

## **I. PHILOSOPHY**

The 5<sup>th</sup> Grade PSSA Math Prep course of the Pine Grove Area School District has been structured to introduce or review, systematically, the five core mathematical concepts including numbers and operations, measurement, geometry, algebraic concepts, and data analysis and probability. Developmentally appropriate activities will include opportunities for collaborative learning using manipulatives. The course will allow for the accommodation of many learning styles, motivational levels, and academic abilities.

## **II. CORE CONCEPTS**

1. Open Ended Questions – Learn strategies for solving open-ended questions
2. Number Systems – Show an understanding of relationships among numbers
3. Processes of Measurement – Ability to make and convert measurements
4. Geometric Relationships – Identify properties of two - and three - dimensional geometric shapes
5. Algebraic Concepts – Demonstrate an understanding of patterns, relations, and functions
6. Data Analysis – Ability to describe and interpret data sets
- 7, Probability – Ability to calculate probability of simple events

### **III. COURSE OF STUDY**

A. Course Name: PSSA Math Prep

B. Grade Level: 5

C. Length of Course: Full year

1. Frequency: 60 days per school year

2. Duration: 44 minutes

D. Academic Level: 5th grade, Basic and Below Basic PSSA students

E. Credits: 0.333

F. Prerequisites: None

G. Course Description:

The PSSA Math Prep course will provide remediation to students in the five core areas of mathematics. The course will help prepare to students to successfully complete the PSSA Math Test. Emphasis will be placed on meeting every student's needs and learning style. Accommodations will be made for students who need additional assistance. Extra help will always be provided as necessary.

IV. CONTENT: Grade 5 Mathematics

CORE CONCEPT 1: Open Ended Questions

MAJOR OBJECTIVE: Learn strategies for solving open-ended questions

<b>CURRICULUM STANDARD:</b>			
State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.5.5.A</b> Develop a plan to analyze a problem, identify the information needed to solve the problem, carry out the plan, check whether an answer makes sense and explain how the problem was solved.</p>	<p>Teacher will guide students to:</p> <p>View examples of responses ranging from 1 – 5 to find differences.</p> <p>Use correct technique in answering open ended questions.</p> <p>Explain how their work was done in finding a solution.</p> <p>Solve and explain work during journal examples.</p>	<p>Teacher evaluation of:</p> <p>Students’ written responses</p> <p>Individuals during small group work</p> <p>Whole class discussion</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher’s supplemental materials</p>
<p><b>PA Standard 2.5.5.B</b> Use appropriate mathematical terms, vocabulary, language symbols and graphs to explain clearly and logically solutions to problems.</p>	<p>Teacher will guide students to:</p> <p>Create a vocabulary journal, which contains all vocabulary words throughout the year.</p> <p>Use vocabulary terms in explanations of open-ended questions.</p> <p>Create graphs or charts to help reach solutions of problems.</p>	<p>Teacher evaluation of:</p> <p>Students’ written responses</p> <p>Individuals during small group work</p> <p>Whole class discussion</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher’s supplemental materials</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 1: Open Ended Questions

MAJOR OBJECTIVE: Learn strategies for solving open-ended questions

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.5.5.F</b> Use appropriate problem-solving strategies (e.g., solving a simpler problem, drawing a picture or diagram).</p>	<p>Teacher will guide students to:</p> <p>Brainstorm in small groups methods they use to solve a problem.</p> <p>Identify information that is not needed to solve the problem.</p> <p>Select a strategy to solve each word problem, including draw a picture or diagram, make a table or chart, numbered steps, guess and test.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Individuals during small group work</p> <p>Whole class discussion</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 2: Number Systems

MAJOR OBJECTIVE: Show an understanding of the relationships among numbers

<b>CURRICULUM STANDARD:</b>			
State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.1.5.A</b> Use expanded notation to represent whole numbers or decimals.</p>	<p>Teacher will guide students to:</p> <p>Convert numbers from standard form to expanded form and expanded form to standard form.</p> <p>Create place value charts to help separate number.</p> <p>Line up expanded form parts and add to find standard form.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Individuals during small group work</p> <p>Whole class discussion</p> <p>Observation of hands-on activities</p> <p>Student exploration</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Manipulatives</p>
<p><b>PA Standard 2.1.5.D</b> Use models to represent fractions and decimals.</p>	<p>Teacher will guide students to:</p> <p>Identify fractions of a whole using pictures and manipulatives.</p> <p>Use money to understand decimals.</p> <p>Find examples throughout their day of the use of fractions (pizza into eighths, sandwich in half, test scores).</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Individuals during small group work</p> <p>Whole class discussion</p> <p>Observation of hands-on activities</p> <p>Student exploration</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Manipulatives</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 2: Number Systems

