

Dear Family,

The next unit in mathematics class, *What Do You Expect?* Explores the topic of Probability and Expected Value, this is a critical thinking unit that assumes eighth grade students are familiar with the basic ideas of probability that were presented in grade 6 in the unit, *How Likely Is It?* Through the work presented in *What do You Expect?*, students will deepen and expand their understanding of these basic concepts.

Probabilities can help students make decisions: If there is a 75% chance of rain, one might decide to carry an umbrella. Probabilities can also help you to predict what will happen over the long run: toss a coin to predict how many days each month it will rain.

***What Do You Expect?* offers many opportunities for students to collect data through experimentation, and to use their data to assign experimental probabilities to the possible outcomes. Continuing to work with familiar strategies, students will progress into finding theoretical probabilities for two-stage events: constructing area models such as tree diagrams will represent the possible outcomes.**

Simply put, problems in *What do You Expect?* will answer questions about situations that involve analyzing probabilities:

- **What are the possible outcomes for the event(s) in a situation?**
- **Are these outcomes equally likely?**
- **Is this a fair or unfair situation?**
- **Can I compute the theoretical probabilities or do I conduct an experiment?**
- **How can I determine the probability of an outcome of one event followed by a second event?**
- **How can I use expected value to help make decisions?**

As students become more familiar with engineering probabilities, they will see that some everyday opinions and decisions can be based upon quick and accurate mathematical thinking.

Sincerely,