

Standards for Mathematical Practice



1 Make sense of problems and persevere in solving them.

- Multiple representations are presented to help students move from concrete to representative and into abstract thinking.
- In *Modeling Real Life* examples and exercises, students **MAKE SENSE OF PROBLEMS** using problem-solving strategies, such as drawing a picture, circling knowns, and underlining unknowns. They also use a formal problem-solving plan: understand the problem, make a plan, and solve and check.

2 Reason abstractly and quantitatively.

- Visual problem-solving models help students create a coherent representation of the problem.
- *Explore and Grows* allow students to investigate concepts to understand the **REASONING** behind the rules.
- Exercises encourage students to apply **NUMBER SENSE** and explain and justify their **REASONING**.

3 Construct viable arguments and critique the reasoning of others.

- *Explore and Grows* help students make conjectures, use **LOGIC**, and **CONSTRUCT ARGUMENTS** to support their conjectures.
- Exercises, such as *You Be The Teacher* and *Which One Doesn't Belong?*, provide students the opportunity to **CRITIQUE REASONING**.

4 Model with mathematics.

- Real-life situations are translated into pictures, diagrams, tables, equations, and graphs to help students analyze relations and to draw conclusions.
- Real-life problems are provided to help students apply the mathematics they are learning to everyday life.
- **MODELING REAL LIFE** examples and exercises help students see that math is used across content areas, other disciplines, and in their own experiences.

5 Use appropriate tools strategically.

- Students can use a variety of hands-on manipulatives to solve problems throughout the program.
- A variety of tools, such as number lines and graph paper, manipulatives, and digital tools, are available as students **CHOOSE TOOLS** and consider how to approach a problem.

6 Attend to precision.

- **PRECISION** exercises encourage students to formulate consistent and appropriate reasoning.
- Cooperative learning opportunities support precise communication.

7 Look for and make use of structure.

- *Learning Targets* and *Success Criteria* at the start of each chapter and lesson help students understand what they are going to learn.
- *Explore and Grows* provide students the opportunity to see **PATTERNS** and **STRUCTURE** in mathematics.
- Real-life problems help students use the **STRUCTURE** of mathematics to break down and solve more difficult problems.

8 Look for and express regularity in repeated reasoning.

- Opportunities are provided to help students make generalizations through **REPEATED REASONING**.
- Students are continually encouraged to check for reasonableness in their solutions.