MAJOR OBJECTIVE: Show an understanding of the relationships among numbers

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.1.5.F</b> Use simple concepts of negative numbers (e.g., on a number line, in counting, in temperature).</p>	<p>Teacher will guide students to:</p> <p>Use a number line to locate negative numbers.</p> <p>Find temperature differences between negative and positive temperatures.</p> <p>Count from zero in both the negative and positive directions to create number lines.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Independent activities</p> <p>Whole class discussion</p> <p>Teacher observation</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p>
<p><b>PA Standard 2.2.5.A</b> Create and solve word problems involving addition, subtraction, multiplication, and division of whole numbers.</p>	<p>Teacher will guide students to:</p> <p>Discuss strategies for solving word problems.</p> <p>Identify the needed information in each problem and eliminate the information that is not needed.</p> <p>Show all steps of math work and explain how they solved their problem.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Independent activities</p> <p>Whole class discussion</p> <p>Teacher observation</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 2: Number Systems

MAJOR OBJECTIVE: Show an understanding of the relationships among numbers

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.2.5.B</b> Develop and apply algorithms to solve word problems that involve addition, subtraction, and/or multiplication with decimals with and without regrouping.</p>	<p>Teacher will guide students to:</p> <p>Practice operations of decimals using manipulatives to model them.</p> <p>Apply rules for decimal operations to solve problems involving addition, subtraction, multiplication.</p> <p>Solve open-ended questions involving the operations of decimals.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Student performance</p> <p>Independent activities</p> <p>Whole class discussion</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Manipulatives</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 2: Number Systems

MAJOR OBJECTIVE: Show an understanding of relationships among numbers

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.2.5.C</b> Develop and apply algorithms to solve word problems that involve addition, subtraction, and/or multiplication with fractions and mixed numbers that include like and unlike denominators.</p>	<p>Teacher will guide students to:</p> <p>Practice operations of fractions using manipulatives to model them.</p> <p>Apply rules for fraction operations to solve problems with fractions with like and unlike denominators.</p> <p>Solve open-ended questions involving the operations of fractions.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Student performance</p> <p>Independent activities</p> <p>Whole class discussion</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Manipulatives</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 3: Processes of Measurement

MAJOR OBJECTIVE: Ability to make and convert measurements

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<b>PA Standard 2.3.5.E</b> Add and subtract measurements.	Teacher will guide students to:  Use rulers to make measurements to 1/16 of an inch of objects around the classroom and find sums and differences between objects.  Compare differences in weights, temperatures, perimeter, volume, and area between different measurements within the same system.	Teacher evaluation of:  Students' written responses  Student exploration  Individuals during small group work  Teacher observation	Textbook resources  Library/AV resources  Computer programs/web sites  Journal or notebook  Publisher's supplemental materials  Rulers

CONTENT: Grade 5 Mathematics

CORE CONCEPT 4: Geometric Relationships

MAJOR OBJECTIVE: Identify properties of two - and three - dimensional geometric shapes

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.9.5.A</b> Give formal definitions of geometric figures.</p>	<p>Teacher will guide students to:</p> <p>Find geometric figures around classroom and identify the shape.</p> <p>Understand classifications of figures such as quadrilaterals, triangles, circles.</p> <p>Name or list properties of classifications.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p> <p>Teacher observation</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p>
<p><b>PA Standard 2.9.5.B</b> Classify and compare triangles and quadrilaterals according to sides or angles.</p>	<p>Teacher will guide students to:</p> <p>Identify differences between quadrilaterals and triangles.</p> <p>Identify similarities and differences amongst different types of quadrilaterals or different types of triangles.</p> <p>Name or list all types of quadrilaterals and their properties.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Student performance</p> <p>Teacher observation</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 4: Geometric Relationships

MAJOR OBJECTIVE: Identify properties of 2 - and three - dimensional geometric shapes

