

Course: Math 6

GRADE: 6

Revised 9/14/07

PLANNED COURSE CURRICULUM GUIDE

I. COURSE DESCRIPTION AND INTENT:

The goal of the mathematics program is to provide an appropriate curriculum for every student to value mathematics; to become confident in one's mathematical ability; to become a mathematical problem-solver; and to learn to communicate and reason mathematically. Students will be provided with a solid foundation in fundamental middle grade topics such as decimals and fractions with an introduction to key algebraic topics. Geometry readiness topics are covered, providing a solid preparation for future math study. Problem-solving strategies involving different techniques on how to approach a problem will be presented.



II. INSTRUCTIONAL TIME:

Class Periods: 90

Length of Class Periods (minutes): 70

Length of Course: ½ year (full year, alternating days)

Unit of Credit:

PLANNED COURSE ADAPTATIONS/MODIFICATIONS

Introduction

The instructional adaptations that follow are provided as suggestions to be implemented with all students, particularly with those in need of special education services including the gifted. This listing is in no way intended to be exhaustive. Rather, it is reflective of some major considerations in the area of curriculum adaptations/modifications.

These instructional adaptations will work with any student, but are especially beneficial to those in need of learning support. Some may argue that these modifications are simply *good teaching*. Indeed, modifications of this type do represent good teaching. These principles of good teaching become instructional modifications whenever: (1) certain students in a particular class require such modifications *above and beyond* what is typically required by *most* students in that class and (2) without these modifications, these same students would not succeed.

Assessment is an integral part of instruction reflecting student progress as well as achievement. Therefore, also included are suggestions for assessment modifications.

- Peer Support
- Cooperative learning among peers
- Modeling
- Development of Information Organizer
- Development of Graphic Organizer
- Development of structured study guides
- Student selection of instructional material (i.e., reading, writing, math)
- Taped lessons
- Copy notes (peer or teacher)
- Student conferencing
- Combine and vary modes of lesson presentation
- Adjust language level to match the developmental and intellectual levels of students
- Let student practice given examples first. Then assign tasks to be completed.
- Provide opportunity for guided and independent practice in a variety of situations
- Limit number and length of directions
- Have students repeat/review directions (i.e., peer to peer, student to teacher)
- Give feedback that is as immediate, specific, and objective as possible
- Clarify error responses so that students do not make the same errors over and over again
- Reinforce progress towards desired outcomes
- Breakdown complex tasks into smaller, more manageable units
- Use verbal prompts to elicit desired results
- Use manual guidance (i.e., hand over hand) to facilitate correct responses
- Computer assisted instruction
- Assessment based upon teacher observation of student performance (i.e., daily work, portfolio, artifacts, projects)
- Extended test time
- Test read to student by teacher or peer
- Oral testing (i.e., student retelling of information)
- Open book/note test
- Alternate testing (any demonstration of a student's understanding of concepts)
- Retesting
- Reduce the number of responses required on tests
- Use of curriculum based assessment
- Vary test format
- Objectively define mastery as related to each task. Tasks should be learned to mastery
- Reduce or remove distracting stimuli
- Use of concrete objects and manipulatives in all stages of instruction and assessment
- Emphasize important information
- Allow extra time to complete assignments/projects
- Limit the number of assigned tasks in the initial stages of learning. As the student's competency increases, expect the student to complete the same number of tasks as the rest of the class
- Use supplemental materials
- Alternate assignments accepted (i.e., modification to homework assignments)
- Flexible grouping/individual assistance
- Seating to accommodate needs
- Teacher proximity
- Use behavioral management techniques (i.e., contracts, time-out, token system, charts)

PREFACE

Users and information seekers should familiarize themselves with the purpose and terminology of this **Planned Course Curriculum Guide (PCCG)**. We suggest that you first read the following:

- **PCCG PURPOSE AND INTENT**
- **PCCG DEFINITIONS**

The PCCG specifies the unit lesson outcome, essential content, standards, activities, resources, and evaluation of student performance. This sector provides the means to initiate the learning activities to attain the program goal as identified in the course description and intent.

