Let’s Experiment with MASS

S5P1. Students will verify that an object is the sum of its parts.

a. Demonstrate that the mass of an object is equal to the sum of its parts by manipulating and measuring different objects made of various parts.
Essential Question

Is the sum of the parts always equal to the whole?
What is MATTER?

- Matter is anything that has MASS and takes up space.
- Everyone is made up of MATTER and experiences both chemical and physical changes. EXAMPLE: If you cut your hair it is a physical change. If you fry an egg, that is a chemical change.
WEIGHT is a PHYSICAL CHANGE
WHAT IS MASS?

The quantity of MATTER in an object. Matter—anything that has MASS and takes up space.

Often referred to as weight BUT it is not the same as weight because weight changes according to gravity SO a brick is weightless in space even though it still has the same MASS as on Earth.
What is VOLUME?

- The amount of space occupied by an object.
Apple

- Will the mass of this apple stay the same if it is cut in half?
- Will the mass of the apple stay the same if a bite is taken out of it?
EXPERIMENT

- Materials needed:
  - Scale for each group
  - Legos
  - Notebooks
Leave the Lego models whole
Place one on each side of the balance
What were the results?
Remove one of the Lego models and take it apart
Place all the pieces back onto the balance
What were the results?
Essential Question

Is the mass of the parts always equal to the whole?