

Lesson 17: Paper Clip Games (Optional)

Standards Alignments

Addressing	4.NF.A
Building Towards	4.NF.A

Teacher-facing Learning Goals

- Locate and compare fractions on the number line.

Student-facing Learning Goals

- Let's create a game about locating and comparing fractions on the number line.

Lesson Purpose

The mathematical purpose of this lesson is for students create and play a game about locating and comparing fractions on a number line.

This lesson is optional because it does not address any new mathematical content standards. It does offer students an opportunity to model with mathematics to create a game.

In previous lessons, students located and compared fractions on number lines using benchmark fractions and numerical relationships. Here, students work in pairs to create a game based on these skills and concepts. They identify fractions on a number line, decide how numerical results will be interpreted to determine the winner, draft rules for their game, share their game with classmates, and revise rules based on feedback.

When students make choices about their approach, analyze numerical information, interpret results, and describe mathematical procedures, they model with mathematics (MP4). When they label fractions on the number line and revise their procedures to better communicate the rules for the game, they are attending to precision (MP6).

This lesson may take more than 60 minutes, as students may need additional time to create, play, and revise their games. Consider modifying the activities or expanding the lesson across 2 days to meet students' needs and any time constraints.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR2 (Warm-up)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Markers: Activity 1, Activity 2
- Paper clips: Activity 1, Activity 2
- Paper: Activity 1, Activity 2
- Tape (painter's or masking): Activity 1, Activity 2

Lesson Timeline

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

Teacher Reflection Question

Reflect on whose thinking was heard today. Reflect on whose thinking was not heard but could have enriched the conversations. What prompts or structures might better enable the latter to share their voices and reasoning?