

# Math Practice #4: Model with Mathematics

## WHY THIS IS IMPORTANT

*Recognizing and exploring math in the world around us helps us to understand our world better. When we can see patterns and make predictions based upon our experiences, we make better, wiser decisions. Mathematical modeling in the real world means:*

- *Making observations and organizing information*
- *Noticing patterns and using them to make predictions*
- *Making decisions based on patterns and predictions*
- *Reflecting on whether decisions were good and learning from them*

## WHAT TO EXPECT IN MATH CLASS

*Finding math in situations that (at first) don't seem math-related.*

*Organizing lots of information in lots of different ways.*

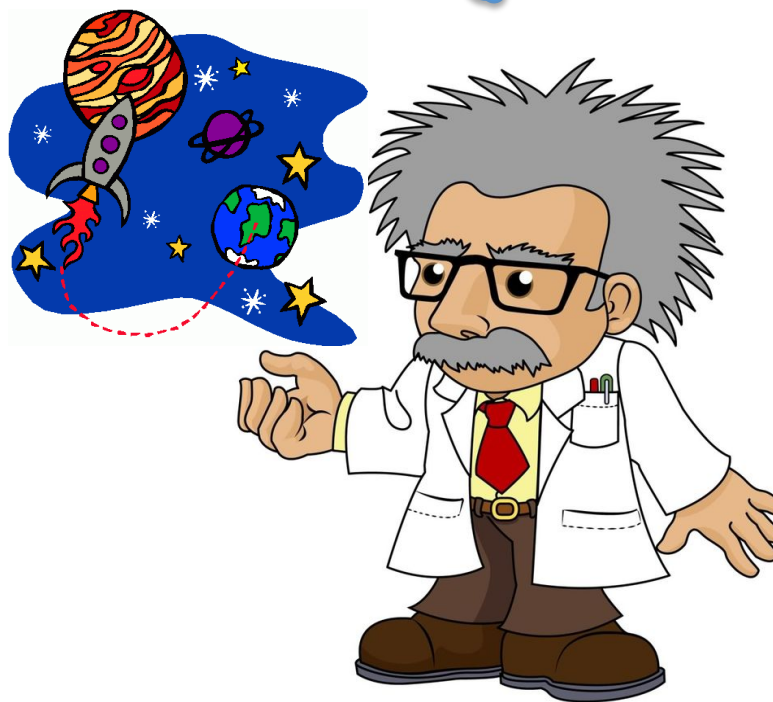
*Finding and describing patterns in data.*

*Using data patterns to explain real-world phenomena.*

## WHAT TO DO IN MATH CLASS

- *Practice wearing "math glasses" - looking for mathematics in your life, even when things don't seem to relate to math at first*
- *Organize information in different ways (tables, charts, pictures, graphs, physical objects, equations, words) to improve chances of finding patterns*
- *Look for patterns; think about which patterns make sense and which ones are coincidence*
- *Keep the pattern going in order to make predictions and discoveries*

**I notice interesting things in the world around me, and I try to explain them using mathematics. I observe. I look for patterns. I make predictions. I test my predictions to see if they are correct.**



## HOW TO SUPPORT

*"What information is important?"*

*"How might you organize the important information?"*

*"What mathematical formulas or calculations might be helpful?"*

*"What patterns can you find?"*

*"What happens if you keep those patterns going?"*

*"Does your answer make sense for the situation? Why or why not?"*