

# Connect to the Classroom

## Connect

Grade level: \_\_\_\_\_ Objective: \_\_\_\_\_ Game: \_\_\_\_\_

Standards: \_\_\_\_\_

**Textbook Correlation** Chapter: \_\_\_\_\_ Lesson: \_\_\_\_\_

### **A**NALYZE

Play the game and analyze to uncover the math.

Visualization:

Math Concept(s):

### **C**REATE

Create a plan that includes questioning for higher-order thinking and addresses how the game will be utilized.

How will it be translated to a hands-on activity? How might the problems/activities be sequenced?

Facilitating Questions:

How will students transition to the symbolic? How will students connect the visualizations to diagrams and symbols?

### **E**XPERIENCE AND EVALUATE

As active participants, students engage with the content of the lesson and display habits of mind of productive learners of mathematics.

# Facilitating Students

## Monitor

Good facilitation allows students to take a conscious role in their learning process, and they can more easily apply what is learned in ST Math to settings outside the program. Monitor students while they are working. Periodically ask students to tell you how they are “winning” the games. Ask questions that will give you a window into their thinking. Make notes of their understandings and misconceptions. Use these notes to connect ST Math to your classroom instruction. It is recommended that only trained adults facilitate students.



### Step 1 Uncover Thinking

- ✓ What have you tried?
- ✓ What happened then?
- ✓ Why did you \_\_\_\_\_?



### Step 2 Examine Animation

- ✓ What is happening in the animation?
- ✓ What did you notice? What else?
- ✓ When you clicked \_\_\_\_\_, what happened?



### Step 3 Apply Hypothesis

- ✓ What do you think will happen?
- ✓ How will this work on this problem?
- ✓ What steps will you take?
- ✓ How did you decide that was correct?



### Facilitating Questions

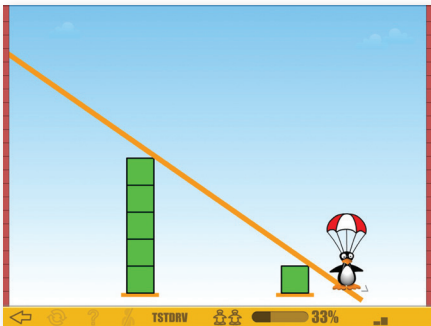
- What does JiJi need to do?
- How might you begin?
- What do you need to do next?
- Why did that happen?
- How can you help JiJi?
- How did the earlier problems/levels work?
- Is this like \_\_\_\_\_ that you did earlier? How is it the same? How is it different?
- How did you get that answer?
- What did you see that showed you the answer was wrong?
- What will happen if you click on \_\_\_\_\_?
- What have you tried? What happened?
- What do you notice? What else do you notice?
- What did you try that did not work? Why did it not work?
- Please explain it in a different way.
- Show me how this will work on the next problem.
- What do you already know about?
- Why did you \_\_\_\_\_?

Occasionally, you might want to put a group of 2-4 students who are struggling with the same game together around one computer. Log in to your JiJi Console to access games and facilitate the students as a group. Encourage interaction among the students as they discuss the hows and whys of that game. When students feel more confident and competent, send them back to their own devices to try the games on their own.

# STMath Classroom Friendly Games

Here are some additional games that work well in the classroom. Try them out!

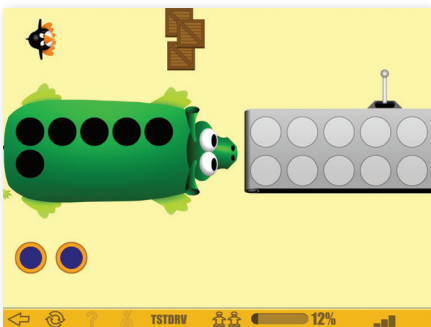
## Kindergarten: **More Less Parachute**



Select a set of stacked objects that will be greater than, less than, or equal to a given set of stacked objects.

*Test Drive > Kindergarten > Greater Than, Less Than, Equal to > More Less Parachute*

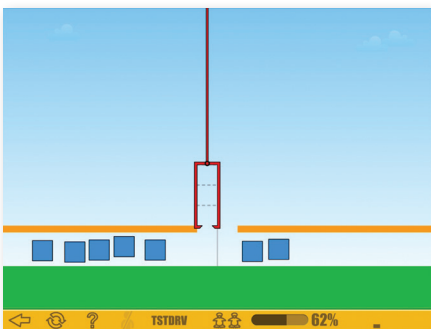
## First Grade: **Pie Monster**



Use the model to solve addition problems. Includes missing addend.

*Test Drive > 1st Grade > Addition and Subtraction Situations with Unknowns > Addition and Subtraction Relationships > Pie Monster*

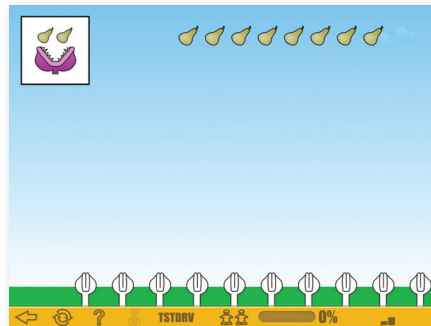
## Second Grade: **How Many More?**



Describe the difference between two whole numbers using models as well as the words less, greater, and equal.

