

**Space Lander**

**3-5**

# **Materials (per student):**

**Activity #1**

* 3 Index cards or stiff paper 3”x 5”
* 10 mini marshmallows ***(not included)***
* 3 rubber bands
* 8 plastic straws
* 1 piece of stiff paper or cardboard about 4”x 5”
* 1 small paper or plastic cup
* 2 regular marshmallows; “Astronauts” ***(not included)***
* Scissors ***(not included)***
* Tape ***(not included)***

# **Instructions:**

1. Create a plan to design shock absorbing system for lander.
2. Assemble the space lander. Attach the shock absorbing system to the cardboard platform. Tape the cup to the top of the platform. Place the two astronauts inside the cup.
3. Test the space lander by dropping it from a height of one foot with the astronauts on board.
4. If the astronauts stay in the cup the landing was successful! If not, what changes need to be made to the shock absorbing system design for it to be successful? (Modify the design and test again until the astronauts can be safe.)

# **Possible Variations:**

Mini marshmallows gum drops, gummies, cotton balls, etc.

Regular marshmallows small bouncy balls, etc.

# **Science Behind the Project:**

This gives the students a chance to understand the basics of a shock absorbing system and obtain practical insight into real world applications.

**\*\*WARNING: Adult Supervision Required. Small parts may cause a choking hazard\*\***