The Whatchamacallit” is on the DVD *Peep Figures It Out*. (Go to shop.wgbh.org and type **Peep DVD** in the search box.) As the children watch, you may want to ask a few questions that focus on the science concepts. For example, when Chirp and Peep are walking up the rain gutter, ask: *What does that remind you of? (a slide) What do you think will happen next?*

Explore

Set up the ramp activities in three distinct parts of the room. Children can rotate through the activities. (The hope is that most children will spend at least 10 minutes at an activity; it's fine if some choose to spend more time.) For each activity, have a volunteer introduce the materials and then invite children to explore. Observe the children, noticing what captures their curiosity. Keep the explorations going by asking them to talk about what they are doing and by posing open-ended questions such as: *What did you notice when you...? How could you make it move faster? More slowly?*

Materials

- a ramp (a piece of cardboard, about 18” long, propped on a box or on blocks) for each child
- materials that will roll, slide, or stay put on a ramp (e.g., toy car, ball, glue stick, marker, small block, toilet paper tube, piece of paper, etc.)

Activity 1: Roll, Slide, or Stay Put?

Introduce the materials by selecting an object and asking: *What do you think will happen when we put this on the ramp? Will it roll, slide, or stay put?* (Use hand motions to show the difference between **roll** and **slide**.) Have a child test it out. Ask: *What did it do?*

Let children experiment with their own ramps, noticing whether each object rolls, slides, or stays put. Watch and listen. Encourage them to share their discoveries with the group. For example, children may discover that an object will roll if placed sideways on the ramp, but slide if placed pointing down. If a child does not spontaneously make this discovery, you may want to pose questions:

- *Wow, look at that (pencil) roll down the ramp! Can you figure out a way to make it slide down the ramp instead of roll? Can you figure out a way to make it stay put?*



Photo: Tiffany Young

Materials

- a piece of cardboard (about 18" long) for each child
- building blocks (or small boxes) to support the cardboard ramps
- a toy car for each child

Activity 2: Steeper and Steeper!

Start by placing a piece of cardboard on the floor in front of each child. Let children place a car on the cardboard and experiment to see how much they need to raise one end to make the car roll.

Have children show you how to prop one end of the cardboard on blocks or boxes to make a ramp. Then let them explore! Watch, listen, and keep the explorations going by asking questions such as:

- *How can you get your car to go even farther?*
- *How do you think you can make your car go more slowly?*
- *What do you think will happen if you make a really steep ramp?*



Photo: Claudette Dawes

Materials

- cardboard tubes from paper towels, wrapping paper, and toilet paper
- masking or duct tape
- small balls that can roll through the tubes (one per child)
- paper cups (optional)

Activity 3: Tube Tracks

Cut lengths of tape and stick to tabletops or chairs for children to grab while they're building. Have each child hold a cardboard tube at a slant and send a ball through. Ask: *How can you make the ball go more slowly? Faster? What do you think would happen if we make the tube longer?* Show children how to tape two tubes (or more!) together to make a longer tube track.

Invite children to build and explore on their own. Children may enjoy working with partners to catch the ball in a cup as it comes out of the tube track. They may want to see how far the ball will roll. Or, like the kids in the *Peep* video, they may want to see if they can get the ball to roll down the tube and then knock over a toilet paper tube or other object. Keep the explorations going by asking questions such as:

- *How can you tell which direction the ball will go when it comes out of the tube?*
- *What do you think you could change to make the ball go farther? Faster?*

If possible, let children take their tube tracks and a ball home for further exploration.



Photo: Tiffany Young

Wrap Up

Bring the children together for a few minutes to enjoy a snack and reflect on their ramp explorations. Ask questions such as:

- *What kinds of things are good rollers? What kinds of things are good sliders?*
- *If you wanted something to roll off a ramp and go as far as possible, what would you do? How would you set up your ramp?*

Distribute the Event Evaluation Form and Family Handouts (*Explore Ramps with Your Child* and *Exploring Science with Kids*) to parents and caregivers. Draw attention to your display of ramp-related books and/or talk about related museum exhibits. If you are distributing free books, hand those out as well.



Explore Ramps!

Join us for hands-on science fun with ramps and rolling.

Who?

Kids ages 3–5 and their families and caregivers

When?

Where?

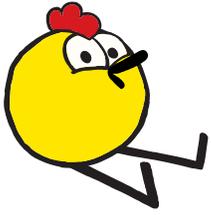
It's free!

PEEP and the
Big Wide World™
Hatching new scientists every day!



Watch *Peep and the Big Wide World* weekday mornings during Ready Set Learn! on TLC and the Discovery Kids Channel.

Go to peepandthebigwideworld.org for more science games and activities.



