



# Bottle Rocket Design Notebook

**Define the following words:**

Force:

Acceleration:

Motion:

Lift:

Drag:

Thrust:

What does it mean for forces to be balanced?

What does it mean for forces to be unbalanced?

**Newtons Laws:**

Describe Newton's 1st Law:

Tell how this law relates to your bottle rocket:

Describe Newton's 2nd Law:

Tell how this law relates to your bottle rocket:

Describe Newton's 3rd Law:

Tell how this law relates to your bottle rocket:

After reading about water bottle rocket design tips, write down six tips that you read about that you plan to use and explain why you want to use them.

1.

2.

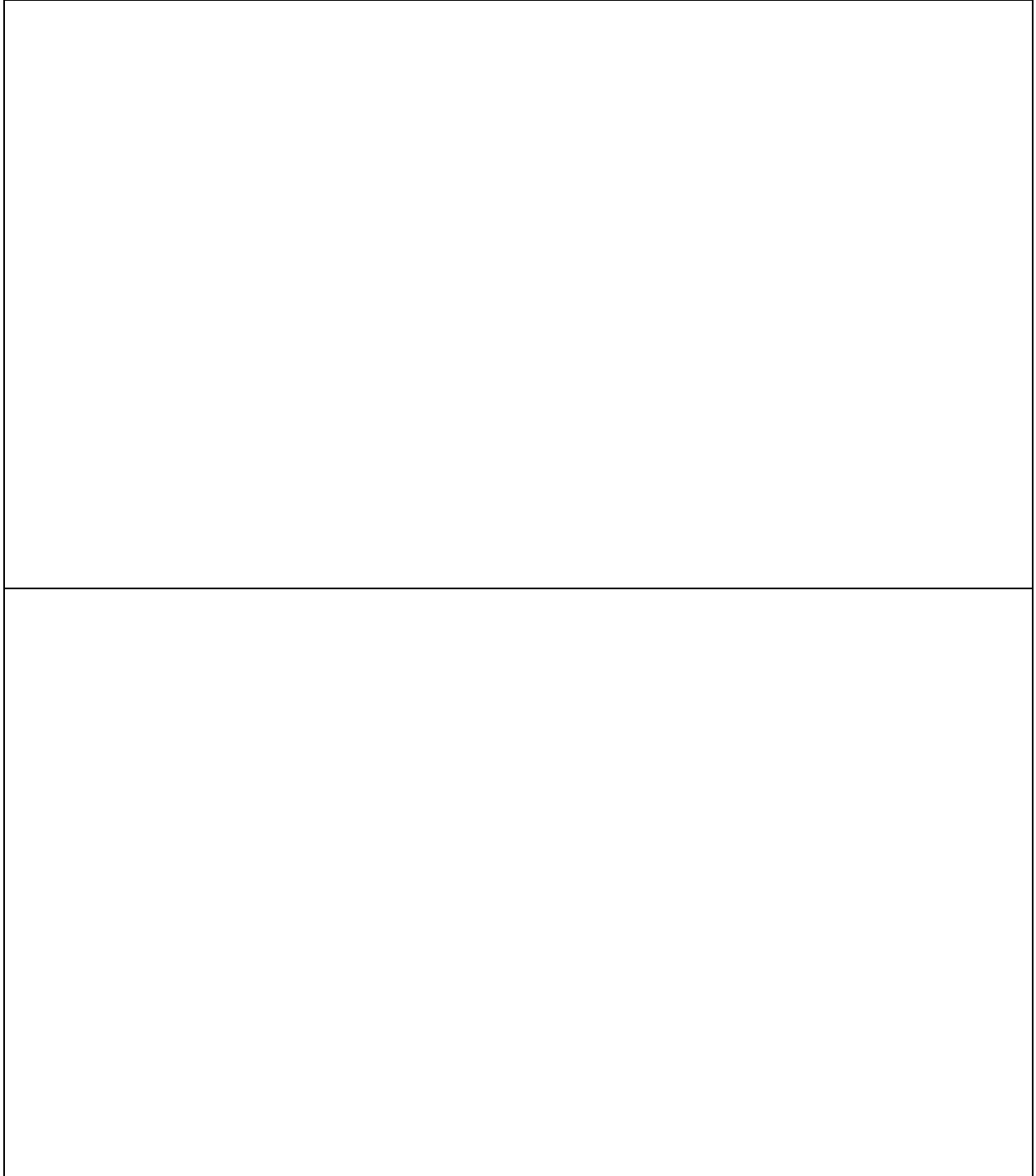
3.

4.

5.

6.

Draw the designs you plan to use for each of your rockets. Tell what each part of the rocket will be made out of as well as how large you estimate it will be (in cm).

A large, empty rectangular box with a thin black border, intended for drawing rocket designs. The box is divided into two horizontal sections by a single line, with the top section being slightly larger than the bottom section.

Record two design changes you are going to make after the testing round. Tell why you will make each of the changes:

1. Change:

Why?

2. Change:

Why?

Draw the final designs for each of your rockets below:

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