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.9.5.C</b> Identify and compare circles, their diameter and their radii.</p>	<p>Teacher will guide students to:</p> <p>Describe the basic properties of a circle.</p> <p>Identify vocabulary terms, such as diameter, circumference and radius.</p> <p>Calculate the diameter, circumference, and radius of circles using the given formulas.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p> <p>Teacher observation of manipulatives</p> <p>Students' drawings</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Manipulatives</p>
<p><b>PA Standard 2.9.5.E</b> Construct two- and three-dimensional shapes and figures using manipulatives, geoboards and computer software.</p>	<p>Teacher will guide students to:</p> <p>Review properties of different two-dimensional figures (squares, rectangles, rhombus, trapezoids, triangles).</p> <p>Draw two-dimensional figures showing differences in their shapes on dot paper.</p> <p>Construct figures and shapes using geoboards and polygons.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p> <p>Teacher observation of manipulatives</p> <p>Students' drawings</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Manipulatives</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 4: Geometric Relationships

MAJOR OBJECTIVE: Identify properties of 2 - and three - dimensional geometric shapes

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.9.5.H</b> Describe the relationship between the perimeter and area of triangles, quadrilaterals, and circles.</p>	<p>Teacher will guide students to:</p> <p>Review formulas for perimeter and area of triangles, quadrilaterals, and circles.</p> <p>Establish ideas for how the perimeter and area formulas relate to each other amongst the different shapes.</p> <p>Explore area by using triangles to make quadrilaterals or dividing quadrilaterals into triangles.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p> <p>Students' drawings</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Manipulatives</p>
<p><b>PA Standard 2.9.5.L</b> Identify properties of geometric figures (e.g., parallel, perpendicular, similar, congruent, symmetrical).</p>	<p>Teacher will guide students to:</p> <p>Identify and learn definitions for vocabulary terms.</p> <p>Identify items in nature or possessions that have parallel or perpendicular lines.</p> <p>Draw, create, and find items that are symmetrical and identify its lines of symmetry.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p> <p>Students' drawings</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 5: Algebraic Concepts

MAJOR OBJECTIVE: Demonstrate an understanding of patterns, relations, and functions

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.8.5.B</b> Connect patterns to geometric relations and basic number skills.</p>	<p>Teacher will guide students to:</p> <p>Extend or find missing element in patterns of numerical or geometric patterns.</p> <p>Create patterns using the four basic operations of whole numbers.</p> <p>Create a pattern for another student to extend.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p> <p>Students' patterns</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p>
<p><b>PA Standard 2.8.5.C</b> Form rules based on patterns (e.g., an equation that relates pairs in a sequence).</p>	<p>Teacher will guide students to:</p> <p>Discuss the "nth" term of a pattern.</p> <p>Form an equation to solve for the "nth" term of a given pattern.</p> <p>Create the pattern from a given equation by substituting a whole number into the "nth" term.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 5: Algebraic Concepts

MAJOR OBJECTIVE: Demonstrate an understanding of patterns, relations, and functions

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.8.5.F</b> Describe a realistic situation using information given in equations, inequalities, tables or graphs.</p>	<p>Teacher will guide students to:</p> <p>Solve one step equations using an isolated variable.</p> <p>Identify examples of real-life situations where equations or graphs would be helpful.</p> <p>Solve equations or complete tables using information from real-life situations (e.g., money, grades).</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p> <p>Students' patterns</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 6: Data Analysis

MAJOR OBJECTIVE: Ability to describe and interpret data sets

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.6.5.A</b> Organize and display data using pictures, tallies, tables, charts, bar graphs, and circle graphs.</p>	<p>Teacher will guide students to:</p> <p>Identify the components of a graph using vocabulary terms such as title, scales, and labels.</p> <p>Analyze graphs and tables and interpret the data by answering questions pertaining to the graphs.</p> <p>Create bar graphs, line graphs, and pictographs using given or collected data.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p> <p>Independent activities</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Graph paper</p>
<p><b>PA Standard 2.6.5.B</b> Describe data sets using mean, median, mode, and range.</p>	<p>Teacher will guide students to:</p> <p>Identify and calculate the measures of central tendency (mean, median, mode, and range).</p> <p>Determine measures of central tendency using given data sets such as sports statistics.</p> <p>Collect data of their choice and find measures of central tendency for collected data.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Cooperative group project</p> <p>Teacher observation</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 6: Data Analysis

MAJOR OBJECTIVE: Ability to describe and interpret data sets

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.6.5.E</b> Construct and defend simple conclusions based on data.</p>	<p>Teacher will guide students to:</p> <p>Identify the components of a graph using vocabulary terms such as title, scales, and labels.</p> <p>Analyze graphs and tables and interpret the data by answering questions pertaining to the graphs.</p> <p>Create bar graphs, line graphs, and pictographs using given or collected data.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p> <p>Independent activities</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Graph paper</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 7: Probability

