

# STATE ASSESSMENT

## PROBABILITY/STATISTICS

### STRATEGIES

- Ask for interpretations of pictographs and bar graphs.
- Teach predictions: matrices, charts, graphs, tables.
- Ensure the understanding of zero in place value.
- Explore probability with ice cream & toppings.
- Compare/order numbers through 999,999.
- Review place value through 999,999.
- Match graphs with sets of data.
- Encourage *Guess and Check!*
- Post students' predictions.
- Explain connections.

#### COMMON MATH STANDARDS

**Numbers and Operations:** Master numbers, representations, standard algorithms of arithmetic, basic and advanced operations, computation fluency, and estimation.

**Measurement:** Determine measurable attributes of objects, units of measurement, formulas, and real-life applications of measurement.

**Problem Solving:** Apply appropriate strategies and use higher-level thinking skills to find solutions. Investigate, develop, and analyze mathematical problems using reasoning and justification.

**Algebra:** Determine patterns, relationships, and algebraic functions. Use reasoning to solve algebraic problems.

**Geometry:** Describe and analyze shapes and geometric relationships, and solve problems involving spatial reasoning.

**Data, Statistics, and Probability:** Collect, organize, interpret, and analyze data using statistical models. Draw inferences and apply probability concepts to make predictions.

**Connections:** Link mathematical ideas within the discipline and connect ideas to other disciplines and to real-life situations. Use talking, writing, and creating representations for precise communication.

#### SEIZE THE MOMENT!

#### CLOSE THE ACHIEVEMENT GAP

1. Invite parents into your classroom regularly.
2. Involve parents with homework and projects.
3. Monitor actual time students spend on learning activities. Increase time on task.
4. Provide early intervention with extra support for struggling students.
5. Take time to teach study skills.
6. Have fun with algebraic concepts!
7. Use writing, illustrating, and verbalizing as a means for students to organize their thinking and to communicate learning.
8. Use assessment to pinpoint specific deficiencies. Make sure all students have mastered math basics.

# MATH GRADE 3

#### HOME CONNECTIONS

Send parents information about how to build their child's self-confidence with math.

**PARENTS, TRY THESE ACTIVITIES WITH YOUR CHILD:**

- Talk about ways math is important in real life.
- Help your child identify coins and bills; count money.
- Have your child read sales ads aloud.
- Cook together using measurement.
- Hang a thermometer. Read it together.
- Explain shoe sizes. Compare sizes.
- Show your child how to weigh himself or herself.
- Have your child identify shapes around the home.
- Use a face clock. Have your child tell you the time.
- Play card games.

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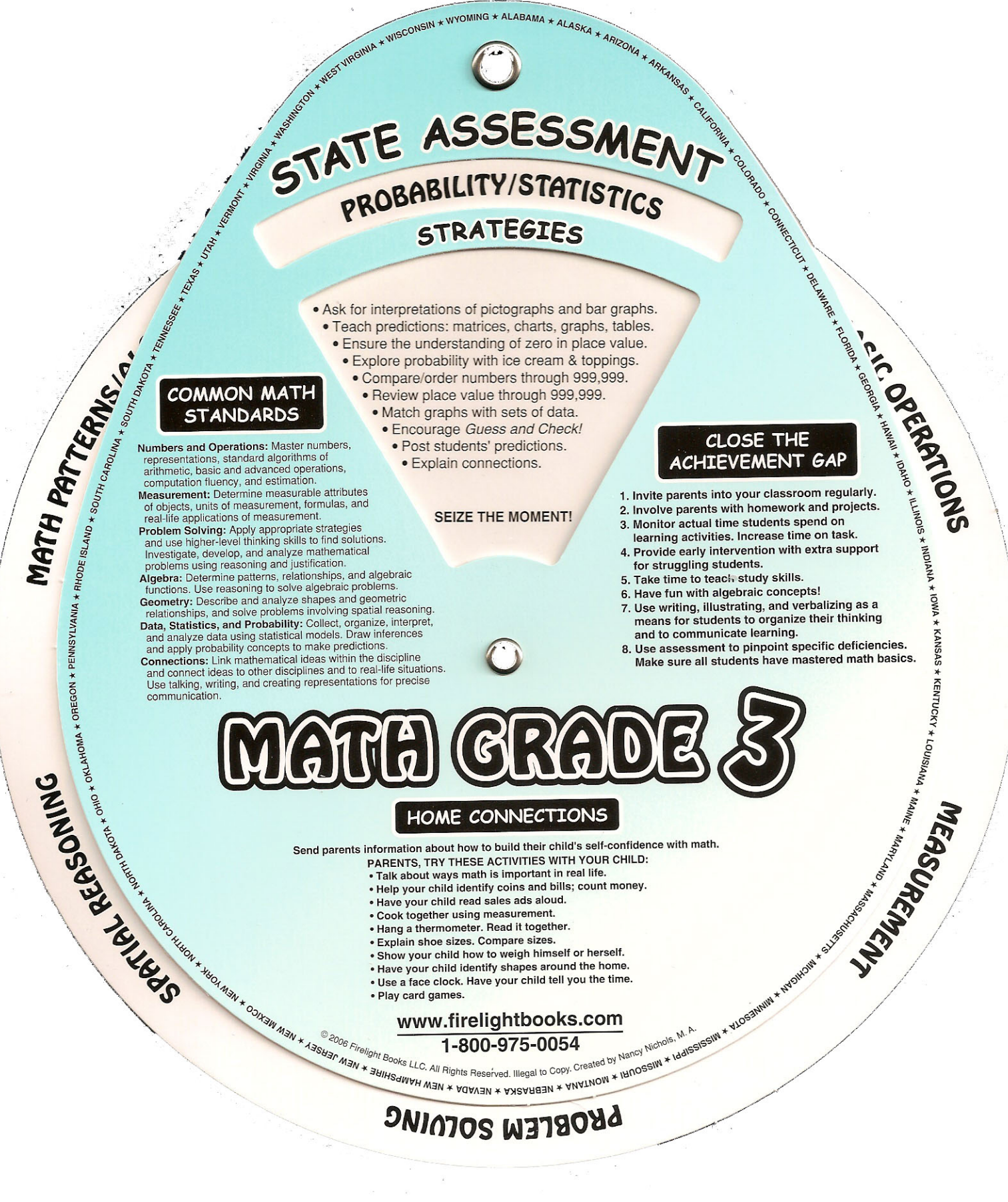
MATH PATTERNS/A

