



## UTENSIL BALANCE

### 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

- Plastic Spoon
- Plastic Fork
- Toothpick
- Glass of Water

### INSTRUCTIONS

**STEP 1:** Connect the plastic spoon and fork by forcing the bowl of the spoon into the tines of the fork creating a wide V-shape.

**STEP 2:** Using the toothpick, balance the spoon and fork on the edge of the rim of the glass of water. Provide evidence of the effects of balanced and unbalanced forces on the motion of the spoon and fork.

### EXPLANATION

The utensils balance since there are multiple forces acting on the spoon and fork, which give zero net forces on the utensils.



### 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. Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net forces on the object. Forces that do not sum to zero can cause changes in the objects speed or direction of motion. Motion is a change in position. The mass of an object affects the objects motion. An object with more mass requires a greater force to put the object in motion. Speed is how far an object moves over a specific period of time. An object moving at a greater speed changes position faster than an object moving at a slower speed. Inertia is the tendency of an object to resist change.

### I CAN STATEMENTS

- ✓ I can plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.

### NEXT GENERATION SCIENCE STANDARDS CONNECTION

3 – Forces and Interactions