

## Lesson 25: Paper Flower Decorations (Optional)

### Standards Alignments

Addressing 4.OA.A.3, 4.OA.C.5

Building Towards 4.OA.C.5

### Teacher-facing Learning Goals

- Generate a pattern of numbers or shapes that follows a given rule.
- Use the four operations to solve problems that involve multi-digit whole numbers and assess the reasonableness of responses.

### Student-facing Learning Goals

- Let's make patterns with paper flowers.

### Lesson Purpose

The purpose of this lesson is for students to create and analyze patterns in a real-world context and to solve multi-step problems.

This lesson is optional because it does not address any new mathematical content standards. This lesson does provide students with an opportunity to apply precursor skills of mathematical modeling. In this lesson, students build on their prior understanding and experiences with creating and analyzing patterns to solve multi-step problems in a real-world context.

In the first activity, students make different types of paper flowers. In the second activity, they consider patterns and solve problems involving paper flower garlands. In the third activity, students think of their own pattern and multi-step problems inspired by their process of making paper flowers.

When students ask and answer questions that arise from a given situation, use mathematical features of an object to solve a problem, make choices, analyze real-world situations with mathematical ideas, interpret a mathematical answer in context, and decide if an answer makes sense in the situation, they model with mathematics (MP4).

### Access for:



#### Students with Disabilities

- Representation (Activity 3)



#### English Learners

- MLR7 (Activity 2)

### Instructional Routines

How Many Do You See? (Warm-up)

### Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	20 min
Activity 3	15 min
Lesson Synthesis	10 min

### Teacher Reflection Question

Think about times when students were able to make connections to and build on the ideas of their peers during discussions today. What norms or routines allowed students to engage with other students' ideas?