

PEACEFUL
ACTIONS
ARE LIKE A
CATAPULT!

BOTH CAN HAVE
FAR-REACHING
EFFECTS!



## **REACHING NEW HEIGHTS**

n ancient times, a catapult was a marvel of engineering. In battle, it hurled stones or arrows for great distances. It used a central lever attached to a spring and to a fixed support called a **fulcrum**. The lever was pulled back to store energy in the spring. It was released, then—whoosh! The force sent the object into flight!

Today, catapults have advanced. A steampowered version can help an airplane take off from the deck of a ship at sea in just seconds!

Scientific knowledge is a powerful force. But it's not enough to create a peaceful, happy planet. We need spiritual qualities, too. Both science and religion work together to help us find solutions to Earth's problems—like war, poverty, and hunger. When we combine science with virtues such as respect and generosity, humanity reaches new heights.

What peaceful actions will you launch today?

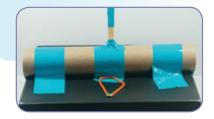
## MAKE A COOL CATAPULT

You'll Need: Duct tape • paper towel tube • 9" x 11" (22.9 x 27.9 cm) box or shoebox lid • craft stick • ruler • plastic spoon • pen • rubber band • brass paper fastener • mini marshmallows

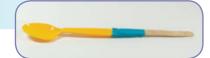
1. Tape tube to box lid (fulcrum).



**4.** With pen, punch hole in box about  $2^{1}/2^{1}$  (6.4 cm) in front of tube. Insert fastener and fit rubber band around it snugly.



2. Tape stick to spoon (lever bar) so they overlap 1" (2.5 cm).





3. Use pen to make hole in top of tube. Put lever inside and secure with tape.



**5.** Wrap rubber band around center of lever so it's taut when pulled backward. Tape in place. Add marshmallow, pull back, and release!

## **HOW IT WORKS**

The rubber band stores potential energy when you pull back the lever. This energy is transferred to the lever when the band is released. It's turned into **kinetic energy**, or energy of motion, so the marshmallow goes flying.



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