MAJOR OBJECTIVE: Ability to calculate probability of simple events

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.7.5.A</b> Perform simulations with concrete devices to predict the chance of an event occurring.</p>	<p>Teacher will guide students to:</p> <p>Identify the probability of flipping a coin and the result being heads.</p> <p>Make a prediction of the results before a simulation takes place.</p> <p>Perform a simulation with 50 flips of a coin and 50 rolls of a die and record the results.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p> <p>Oral question and answer</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Dice, coins</p>
<p><b>PA Standard 2.7.5.B</b> Determine the fairness of a spinner.</p>	<p>Teacher will guide students to:</p> <p>Discuss the fairness of the spinner and if chances of each outcome are equally likely.</p> <p>Identify the properties of a spinner that is fair.</p> <p>Create a spinner which is "fair".</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Whole class discussion</p> <p>Individuals during small group work</p> <p>Oral question and answer</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Board game spinner</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 7: Probability

MAJOR OBJECTIVE: Ability to calculate probability of simple events

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<b>PA Standard 2.7.5.C</b> Express probability as a fraction or decimal.	Teacher will guide students to:  Use data collected from coin flips and die rolls to determine the experimental probability of each event as a fraction.  Identify probability of events as both a decimal and fraction.	Teacher evaluation of:  Students' written responses  Partner work  Individuals during small group work  Oral question and answer	Textbook resources  Library/AV resources  Computer programs/web sites  Journal or notebook  Publisher's supplemental materials  Dice, coins, spinners
<b>PA Standard 2.7.5.E</b> Calculate the probability of a simple event.	Teacher will guide students to:  Identify events that are certain or impossible to occur.  Predict which events are most likely to least likely to occur on a created spinner.	Teacher evaluation of:  Students' written responses  Whole class discussion  Individuals during small group work  Oral question and answer	Textbook resources  Library/AV resources  Computer programs/web sites  Journal or notebook  Publisher's supplemental materials  Board game spinner

CONTENT: Grade 5 Mathematics

CORE CONCEPT 7: Probability

MAJOR OBJECTIVE: Ability to calculate probability of simple events

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.7.5.F</b> Determine patterns generated as a result of an experiment.</p>	<p>Teacher will guide students to:</p> <p>Review fairness and likeliness of an event happening with impossible being 0 and certain being 1.</p> <p>Identify events that are certain or impossible to occur.</p> <p>Predict which events are most likely to least likely to occur on a created spinner.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Partner work</p> <p>Individuals during small group work</p> <p>Oral question and answer</p> <p>Created spinner</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Dice, coins, spinners</p>
<p><b>PA Standard 2.7.5.G</b> Determine the probability of an event involving "and", "or" "not".</p>	<p>Teacher will guide students to:</p> <p>Review fairness and likeliness of an event happening with impossible being 0 and certain being 1.</p> <p>Identify events that are certain or impossible to occur.</p> <p>Predict which events are most likely to least likely to occur on a created spinner.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Partner work</p> <p>Individuals during small group work</p> <p>Oral question and answer</p> <p>Created spinner</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Dice, coins, spinners</p>

CONTENT: Grade 5 Mathematics

CORE CONCEPT 7: Probability

MAJOR OBJECTIVE: Ability to calculate probability of simple events

**CURRICULUM STANDARD:**

State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p><b>PA Standard 2.7.5.H</b> Predict and determine why some outcomes are certain, more likely, less likely, equally likely or impossible.</p>	<p>Teacher will guide students to:</p> <p>Review fairness and likeliness of an event happening with impossible being 0 and certain being 1.</p> <p>Identify events that are certain or impossible to occur.</p> <p>Predict which events are most likely to least likely to occur on a created spinner.</p>	<p>Teacher evaluation of:</p> <p>Students' written responses</p> <p>Partner work</p> <p>Individuals during small group work</p> <p>Oral question and answer</p> <p>Created spinner</p>	<p>Textbook resources</p> <p>Library/AV resources</p> <p>Computer programs/web sites</p> <p>Journal or notebook</p> <p>Publisher's supplemental materials</p> <p>Dice, coins, spinners</p>

**V. EXPECTED LEVELS OF ACHIEVEMENT**

A. Students are expected to reach the 5<sup>th</sup> Grade level of achievement in mathematics. These skills include all of those noted in the specific content area of this curriculum.

B. Grading system for PSSA Math Prep class is as follows:

<b>Grading Scale</b>	
Proficient	63% - 100%
Basic	0% – 62%

C. Each student's grade will be determined at the conclusion of each marking period.