

SCIENCE FAIR CENTRAL

MAKE. CREATE. EXPLORE.



DON'T CRACK

What We Want to Find Out

What is the best material to protect an egg when dropped from 10 feet?

Procedure

Ask your child to imagine what might happen if you dropped an egg from 10 feet high! (You may need to demonstrate what 10 feet looks like.) Then, ask your child to imagine that he or she is being challenged to design a package that could protect an egg if it dropped from 10 feet. Look over the available materials, and brainstorm which materials might protect the egg. Support your child as he or she starts to build the container. You might need to share reminders not to make the container too heavy so that the egg does not crack before dropped. Once your child is confident with the design, drop the egg from 10 feet. Check the container to see if the shell has been cracked. If the egg is damaged, discuss what could be done differently to protect it. If possible, re-design the egg packaging and try again! Could success be achieved with less packaging material? Would the egg be safe if dropped from another height?

Science Behind the Fun

Gravity is defined as a force that exists between Earth and objects near it. A force is something that changes an object's shape or movement. Gravity is a force that pulls objects toward each other. It is the force that makes objects fall to Earth. Your egg was attracted to and pulled toward the center of Earth because of gravity.

Materials

- Raw egg
- Newspaper
- Construction material
- Tape

Tips

Some children may want to add a parachute. Consider including plastic bags and tissue paper for this use. Encourage your child to think about how items are shipped through the mail and the packaging used to keep these items safe.

Still Curious?

Check out NASA's Launch and Landing page to learn how engineers design spacecraft to return to Earth. Gravity works with and against re-entry! http://www.nasa.gov/mission_pages/shuttle/launch/index.html

