

# Lego Mass



**Theme:** Game

**Curriculum Area:** Math

**Activity:** Today we will learn about the law of **Conversion of Mass**. Matter cannot be created or destroyed. The mass of an object never changes even if its rearranged. Students will have 30 pieces of Legos in front of them. The students will be in groups and be in completion with each other. The students will assign a job for each member (An artist, a Lego breaker, a Lego architect, timekeeper/cheerer). They will rotate roles until everyone in the group has had a chance to do each job. Whichever group completes the worksheet, wins the game. The point of the game is for the children to recognize that mass can change its shape and be whatever it wants to be but it will not lose its mass or weight.

**Age of Children:** 5-6<sup>th</sup> grades

## **Materials Needed:**

1. 30 pieces of Legos for each group.
2. Worksheets
3. Pencil
4. crayons

## **Developmental Objectives/Domains:**

By participating in this activity, children will:

1. Work together to solve the conversion of mass using Legos
2. Understand that when it comes to mass, it can change shape and be the same weight.
3. Comprehend that this is a great analogy for molecules.
4. Realize that when done at the atomic level this is called chemistry.

## **Procedure:**

1. The Lego architect will construct a structure with Legos. The Artist will draw, and color it in **Box 1** on one row.
2. The Lego breaker will then break the structure and have the following:
  - a. 1 piece needs to have 4 Legos together.

- b. 1 piece needs to have 3 Legos together.
  - c. 1 piece needs to have 2 Legos together.
  - d. The rests need to be broken apart.
3. The Artist will draw and color the 4 different pieces in **Box 2**.
  4. The Lego architect will then build a structure that is completely different from the **Box 1**.
  5. The Artist will draw and color the new structure in **Box 3**.
  6. The cheerer will keep an eye on the clock and help the others with their task.
  7. Rotate so that everyone has different jobs now.
  8. Repeat **STEPS 1-6** until everyone has had all jobs.

**5-PS1-2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.**

[**Clarification Statement:** Examples of reactions or changes could include phase changes, dissolving, and mixing that forms new substances.] [**Assessment Boundary:** Assessment does not include distinguishing mass and weight.]

Reference:

<https://kids.britannica.com/students/article/conservation-of-mass/599570#:~:text=The%20law%20of%20conservation%20of,how%20the%20parts%20are%20rearranged.>

Video: <https://youtu.be/VYAsFIC2PkU>