CHIPS IN A CAN RING

SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything while doing any experiment.
- **REMEMBER** experiments may require marbles, small balls, balloons, and other small parts. Those objects could become a CHOKING HAZARD. Adults are to perform those experiments using these objects. Any child can choke or suffocate on uninflated or broken balloons. Keep uninflated or broken balloons away from children.

INGREDIENTS

- 1 Can of Pringles Chips

INSTRUCTIONS

STEP 1: Using the chips, create a ring with a diameter of at least 6 inches. Start by developing a simple sketch of your creation to illustrate how you will engineer the ring. Provide evidence of the effects of balanced and unbalanced forces on the ring.

EXPLANATION

As gravity pulls your creation toward the center of Earth, friction, or the resistance between the chips, prevents your creation from collapsing. Balanced forces act on your creation to keep it standing.

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SCIENCE BACKGROUND

A force is a push or pull, which can cause an object to be in motion. Pushes and pulls can have different strengths and directions. Motion is a change in position. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion. Speed is how far an object moves over a specific period of time. Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. Friction is the resistance between two objects. The force of friction opposes the motion of an object, causing moving objects to lose energy and slow down.

I CAN STATEMENT

- ✓ I can develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
- ✓ I can plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on an object.
- ✓ I can define a simple design problem reflecting a need or want that includes specified criteria for success and constrains on materials, time, and cost.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

K-2 – Engineering Design
3 – Forces and Interactions | Cause and Effect
3-5 – Engineering Design