The standards and outcomes are minimal expectations; further embellishment of the course is discretionary with the instructor depending upon the capability of the students.

This PCCG is designed as an ACTIVE document capable of technological modification as required.

The instructional delivery of this curriculum is quality controlled through the lesson plan development of the teacher.

PLANNED COURSE CURRICULUM GUIDE (PCCG) PURPOSE AND INTENT

The Planned Course Curriculum Guide (PCCG) is a multi-purpose document:

- All staff, particularly new teachers, can understand instructional expectations through the WRITTEN curriculum
- A continuing district-wide instructional process and scope and sequence of subject matter are enhanced. The WRITTEN curriculum is delivered through the TAUGHT curriculum [instructional content and learning activities] and is evaluated through the TESTED curriculum [expected levels of student achievement - learning outcomes]
- Priority student-centered outcomes are identified and attained through suggested learning activities and content designed to help insure a balanced and comprehensive basic curriculum
- Essential content and course standards provide an efficient basis for selecting appropriate instructional materials and resources
- Staff development areas for curriculum improvement are provided
- The PCCG conforms with current Pennsylvania Department of Education curriculum regulations and serves the dual feature of providing both an administrative document and an instructional guide
- Content and subject format remain flexible and adaptable to modification - an “active” document
- Special Pennsylvania Department of Education [PDE] legislation is identified
- Parents and students are provided with an overview of the instructional program and each course in particular

PLANNED COURSE CURRICULUM GUIDE (PCCG) DEFINITIONS

- **Course Description and Intent:** a brief overview of the course and program goals
- **Instructional Time:** frequency of class meetings and time/appropriate credit at the secondary level
- **Special Notes:** emphatic features or highlights and identification of Department of Education mandates found in the course
- **Unit Lesson Outcome:** describes the knowledge, skills, attitudes, student performance behaviors and areas of study that have been identified as appropriate to help the student attain the rigorous standards of a quality education
- **Teaching-Learning Activities:** suggested activities designed to help all students achieve the learning outcomes and standards
- **Outcomes/Standards:** statements establishing the minimal knowledge, skills, performance behaviors, and essential learning (content) a student must attain
- **Expected Levels of Achievement (Learning Outcomes):** what students will be expected to do as a result of the application of teaching-learning activities and content
- **Evaluation Criteria (Actual Level of Attainment):** student performance level achieved and measured through specified evaluation criteria

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

Subject Title: Math

Discipline/Grade Level: 6

UNIT LESSON OUTCOME: 1

Students will be able to order, add, subtract, round and estimate decimal numbers.

RELATIONSHIP TO PA OUTCOMES/STANDARDS (Check Appropriate Graduation Outcomes)																						
Communications	1.1	<input type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	1.3	<input type="checkbox"/>	1.4	<input type="checkbox"/>	1.5	<input type="checkbox"/>	1.6	<input checked="" type="checkbox"/>	1.7	<input type="checkbox"/>	1.8	<input type="checkbox"/>						
Mathematics	2.1	<input checked="" type="checkbox"/>	2.2	<input checked="" type="checkbox"/>	2.3	<input checked="" type="checkbox"/>	2.4	<input type="checkbox"/>	2.5	<input checked="" type="checkbox"/>	2.6	<input type="checkbox"/>	2.7	<input checked="" type="checkbox"/>	2.8	<input type="checkbox"/>	2.9	<input type="checkbox"/>	2.10	<input type="checkbox"/>	2.11	<input type="checkbox"/>
Science & Technology	3.1	<input type="checkbox"/>	3.2	<input type="checkbox"/>	3.3	<input type="checkbox"/>	3.4	<input type="checkbox"/>	3.5	<input type="checkbox"/>	3.6	<input type="checkbox"/>	3.7	<input type="checkbox"/>	3.8	<input type="checkbox"/>	3.9	<input type="checkbox"/>				
Environment & Ecology	4.1	<input type="checkbox"/>	4.2	<input type="checkbox"/>	4.3	<input type="checkbox"/>	4.4	<input type="checkbox"/>	4.5	<input type="checkbox"/>	4.6	<input type="checkbox"/>	4.7	<input type="checkbox"/>	4.8	<input type="checkbox"/>	4.9	<input type="checkbox"/>				
Civics & Government	5.1	<input type="checkbox"/>	5.2	<input type="checkbox"/>	5.3	<input type="checkbox"/>	5.4	<input type="checkbox"/>														
Economics	6.1	<input type="checkbox"/>	6.2	<input type="checkbox"/>	6.3	<input type="checkbox"/>	6.4	<input type="checkbox"/>	6.5	<input type="checkbox"/>												
Geography	7.1	<input type="checkbox"/>	7.2	<input type="checkbox"/>	7.3	<input type="checkbox"/>	7.4	<input type="checkbox"/>														
History	8.1	<input type="checkbox"/>	8.2	<input type="checkbox"/>	8.3	<input type="checkbox"/>	8.4	<input type="checkbox"/>														
Arts & Humanities	9.1	<input type="checkbox"/>	9.2	<input type="checkbox"/>	9.3	<input type="checkbox"/>	9.4	<input type="checkbox"/>														
Health, Safety & PE	10.1	<input type="checkbox"/>	10.2	<input type="checkbox"/>	10.3	<input type="checkbox"/>	10.4	<input type="checkbox"/>	10.5	<input type="checkbox"/>												
Family & Consumer Science	11.1	<input type="checkbox"/>	11.2	<input type="checkbox"/>	11.3	<input type="checkbox"/>	11.4	<input type="checkbox"/>														
Career Education & Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																		