PEEP and the Big Wide World™

Explore Ramps with Your Child

Out and About

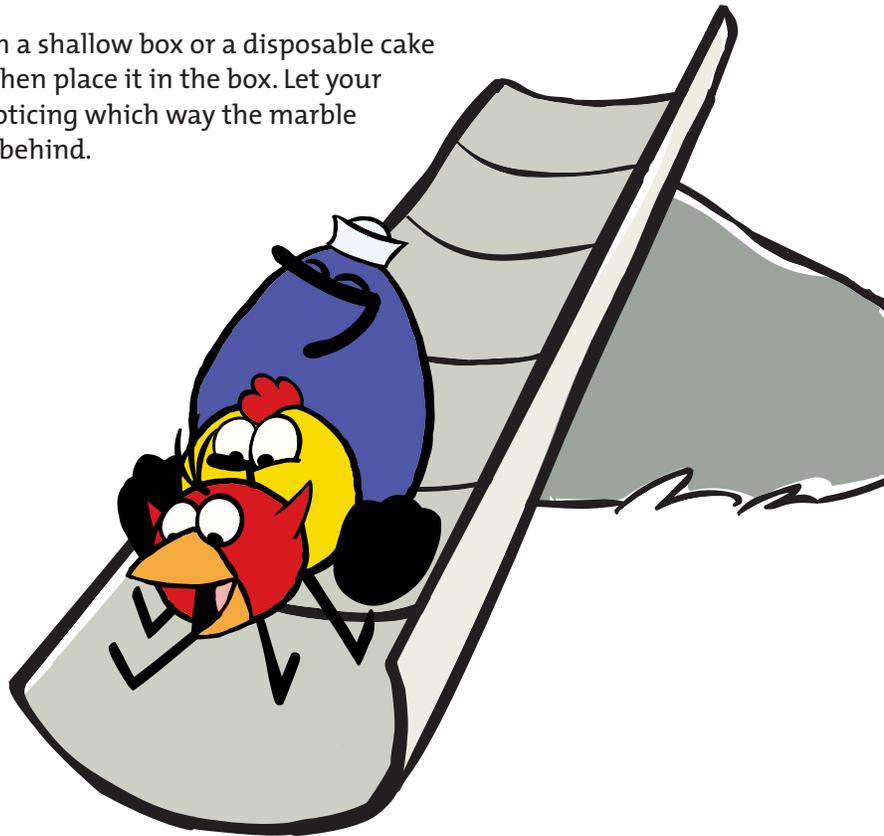
Look for ramps. As you and your child walk around the neighborhood, see how many ramps you can find. Look for curb cuts in the sidewalk and entrance ramps to public buildings. Let your child try going up and down them. Talk about how ramps can make it easier for people in wheelchairs or with strollers to get around.

On the playground, let your child place objects on a slide (a toy animal, a leaf, a stick, a mitten, a ball, etc.) Talk about what happens. *I wonder why it moved like that. What do you think made this one move so fast? After experimenting a little, ask your child to predict what an object will do before placing it on the slide.*

In the House

Let it roll. Build a ramp with your child by propping up one end of a large picture book or a piece of cardboard. Together, collect things that you think will roll down the ramp—for example, a crayon, a toy car, a ball, a toilet paper roll. Encourage your child to experiment: *What could we do to the ramp to make the objects roll faster? How about more slowly?*

Tip and roll. Put a piece of paper in a shallow box or a disposable cake or pie pan. Dip a marble in paint, then place it in the box. Let your child tip the box back and forth, noticing which way the marble rolls and the paint tracks it leaves behind.



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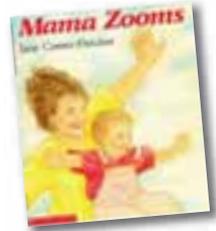
Learn More about Ramps

Read and Find Out!

Visit your library and look for these books. Ask your librarian for additional recommendations.

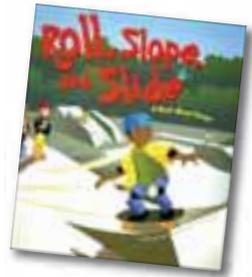
Mama Zooms by Jane Cowen-Fletcher Scholastic, 1993

"Mama's got a zooming machine and she zooms me everywhere."
A little boy spends busy days zooming up hills, down ramps, and around town with his mom, on her wheelchair.



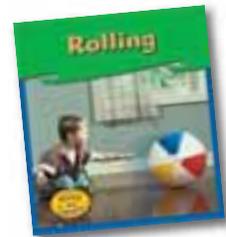
Roll, Slope, and Slide: A Book about Ramps by Michael Dahl Picture Window Books, 2006

From skateboard parks, to highway ramps, to ramps on moving vans, this book takes a look at the many ways we use ramps everyday.



Rolling by Patricia Whitehouse Heinemann, 2003

Explore things that roll and things that don't. This book invites your child to try a number of simple experiments with everyday objects.



Click and Explore!

Marble Drop: An online game pbs.org/parents/creativity

Click **Creativity Challenge**, then choose **Marble Drop**.

