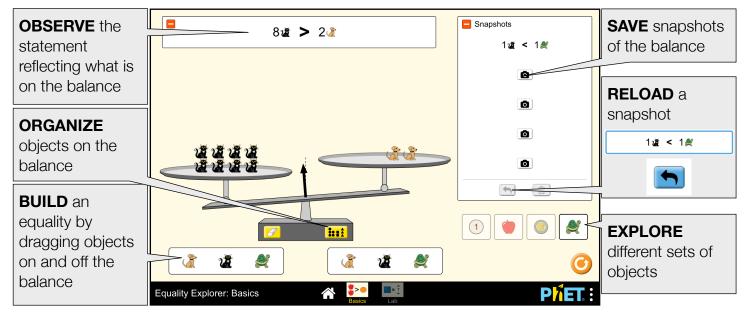


# Equality Explorer: Basics

The *Equality Explorer: Basics* simulation allows students to explore the conditions that result in equality and inequality and play with the concept of a variable.

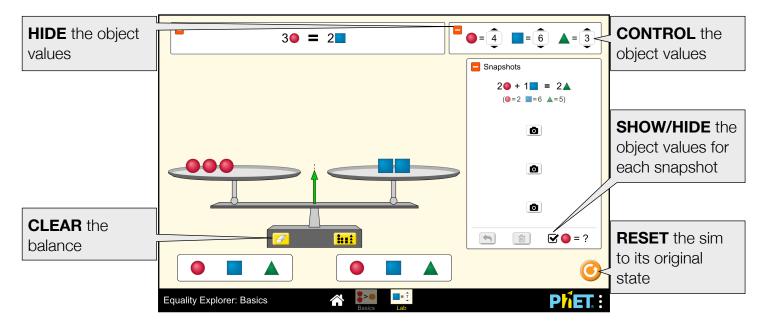
### **Basics Screen**

In the Basics screen, students can discover equality relationships and create functional definitions of equality and inequality.



#### Lab Screen

In the Lab screen, students can change the values of the objects and build unique equations.



## **Insights into Student Use**

- Students naturally want to find balanced situations. Encourage them to find as many as possible.
- Students enjoy making extremely unbalanced situations. Challenge them to find the "most unbalanced" scenario. What were the values of the objects?

### **Suggestions for Use**

- Explore proportional relationships on the Basics screen.
- Build equations with different values for each shape.

#### Sample Challenge Prompts

- Find as many equations as possible using the objects on the Basics screen.
- Build an equation on the lab screen. What makes this an equation?
- Identify the values for the square and circle. What could these values represent about the square and circle?
- If a dog equals 1, what does a cat equal?
- Using the Lab screen, balance 2 squares with 3 triangles. What values for the square and triangle make this work? Compare with the class.

See all published activities for Equality Explorer: Basics here. For more tips on using PhET sims with your students, see Tips for Using PhET.