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

ESSENTIAL CONTENT OUTCOMES/STANDARD	CONTENT & INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES <i>(Individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful:</i>	ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT	RESOURCES AND MATERIALS
<p>STANDARD 1</p> <p>How does a decimal affect the value of a number?</p> <p>How do base ten blocks represent decimal numbers?</p> <p>What are the steps in rounding decimal numbers?</p> <p>How are decimals added and subtracted?</p> <p>What do the symbols $>$, $<$ and $=$ represent?</p> <p>How is rounding used to determine the reasonableness of an answer?</p> <p>What are some real life applications of estimating, rounding, comparing, adding and subtracting decimals when shopping?</p>	<p>Name the place and value of digits in a decimal number</p> <p>Model decimals using base ten blocks</p> <p>Draw models of decimals</p> <p>Use number lines to model decimals</p> <p>Compare decimals using $<$, $>$, $=$</p> <p>Order decimals from least to greatest value</p> <p>Add and subtract decimals and money amounts</p> <p>Use rounding to estimate sums and differences</p>	<p>Diagrams</p> <p>Observation</p> <p>Oral Questioning</p> <p>Short answers</p> <p>Quizzes</p> <p>Tests</p> <p>Homework</p>	<p>Textbook (Prentice Hall) and workbook Title: <u>Middle Grades Math Tools for Success Course I</u> Copyright: 2001 (MS) 2004 (SE) ISBN: 0-13-051960-X (MS) ISBN: 0-13-063136-1 (SE)</p> <p>Smart board</p> <p>Supplemental worksheets and handouts</p>

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

Subject Title: Math

Discipline/Grade Level: 6

UNIT LESSON OUTCOME: 2

Students will be able to identify and explain characteristics of geometric figures.

