

Toothpick and fork balance trick!

ELECT# 4.5 Inquiry- observing and forming a question.

Collecting information, evaluating and re-adjusting

Materials needed:

1. Two forks
2. Wine glass
3. Toothpick

Instructions:

- **Step 1/3:** Slide two forks connected to each other.
- **Step 2/3:** Insert a toothpick in the connection of two forks.
- **Step 3/3:** Place the end of the toothpick along the rim of the wine glass with the toothpick on. Do some small adjustments until you feel its balanced, then let go!



Troubleshooting:

Why my toothpick and forks cannot stay balanced on the rim of the glass?

- Make sure the tail of the fork is pointing to the wine glass, not vertical to the ground.

Scientific description:

The center of gravity of an object is the point which average location of the weight of an object and all sides are in balance. When the point of center of gravity and point of connection share a plumb line, the object is balanced and stand still. In this experiment, the gravity center of the toothpick and fork system is on the toothpick which shares a plumb line with its connection with a wine glass, so it can stay balanced