SPATIAL REASONING

BASIC OPERATIONS

MEASUREMENT

PROBLEM SOLVING



# STATE ASSESSMENT

## SPATIAL REASONING STRATEGIES

- Flash a shape for 5 seconds, then let students draw it from memory. Show original; discuss characteristics.
- Explore concepts with Snap Cubes & Fraction Cubes.
- Discuss form discrimination and attributes.
- Display student-generated projects of geometric figures, including definition of properties.
- Use pattern recognition brainteasers!
- Home project: geometry word-webs.
- Exhibit art: translations, rotations, & reflections.

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PENTOMINOES!

### CLOSE THE ACHIEVEMENT GAP

1. Contact parents. Invite them to your classroom.
2. Involve parents with homework and projects.
3. Monitor actual time students spend on learning activities. Increase time on task.
4. Provide early intervention with extra support for struggling students. Utilize peer tutoring.
5. Make sure all students use effective study skills.
6. Ensure proficiency with pencil and paper calculations.
7. Get serious about algebraic concepts!
8. Use writing, illustrating, and verbalizing as ways for students to organize their thinking and to communicate learning.
9. Use assessment to pinpoint specific deficiencies. Reteach for mastery.

# MATH GRADE 6

### HOME CONNECTIONS

Send parents information about how to build their child's math skills.

PARENTS, TRY THESE ACTIVITIES AT HOME:

- Spend time with your child. Talk about how math is important in the real world.
- Expect homework. Help your child by providing a quiet study place. Turn off the TV and radio.
- Communication between school and home is important. Visit your child's teachers!
- Give your child some responsibilities such as shopping, cooking with recipes, and home repair using real tools.
- Talk about budgets, responsible spending, and saving. Take your child to the bank.
- If your child is having problems, ask the teacher for advice, get a tutor, or suggest study time with friends.
- Play card games and board games. Put together jigsaw puzzles.
- Hang a thermometer and display a face clock. Talk about temperature and time each day.

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PROBLEM SOLVING

MEASUREMENT

BASIC OPERATIONS

PROBABILITY/STATISTICS

BASIC OPERATIONS

ALABAMA \* ALASKA \* ARIZONA \* ARKANSAS \* CALIFORNIA \* COLORADO \* CONNECTICUT \* DELAWARE \* FLORIDA \* GEORGIA \* HAWAII \* IDAHO \* ILLINOIS \* INDIANA \* IOWA \* KANSAS \* KENTUCKY \* LOUISIANA \* MAINE \* MARYLAND \* MASSACHUSETTS \* MICHIGAN \* MINNESOTA \* MISSISSIPPI \* MISSOURI \* MONTANA \* NEBRASKA \* NEVADA \* NEW HAMPSHIRE \* NEW JERSEY \* NEW MEXICO \* NEW YORK \* NORTH CAROLINA \* NORTH DAKOTA \* OHIO \* OKLAHOMA \* OREGON \* PENNSYLVANIA \* RHODE ISLAND \* SOUTH CAROLINA \* SOUTH DAKOTA \* TENNESSEE \* TEXAS \* UTAH \* VERMONT \* VIRGINIA \* WASHINGTON \* WEST VIRGINIA \* WISCONSIN \* WYOMING

# STATE ASSESSMENT

## FUNCTIONS

## STRATEGIES

- Stress that complex problems are not solved quickly.
- Use the cyclic method to review concepts, allowing students to review, relearn, or finally learn a topic.
- Use tables and graphs as tools to interpret expressions, equations, and inequalities.
- Graph quadratic functions for real-life data, such as wind chill predictions.
- Require students to explain their thinking process in written form.

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### CLOSE THE ACHIEVEMENT GAP

1. Align curriculum with the state standards. Use supplementary materials.
2. Devote quality time to instruction and practice. Monitor time on task.
3. Use assessment to pinpoint specific deficiencies. Reteach for mastery.
4. Provide early intervention with extra support for struggling learners. Utilize peer tutoring.
5. Incorporate differentiated instruction.
6. Make sure all students use effective study skills.
7. Link real-life situations to objectives.
8. Use interactive teaching strategies. Use manipulatives. Make lessons interesting!
9. Use writing, illustrating, and verbalizing as a means for students to organize their thinking and to communicate learning.
10. Involve parents and the community. Provide service learning opportunities.

### POST STEPS!

# MATH GRADE 9

### HOME CONNECTIONS

Send parents information about how to build their teen's self-confidence with math.

#### PARENTS, TRY THESE ACTIVITIES WITH YOUR TEEN:

- Talk about how adults use math in daily life.
- Express respect for teachers and encourage your teen to learn as much as possible.
- Provide a quiet study place. Turn off distractions such as the TV and radio. Expect homework.
- Communication between school and home is very important. Visit your teen's teacher.
- Expect your teen to count money and make correct change.
- Let your teen have shopping responsibilities that include reading sales ads and seeking the best buy.
- Hang a thermometer. Discuss temperature and weather.
- Encourage drawing 3D shapes: homes, castles, rockets.

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