RELATIONSHIP TO PA OUTCOMES/STANDARDS (Check Appropriate Graduation Outcomes)																						
Communications	1.1	<input type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	1.3	<input type="checkbox"/>	1.4	<input type="checkbox"/>	1.5	<input type="checkbox"/>	1.6	<input checked="" type="checkbox"/>	1.7	<input type="checkbox"/>	1.8	<input type="checkbox"/>						
Mathematics	2.1	<input checked="" type="checkbox"/>	2.2	<input checked="" type="checkbox"/>	2.3	<input checked="" type="checkbox"/>	2.4	<input type="checkbox"/>	2.5	<input checked="" type="checkbox"/>	2.6	<input type="checkbox"/>	2.7	<input type="checkbox"/>	2.8	<input type="checkbox"/>	2.9	<input checked="" type="checkbox"/>	2.10	<input type="checkbox"/>	2.11	<input type="checkbox"/>
Science & Technology	3.1	<input type="checkbox"/>	3.2	<input type="checkbox"/>	3.3	<input type="checkbox"/>	3.4	<input type="checkbox"/>	3.5	<input type="checkbox"/>	3.6	<input type="checkbox"/>	3.7	<input type="checkbox"/>	3.8	<input type="checkbox"/>	3.9	<input type="checkbox"/>				
Environment & Ecology	4.1	<input type="checkbox"/>	4.2	<input type="checkbox"/>	4.3	<input type="checkbox"/>	4.4	<input type="checkbox"/>	4.5	<input type="checkbox"/>	4.6	<input type="checkbox"/>	4.7	<input type="checkbox"/>	4.8	<input type="checkbox"/>	4.9	<input type="checkbox"/>				
Civics & Government	5.1	<input type="checkbox"/>	5.2	<input type="checkbox"/>	5.3	<input type="checkbox"/>	5.4	<input type="checkbox"/>														
Economics	6.1	<input type="checkbox"/>	6.2	<input type="checkbox"/>	6.3	<input type="checkbox"/>	6.4	<input type="checkbox"/>	6.5	<input type="checkbox"/>												
Geography	7.1	<input type="checkbox"/>	7.2	<input type="checkbox"/>	7.3	<input type="checkbox"/>	7.4	<input type="checkbox"/>														
History	8.1	<input type="checkbox"/>	8.2	<input type="checkbox"/>	8.3	<input type="checkbox"/>	8.4	<input type="checkbox"/>														
Arts & Humanities	9.1	<input type="checkbox"/>	9.2	<input type="checkbox"/>	9.3	<input type="checkbox"/>	9.4	<input type="checkbox"/>														
Health, Safety & PE	10.1	<input type="checkbox"/>	10.2	<input type="checkbox"/>	10.3	<input type="checkbox"/>	10.4	<input type="checkbox"/>	10.5	<input type="checkbox"/>												
Family & Consumer Science	11.1	<input type="checkbox"/>	11.2	<input type="checkbox"/>	11.3	<input type="checkbox"/>	11.4	<input type="checkbox"/>														
Career Education & Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																		

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

ESSENTIAL CONTENT OUTCOMES/STANDARD	CONTENT & INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES <i>(Individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful:</i>	ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT	RESOURCES AND MATERIALS
<p>STANDARD 2</p> <p>What are common geometric terms used to describe two-dimensional figures?</p> <p>What are the characteristics of the three types of angles?</p> <p>What are the parts of a circle?</p> <p>How are polygons named?</p> <p>What are the names of common polygons?</p> <p>When is a figure not a polygon?</p>	<p>Define and identify geometric terms: plane, point, line, line segment, ray, parallel, perpendicular, angle</p> <p>Distinguish between right, acute and obtuse angles</p> <p>Identify polygons</p> <p>Label the radius, diameter, chord and tangent of circles</p>	<p>Diagrams</p> <p>Observation</p> <p>Oral Questioning</p> <p>Short answers</p> <p>Quizzes</p> <p>Tests</p> <p>Homework</p>	<p>Prentice Hall text and workbook</p> <p>Smart board</p> <p>Supplemental worksheets and handouts</p>

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

Subject Title: Math

Discipline/Grade Level: 6

UNIT LESSON OUTCOME: 3

Students will be able to identify, extend and represent number patterns using variable equations.

