



Elementary Engineering #2: Teacher Tips & Helpful Hints

The Student Activity Pack is broken up into three different activities:

- **Activity 1: Float Your Boat**
- **Activity 2: Tallest Towers**
- **Activity 3: Taking Flight**

- Students can make observations on the materials before beginning any of the activities. For younger students it is very helpful to become familiar with the materials.
- We have a full program that explore [the Scientific Method](#) using this activity bag along with storytelling and citizen science.

Activity 1: Float Your Boat

- There is a full google slide deck to walk through the activity using the 5 E model.
- Students may struggle with not getting their boat to float. [“The Mistakes Song”](#) video by the Paper Girls is great for addressing this.
- Extension: Have students use both foil and clay to make another boat.

Activity 2: Tallest Tower

- There is a full google slide deck to walk through the activity using the 5 E model.
- Students can cut the wooden sticks when building if they would like.

Activity 3: Taking Flight

- There is a full google slide deck to walk through the activity using the 5 E model.
- Build the prototype together.
- Students are encouraged to make multiple planes with different wing shapes and sizes.

N.C.S.S:

- K.P.1.1 Compare the relative position of various objects observed in the classroom and outside using position words such as: in front of, behind, between, on top of, under, above, below, and beside.
- K.P.1.2 Give examples of different ways objects and organisms move (to include falling to the ground when dropped)
- 1.P.1.3 Predict the effect of a given force on the motion of an object, including balanced forces.
- 3.P.1.1 Infer changes in speed or direction resulting from forces acting on an object
- 3.P.1.2 Compare the relative speeds (faster or slower) of objects that travel the same distance in different amounts of time.
- 5.P.1.4 Predict the effect of a given force or a change in mass on the motion of an object.