*Test Drive > 2nd Grade > Addition and Subtraction Situations > How Many More?*

## Third Grade: **Fruit Monster**

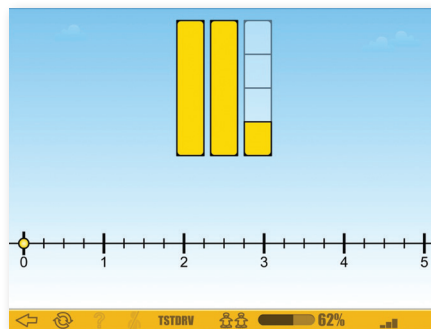


Students explore the relationship between inputs and outputs using ratios within a visual model.

*Test Drive > 3rd Grade > Multiplication and Division Situations > Fruit Monster*

*VA: Test Drive > 3rd Grade > Optional Objectives > Multiplication and Division Situations > Fruit Monster*

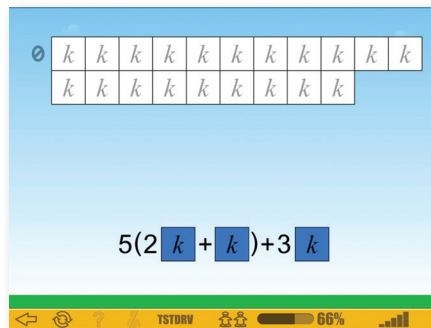
## Fourth Grade: **Scale Fraction**



Plot the combined length of a collection of rectangles on the number line.

*Test Drive > 4th Grade > Mixed Numbers > Mixed Numbers on the Number Line > Scale Fraction*

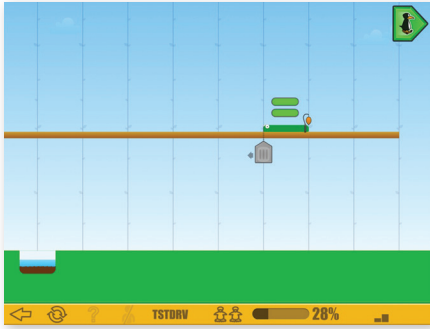
## Fifth Grade: **Multiplying with Parentheses**



Learn the meaning of and how to simplify expressions involving variables and parentheses.

*Test Drive > 5th Grade > Using Parentheses > Multiplying with Parentheses*

Sixth Grade and Sixth Grade MSS: **Seed Worm**

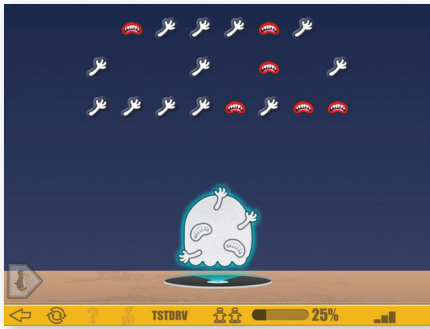


Select the number of increments, the length of the increment, or the total distance, when given the other two.

*Test Drive > 6th Grade > Applying Rates and Ratios > Seed Worm*

*Test Drive > 6th Grade MSS > Applying Rates and Ratios > Seed Worm*

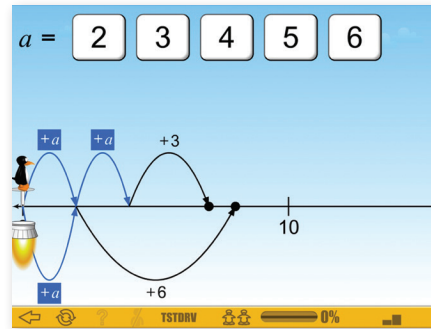
Seventh Grade MSS: **Ratio Monster**



Select a number of monster arms and mouths according the given ratio. In the last level, chose a ratio first and then select the parts.

*Test Drive > 7th Grade MSS > Proportional Reasoning > Ratio Monster*

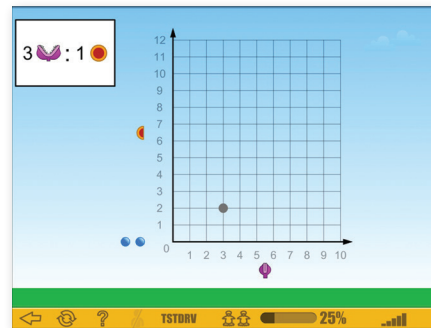
Eighth Grade MSS: **Rolling Equation**



Use a number line model to solve one-variable addition equations, including equations with multiple instances of the variable.

*Test Drive > 8th Grade MSS > Solving Linear Equations > Solving Linear Equations > Rolling Equation*

High School: **Monster Graph**



Given a rate, plot equivalent rates on a graph.

*Test Drive > High School Intervention > Unit Rates, Tables, and Graphs > Tables and Graphs > Monster Graphs*