RELATIONSHIP TO PA OUTCOMES/STANDARDS (Check Appropriate Graduation Outcomes)																						
Communications	1.1	<input type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	1.3	<input type="checkbox"/>	1.4	<input type="checkbox"/>	1.5	<input type="checkbox"/>	1.6	<input checked="" type="checkbox"/>	1.7	<input type="checkbox"/>	1.8	<input type="checkbox"/>						
Mathematics	2.1	<input checked="" type="checkbox"/>	2.2	<input checked="" type="checkbox"/>	2.3	<input type="checkbox"/>	2.4	<input type="checkbox"/>	2.5	<input checked="" type="checkbox"/>	2.6	<input type="checkbox"/>	2.7	<input type="checkbox"/>	2.8	<input checked="" type="checkbox"/>	2.9	<input type="checkbox"/>	2.10	<input type="checkbox"/>	2.11	<input checked="" type="checkbox"/>
Science & Technology	3.1	<input type="checkbox"/>	3.2	<input type="checkbox"/>	3.3	<input type="checkbox"/>	3.4	<input type="checkbox"/>	3.5	<input type="checkbox"/>	3.6	<input type="checkbox"/>	3.7	<input type="checkbox"/>	3.8	<input type="checkbox"/>	3.9	<input type="checkbox"/>				
Environment & Ecology	4.1	<input type="checkbox"/>	4.2	<input type="checkbox"/>	4.3	<input type="checkbox"/>	4.4	<input type="checkbox"/>	4.5	<input type="checkbox"/>	4.6	<input type="checkbox"/>	4.7	<input type="checkbox"/>	4.8	<input type="checkbox"/>	4.9	<input type="checkbox"/>				
Civics & Government	5.1	<input type="checkbox"/>	5.2	<input type="checkbox"/>	5.3	<input type="checkbox"/>	5.4	<input type="checkbox"/>														
Economics	6.1	<input type="checkbox"/>	6.2	<input type="checkbox"/>	6.3	<input type="checkbox"/>	6.4	<input type="checkbox"/>	6.5	<input type="checkbox"/>												
Geography	7.1	<input type="checkbox"/>	7.2	<input type="checkbox"/>	7.3	<input type="checkbox"/>	7.4	<input type="checkbox"/>														
History	8.1	<input type="checkbox"/>	8.2	<input type="checkbox"/>	8.3	<input type="checkbox"/>	8.4	<input type="checkbox"/>														
Arts & Humanities	9.1	<input type="checkbox"/>	9.2	<input type="checkbox"/>	9.3	<input type="checkbox"/>	9.4	<input type="checkbox"/>														
Health, Safety & PE	10.1	<input type="checkbox"/>	10.2	<input type="checkbox"/>	10.3	<input type="checkbox"/>	10.4	<input type="checkbox"/>	10.5	<input type="checkbox"/>												
Family & Consumer Science	11.1	<input type="checkbox"/>	11.2	<input type="checkbox"/>	11.3	<input type="checkbox"/>	11.4	<input type="checkbox"/>														
Career Education & Work	13.1	<input type="checkbox"/>	13.2	<input type="checkbox"/>	13.3	<input type="checkbox"/>	13.4	<input type="checkbox"/>														

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

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ESSENTIAL CONTENT OUTCOMES/STANDARD	CONTENT & INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES <i>(Individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful:</i>	ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT	RESOURCES AND MATERIALS
<p>STANDARD 3</p> <p>What strategies can be used to identify number patterns?</p> <p>What is the order of operations and how is it used?</p> <p>What are variables?</p> <p>What are the rules for number patterns?</p> <p>How are positive and negative numbers affected by operations?</p> <p>What steps are taken to isolate a variable?</p> <p>What is a real life application that uses a variable equation to solve a problem?</p>	<p>Recognize and extend number patterns</p> <p>Use the order of operations to solve expressions</p> <p>Demonstrate the use of variables to represent unknown numbers</p> <p>Solve variable equations</p> <p>Use math vocabulary in solving equations</p> <p>Write rules for number patterns</p> <p>Solve variable equations using positives and negatives</p> <p>Isolate a variable in an equation using addition, subtraction, multiplication or division</p> <p>Solve word problems using variable equations</p>	<p>Observation</p> <p>Oral questioning</p> <p>Short answers</p> <p>Homework</p> <p>Quizzes</p> <p>Tests</p>	<p>Prentice Hall text and workbook</p> <p>Supplemental worksheets and handouts</p>

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

Subject Title: Math

Discipline/Grade Level: 6

UNIT LESSON OUTCOME: 4

Students will be able to collect, organize, analyze and explain data through a variety of visual representations.

