

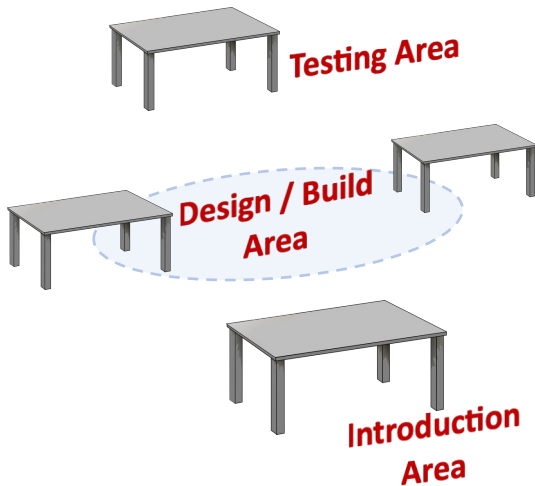
Materials

- ✓ Foil Sheets
- ✓ Plastic Tubs
- ✓ Water
- ✓ Marbles
- ✓ Chart Paper
- ✓ Markers



Build-A-Boat

Families work together to **design, build, and test** foil boats to explore the impacts of shape and size in determining how many marbles their boats can hold before sinking.



Room Layout

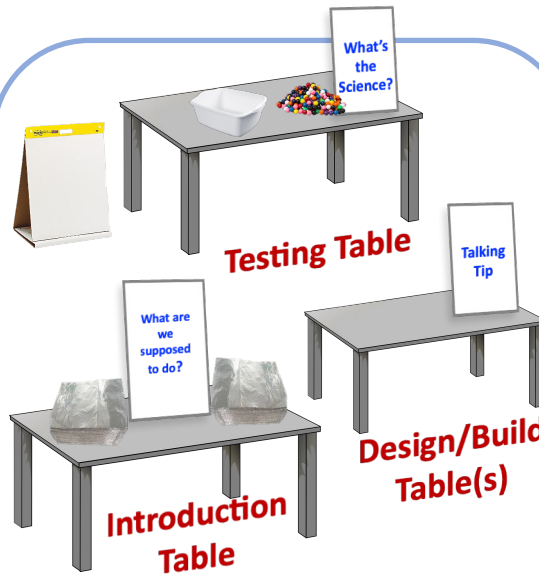
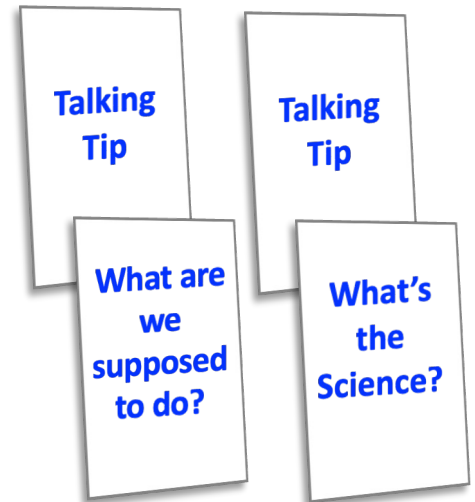


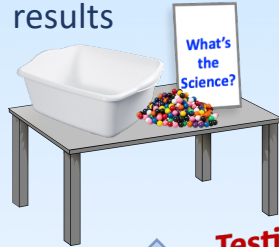
Table Setup



Signage

3

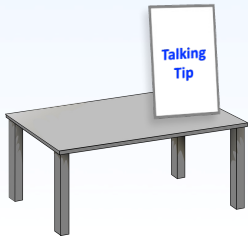
After build is complete, families test their designs and record results



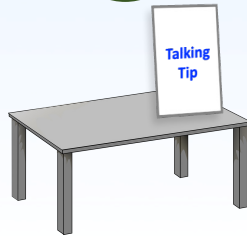
Testing Table

Families use materials and **Event Guide** to design & build

2



Design/Build Table



1

Families are provided with details on the challenge



Introduction Table

1

Introduction Table

Provide activity directions to families, either through a facilitator or a table top sign. Provide **one foil sheet per child** for designing and building their boat. Direct families to use the **Event Guide** to facilitate engagement.

2

Design/Build Table(s)

Place “**Talking Tips**” signs on design/build tables to encourage conversation. Facilitators should circulate among families, encouraging them to use the **Discuss** and **Think** sections of the **Event Guide** for each specific activity.

3

Testing Area

Place “**What’s the Science?**” signs in area and hang large chart paper for families to **graph the number of marbles** held by various shaped boats (round, square, long, short, deep, shallow, etc.). Facilitators should encourage **redesign** and **rebuilding**.