

## Explore Screen

This screen provides an exploratory environment to play directly with the values in a ratio and get immediate feedback in the illustrated ratio.

### Necklace Scene

**CHOOSE** a scene to explore different contexts

**PLAY** with the values in the ratio

**VIEW** one or two ratios

**COMPARE** the necklace patterns (reduced ratios)

**REFRESH** ratios

Proportion Playground

### Paint Scene

Proportion Playground

**CHANGE** the colors of the paint balloons

**COMPARE** the paint colors on a gradient

### Billiards Scene

Proportion Playground

**COMPARE** the patterns on two tables

### Apple Scene

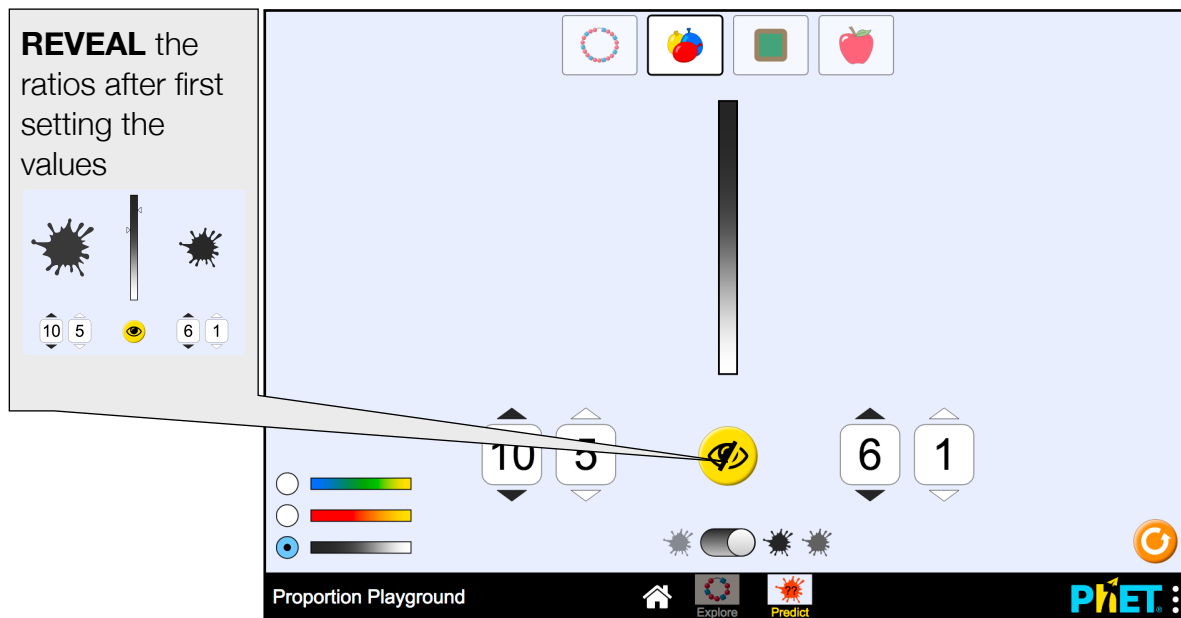
Proportion Playground

**SHOW** the cost per apple

**COMPARE** the unit cost for two sets of apples

## Predict Screen

This screen has one additional control that allows students to make predictions before viewing their ratios.



## Insights into Student Use

Each context provides a unique but rich environment for exploring ratios. Students naturally want to investigate each context and may settle on one that they like best until prompted to focus on a specific one.

## Suggestions for Use

### Sample Challenge Prompts

- Create two paint splotches that are the same shade but different sizes.
- Create as many necklaces as possible with the same bead pattern. Record your findings in a ratio table, then plot the values on a graph. Compare your graph with your classmates' graphs.
- Use the spinners to create the same ratio on every scene. What does your ratio mean when talking about necklaces? Paint colors? Billiards tables? Apple prices?

See all published activities for Proportion Playground [here](#).

For more tips on using PhET sims with your students, see [Tips for Using PhET](#).