RELATIONSHIP TO PA OUTCOMES/STANDARDS (Check Appropriate Graduation Outcomes)																						
Communications	1.1	<input type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	1.3	<input type="checkbox"/>	1.4	<input type="checkbox"/>	1.5	<input type="checkbox"/>	1.6	<input checked="" type="checkbox"/>	1.7	<input type="checkbox"/>	1.8	<input type="checkbox"/>						
Mathematics	2.1	<input checked="" type="checkbox"/>	2.2	<input checked="" type="checkbox"/>	2.3	<input type="checkbox"/>	2.4	<input checked="" type="checkbox"/>	2.5	<input type="checkbox"/>	2.6	<input checked="" type="checkbox"/>	2.7	<input checked="" type="checkbox"/>	2.8	<input checked="" type="checkbox"/>	2.9	<input type="checkbox"/>	2.10	<input type="checkbox"/>	2.11	<input type="checkbox"/>
Science & Technology	3.1	<input type="checkbox"/>	3.2	<input type="checkbox"/>	3.3	<input type="checkbox"/>	3.4	<input type="checkbox"/>	3.5	<input type="checkbox"/>	3.6	<input type="checkbox"/>	3.7	<input type="checkbox"/>	3.8	<input type="checkbox"/>	3.9	<input type="checkbox"/>				
Environment & Ecology	4.1	<input type="checkbox"/>	4.2	<input type="checkbox"/>	4.3	<input type="checkbox"/>	4.4	<input type="checkbox"/>	4.5	<input type="checkbox"/>	4.6	<input type="checkbox"/>	4.7	<input type="checkbox"/>	4.8	<input type="checkbox"/>	4.9	<input type="checkbox"/>				
Civics & Government	5.1	<input type="checkbox"/>	5.2	<input type="checkbox"/>	5.3	<input type="checkbox"/>	5.4	<input type="checkbox"/>														
Economics	6.1	<input type="checkbox"/>	6.2	<input type="checkbox"/>	6.3	<input type="checkbox"/>	6.4	<input type="checkbox"/>	6.5	<input type="checkbox"/>												
Geography	7.1	<input type="checkbox"/>	7.2	<input type="checkbox"/>	7.3	<input type="checkbox"/>	7.4	<input type="checkbox"/>														
History	8.1	<input type="checkbox"/>	8.2	<input type="checkbox"/>	8.3	<input type="checkbox"/>	8.4	<input type="checkbox"/>														
Arts & Humanities	9.1	<input type="checkbox"/>	9.2	<input type="checkbox"/>	9.3	<input type="checkbox"/>	9.4	<input type="checkbox"/>														
Health, Safety & PE	10.1	<input type="checkbox"/>	10.2	<input type="checkbox"/>	10.3	<input type="checkbox"/>	10.4	<input type="checkbox"/>	10.5	<input type="checkbox"/>												
Family & Consumer Science	11.1	<input type="checkbox"/>	11.2	<input type="checkbox"/>	11.3	<input type="checkbox"/>	11.4	<input type="checkbox"/>														
Career Education & Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																		

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

ESSENTIAL CONTENT OUTCOMES/STANDARD	CONTENT & INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES <i>(Individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful:</i>	ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT	RESOURCES AND MATERIALS
<p>STANDARD 4</p> <p>What is a frequency table?</p> <p>How is data organized in a frequency table?</p> <p>How are range, mean, median and mode calculated?</p> <p>How can data be represented visually in graphs and tables?</p> <p>What is a survey and how can survey data be organized?</p> <p>What are real life uses of graphs and tables?</p>	<p>Create a frequency table</p> <p>Find the range, mean, median and mode of a given set of data</p> <p>Determine the interval and scale for a bar and line graph</p> <p>Construct bar and line graphs</p> <p>Analyze graphs to answer questions</p> <p>Create a line plot</p> <p>Use tables to determine all combinations</p> <p>Conduct a survey</p> <p>Create a graph using survey data</p> <p>Discuss the use of graphs in everyday life</p> <p>Use tables to solve word problems</p>	<p>Observation</p> <p>Oral Questioning</p> <p>Short answers</p> <p>Homework</p> <p>Quizzes</p> <p>Tests</p>	<p>Prentice Hall text and workbook</p> <p>Supplemental worksheets and handouts</p>

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

Subject Title: Math

Discipline/Grade Level: 6

UNIT LESSON OUTCOME: 5

Students will be able to order decimals, improper fractions and mixed numerals.