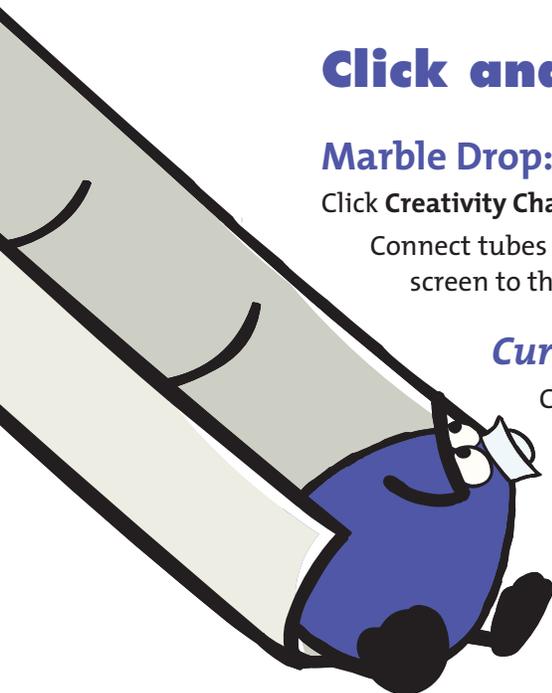
Connect tubes to make a pathway that will transport a marble down and across the screen to the bowl on the bottom right.

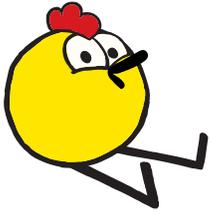
Curious George Activity Booklet pbskids.org/curiousgeorge

Click on **Parents & Teachers**, then on **Activities & More**.

Choose **Parent-Child Activities**. Click on **Curious George Family Activity Booklet**.

Join your kids in exploring ramps and other science activities.
Play and learn!





PEEP and the Big Wide World™

Explore las rampas con el niño

Por aquí y por allá

Busquen rampas. En sus caminatas por el vecindario, cuenten las rampas que encuentren. Las hay en el bordillo de la acera y en las entradas a edificios públicos. Permítale al niño subir y bajar por ellas. Hablen sobre lo mucho que las rampas les facilitan el movimiento a las personas en silla de ruedas y con cochecito para bebés.

En el parque, deje que el niño coloque objetos (un peluche, una hoja, un palo, un guante, una bola, etc.) en el rodadero. Hablen sobre lo que sucede. *Me pregunto por qué se movió así. ¿Cuáles objetos fueron los más veloces? ¿Por qué crees que se movieron tan rápido?* Luego de experimentar un rato, pídale al niño que haga predicciones acerca de otro objeto antes de que lo coloque sobre el rodadero.

En casa

A rodar se dijo. Junto con el niño, construyan una rampa. Apoyen un extremo de un libro grande o de un pedazo de cartón sobre algo para que quede más alto en un extremo que en el otro. Juntos, recojan cosas que pueden hacer rodar por la rampa, p. ej., un lápiz, un auto de juguete, una bola, un rollo de papel higiénico. Pídale al niño que experimente: *¿Qué le podemos hacer a la rampa para que los objetos rueden más rápidamente? Y ¿para que rueden más lentamente?*

Inclinar y rodar. Pongan una hoja de papel en una caja de poca profundidad o en un molde desechable para pastel. Sumerjan una canica en pintura y luego pónganla en la caja. Deje que el niño incline la caja hacia un lado y luego hacia el otro. Observen cómo rueda la canica, así como las marcas de pintura que quedan al rodar la canica.



Vean Peep and the Big Wide World las mañanas entre semana durante Ready Set Learn! en los canales TLC y Discovery Kids.

En peepandthebigwideworld.org verán más actividades y juegos científicos.



Aprendamos más sobre las rampas

Leer y descubrir

Acudan a la biblioteca y busquen estos libros.
Pídanle a la bibliotecaria que les recomiende otros libros.

A rodar de Dana Meachen Rau **Marshall Cavendish, 2007**

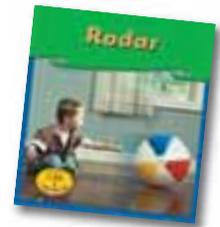
Con dibujos y palabras, este libro de pictogramas trata de objetos cotidianos que ruedan. Los pictogramas le permiten al niño participar mientras leen el libro juntos.

Rodar de Patricia Whitehouse **Heinemann, 2003**

Exploren unas cosas que ruedan y otras que no. En este libro se invita al niño a hacer varios experimentos sencillos con objetos cotidianos.

El viejo y su puerta de Gary Soto **Putnam, 1998**

En camino a una fiesta, el viejito usa una puerta para jugar al escondite con un bebé, para hacer una rampa para ayudarles a unos vecinos a bajar los muebles del camión de mudanzas, y para usar como balsa para salvar a un niño que casi se ahoga.



Hagan clic y exploren

Marble Drop: Juego en Internet pbs.org/parents/creativity

Hagan clic en **Creativity Challenge**, luego escojan **Marble Drop** (Caen las canicas).

Conecten los tubos para crear un camino que transportará una canica de un extremo al otro de la pantalla hasta llegar a un cuenco en la esquina inferior derecha.

La cabalgata de la canica: Actividad científica para la familia pbskids.org/zoom/printables

Hagan clic en **Activity Pages**. Bajo **Engineering**, hagan clic en **Marble Ride ESP (La cabalgata de la canica)**.

¿Qué tan l-e-n-t-a-m-e-n-t-e pueden lograr que una canica baje rodando por la rampa? Se trata de un reto interesante que los niños pueden hacer junto con los padres.

