

**Activity:** Playdough Workshop  
**Grades:** PreK-1



**Description:** Engage students in thinking about decomposition by investigating and counting the smaller parts of a playdough design before creating one on their own. By identifying the smaller pieces that make up the design, the bigger task will become easier. Encourage discussion about how this process made the project easier. After decomposing several playdough projects, challenge students to create their own design.

**Materials:** Playdough, copy of [Playdough Designs project page](#)

**Steps:**

- 1) Introduce the activity by explaining what *decomposition* is.  
Decomposition: Breaking a larger task into a smaller task to make the problem easier to solve.
- 2) Show students the project page with sample playdough designs, or create them on your own with playdough. These can also be made into cards to place on the tables for students to recreate. Together, examine a few of the designs, one at a time, and identify and count the shapes used to make the design.
- 3) Ask students how breaking down the designs into smaller parts may make it easier to recreate. Encourage the use of math and CS vocabulary, such as decomposition, shapes, counting.
- 4) Have students select a design to recreate.
- 5) When designs are complete, ask students to share their ideas about how decomposing the shapes helped them recreate a design.
- 6) As a final step, have students use shapes to create their own designs. This step can also be completed with precut construction paper shapes and used as an art/math/CS center.

Activity from [Digital Promise](#)