RELATIONSHIP TO PA OUTCOMES/STANDARDS (Check Appropriate Graduation Outcomes)																						
Communications	1.1	<input type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	1.3	<input type="checkbox"/>	1.4	<input type="checkbox"/>	1.5	<input type="checkbox"/>	1.6	<input checked="" type="checkbox"/>	1.7	<input type="checkbox"/>	1.8	<input type="checkbox"/>						
Mathematics	2.1	<input checked="" type="checkbox"/>	2.2	<input checked="" type="checkbox"/>	2.3	<input checked="" type="checkbox"/>	2.4	<input type="checkbox"/>	2.5	<input checked="" type="checkbox"/>	2.6	<input type="checkbox"/>	2.7	<input type="checkbox"/>	2.8	<input type="checkbox"/>	2.9	<input checked="" type="checkbox"/>	2.10	<input type="checkbox"/>	2.11	<input type="checkbox"/>
Science & Technology	3.1	<input type="checkbox"/>	3.2	<input type="checkbox"/>	3.3	<input type="checkbox"/>	3.4	<input type="checkbox"/>	3.5	<input type="checkbox"/>	3.6	<input type="checkbox"/>	3.7	<input type="checkbox"/>	3.8	<input type="checkbox"/>	3.9	<input type="checkbox"/>				
Environment & Ecology	4.1	<input type="checkbox"/>	4.2	<input type="checkbox"/>	4.3	<input type="checkbox"/>	4.4	<input type="checkbox"/>	4.5	<input type="checkbox"/>	4.6	<input type="checkbox"/>	4.7	<input type="checkbox"/>	4.8	<input type="checkbox"/>	4.9	<input type="checkbox"/>				
Civics & Government	5.1	<input type="checkbox"/>	5.2	<input type="checkbox"/>	5.3	<input type="checkbox"/>	5.4	<input type="checkbox"/>														
Economics	6.1	<input type="checkbox"/>	6.2	<input type="checkbox"/>	6.3	<input type="checkbox"/>	6.4	<input type="checkbox"/>	6.5	<input type="checkbox"/>												
Geography	7.1	<input type="checkbox"/>	7.2	<input type="checkbox"/>	7.3	<input type="checkbox"/>	7.4	<input type="checkbox"/>														
History	8.1	<input type="checkbox"/>	8.2	<input type="checkbox"/>	8.3	<input type="checkbox"/>	8.4	<input type="checkbox"/>														
Arts & Humanities	9.1	<input type="checkbox"/>	9.2	<input type="checkbox"/>	9.3	<input type="checkbox"/>	9.4	<input type="checkbox"/>														
Health, Safety & PE	10.1	<input type="checkbox"/>	10.2	<input type="checkbox"/>	10.3	<input type="checkbox"/>	10.4	<input type="checkbox"/>	10.5	<input type="checkbox"/>												
Family & Consumer Science	11.1	<input type="checkbox"/>	11.2	<input type="checkbox"/>	11.3	<input type="checkbox"/>	11.4	<input type="checkbox"/>														
Career Education & Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																		

