

# Design Challenge: Egg Drop

In this challenge, your child's task is to create a contraption that will protect an egg when it is dropped from a height of about 10 feet. Since this prompt is open-ended, your child can be creative with how they make their egg drop device. This activity doesn't require a specific set of materials, so feel free to give your child any arts and crafts materials you have around the house and allow them to decide how to use them.



## What You Need:

- At least one egg (exact number depends on how many tests you complete)
- A designated location that is about 10 feet above the ground from which you'll drop the egg (i.e. top of play structure, balcony)
- Cotton balls
- Tape
- Scissors
- Any arts and crafts materials you already have that your child could potentially use
- Pen and paper for notetaking

## What You Do:

1. First, fully explain the prompt of this challenge to your child. Tell them that their job is to create a device that will protect their egg when it's dropped from a height of 10 feet. Show them the exact spot they will be dropping their egg from so that they can have a better idea of what they need to design.
  - a. Make sure that your child knows this prompt is open-ended: There's not one "correct" way of completing it, and they get to be creative.
2. After your child fully understands the task, allow them to start **brainstorming** ideas for the contraption they want to build. Ask them to write or draw their ideas on a piece of paper.
  - a. Feel free to show your child the materials you're providing so that they know what they're working with. However, don't allow them to start building quite yet.
3. Once your child has come up with a few different ideas, ask them to pick the one they think will work best. This will teach your child to prioritize the functionality of their device without getting emotionally attached to their ideas.
4. After your child has chosen the design, allow them to start **prototyping** (building)! Be sure to supervise for safety purposes, but allow them to work independently as much as possible. Allow them to work through challenges to the best of their ability.
5. Once your child has built their prototype (design), it's time to **test** it. Go to your designated location for the egg drop, and ask your child to use their contraption.
  - a. If your child's prototype is successful, congratulate them for completing this challenge.
6. If your child's prototype doesn't work, it's important that they don't get discouraged. Frame the outcome as an opportunity for your child to learn, and help them come up with ideas as to why their design didn't work. Then, go back to the beginning of this process and help your child come up with a better design.

Author: Hanna Zarrinnegar

Copyright © 2020 Education.com LLC All Rights Reserved