

CREATEKIT™

Space Lander Lesson Directions Overview

Equipment List

- 50 Cups
- 200 Construction Paper Sheets
- 100 Cardboard Sheets (8" x 10")
- 4 Glue Bottles (4 oz Ea)
- 320 Assorted Rubber Bands
- 1,000 Craft Sticks
- 40 Binder Clips
- 100 Pipe Cleaners
- 2 Rolls Makerspace Tape
- 1 Crack 'N Splat™ Egg

Deluxe Kit Adds:

- 12 Felt Sheets
- 24 Glue Sticks
- 2 Glue Guns
- Cardboard Modeling Rolls

Learning Objectives

1. Students will use the engineering design process to design and build a vessel that will keep a plastic egg from breaking open upon impact.
2. Students will use an iterative approach and knowledge of physics concepts to determine the best materials and structural features for minimizing damage from impact..
3. Students will measure and graph the results of their space lander trials, including the success rate and distance from the landing target.

Grade Levels: Upper Elementary & Up

Vocabulary Covered

- Acceleration
- Accuracy
- Gravity
- Force
- Friction
- Gravitational Potential Energy
- Kinetic Energy

NGSS Topics Addressed

- Engineering Design
- Forces & Interactions
- Energy

CCMS Topics Addressed

- Data & Measurement