



ART & DESIGN FUN: A RUBE GOLDBERG BALL RUN

IDEAL AGE: 4+

Design, build, decorate, and test out a Rube Goldberg-inspired ball run.

LEARN TOGETHER

Designing and building supports your child's ability to make a plan, think ahead, and turn 2-D thinking into 3-D thinking. Experimentation requires creativity, patience, and critical thinking.

MATERIALS

- Toilet paper and paper towel tubes
- Scissors
- Tape
- Ping pong ball or marble
- Markers, crayons, or colored pencils
- Poster board (optional)
- Colored paper and collage (optional)



MAKE TOGETHER

Rube Goldberg was a cartoonist famous for imagining and designing crazy machines using a series of chain reactions to perform a simple task, like making toast or turning on a light bulb. Learn about Rube Goldberg's life, cartoons, and see Rube Goldberg Machines in action at [Rube Goldberg Inc.](https://www.rubegoldberg.com/)

Design your ball run, an important part of any Rube Goldberg Machine.

- 1 Decide what kind of ball run you want to make. You can design a ball run on a vertical surface like a door or wall or a ball run that goes throughout the room – from the top of the refrigerator to the table to the chair. You can even make one that takes up your entire home!
- 2 Use pencil and paper to draw out how you would like your ball run to work. Decide where you want your ball run to start and finish and think about how the ball will get there. Will it run in one diagonal line? Will it zigzag from side to side? Will it have to drop, jump, or roll between gaps?
- 3 Cut several toilet paper and paper towel tubes in half along the longest side of the tube. These will be your tracks. Use uncut tubes as tunnels.
- 4 Decorate your track pieces and tunnels using markers, crayons, or colored pencils or colored paper and collage.
- 5 Following the design you've sketched, assemble the ball run by taping the toilet paper and paper towel tubes together.
- 6 Send your ball or marble down the run. Did it work? Do you need to adjust the tracks or make any changes to your design to get the ball to the end?
- 7 Change it up! See how many different track layouts you can invent. Try using a larger or smaller ball or more than one at the same time. You can make your ball run as simple or as complex as you like.

Create a net to catch your ball with help from our friends at the [Children's Museum of Pittsburgh](https://www.childrensmuseum.org/).

Did you enjoy learning about Rube Goldberg? Join the [Rube Goldberg Bar of Soap Video Challenge](https://www.rubegoldberg.com/)!

For more fun activities, please go to
cmom.org/resources