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

ESSENTIAL CONTENT OUTCOMES/STANDARD	CONTENT & INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES <i>(Individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful:</i>	ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT	RESOURCES AND MATERIALS
<p>STANDARD 5</p> <p>How are prime and composite numbers different?</p> <p>What is the purpose of a factor tree?</p> <p>What are the parts of a fraction?</p> <p>What are the three types of fractions?</p> <p>What are divisibility rules?</p> <p>How are fractions, mixed numbers, decimals and improper fractions converted?</p> <p>How are GCF and LCM found?</p> <p>How is the value of a fraction evaluated?</p> <p>What are the characteristics of a terminating or repeating decimal?</p>	<p>Identify prime and composite numbers</p> <p>List factors of a number</p> <p>Construct a factor tree</p> <p>Write the prime factorization of a given number</p> <p>Identify parts of a fraction</p> <p>Explain divisibility</p> <p>Name three types of fractions</p> <p>Find GCF and LCM</p> <p>Find divisibility by 1, 2, 3, 4, 5, 6, 9 and 10</p> <p>Identify equivalent fractions</p> <p>Convert improper fractions and mixed numbers</p> <p>Order fractions with unlike denominators from least to greatest</p> <p>Convert fractions to decimals and</p>	<p>Observation</p> <p>Oral Questioning</p> <p>Homework</p> <p>Quizzes</p> <p>Tests</p>	<p>Prentice Hall text and workbook</p> <p>Supplemental worksheets and handouts</p>

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

	decimals to fractions Simplify fractions Identify terminating and repeating decimals		
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LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

Subject Title: Math

Discipline/Grade Level: 6

UNIT LESSON OUTCOME: 6

Students will be able to estimate, round and perform operations using decimals and exponents.

RELATIONSHIP TO PA OUTCOMES/STANDARDS (Check Appropriate Graduation Outcomes)																						
Communications	1.1	<input type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	1.3	<input type="checkbox"/>	1.4	<input type="checkbox"/>	1.5	<input type="checkbox"/>	1.6	<input checked="" type="checkbox"/>	1.7	<input type="checkbox"/>	1.8	<input type="checkbox"/>						
Mathematics	2.1	<input checked="" type="checkbox"/>	2.2	<input checked="" type="checkbox"/>	2.3	<input type="checkbox"/>	2.4	<input checked="" type="checkbox"/>	2.5	<input checked="" type="checkbox"/>	2.6	<input type="checkbox"/>	2.7	<input checked="" type="checkbox"/>	2.8	<input type="checkbox"/>	2.9	<input type="checkbox"/>	2.10	<input type="checkbox"/>	2.11	<input checked="" type="checkbox"/>
Science & Technology	3.1	<input type="checkbox"/>	3.2	<input type="checkbox"/>	3.3	<input type="checkbox"/>	3.4	<input type="checkbox"/>	3.5	<input type="checkbox"/>	3.6	<input type="checkbox"/>	3.7	<input type="checkbox"/>	3.8	<input type="checkbox"/>	3.9	<input type="checkbox"/>				
Environment & Ecology	4.1	<input type="checkbox"/>	4.2	<input type="checkbox"/>	4.3	<input type="checkbox"/>	4.4	<input type="checkbox"/>	4.5	<input type="checkbox"/>	4.6	<input type="checkbox"/>	4.7	<input type="checkbox"/>	4.8	<input type="checkbox"/>	4.9	<input type="checkbox"/>				
Civics & Government	5.1	<input type="checkbox"/>	5.2	<input type="checkbox"/>	5.3	<input type="checkbox"/>	5.4	<input type="checkbox"/>														
Economics	6.1	<input type="checkbox"/>	6.2	<input type="checkbox"/>	6.3	<input type="checkbox"/>	6.4	<input type="checkbox"/>	6.5	<input type="checkbox"/>												
Geography	7.1	<input type="checkbox"/>	7.2	<input type="checkbox"/>	7.3	<input type="checkbox"/>	7.4	<input type="checkbox"/>														
History	8.1	<input type="checkbox"/>	8.2	<input type="checkbox"/>	8.3	<input type="checkbox"/>	8.4	<input type="checkbox"/>														
Arts & Humanities	9.1	<input type="checkbox"/>	9.2	<input type="checkbox"/>	9.3	<input type="checkbox"/>	9.4	<input type="checkbox"/>														
Health, Safety & PE	10.1	<input type="checkbox"/>	10.2	<input type="checkbox"/>	10.3	<input type="checkbox"/>	10.4	<input type="checkbox"/>	10.5	<input type="checkbox"/>												
Family & Consumer Science	11.1	<input type="checkbox"/>	11.2	<input type="checkbox"/>	11.3	<input type="checkbox"/>	11.4	<input type="checkbox"/>														
Career Education & Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																		

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

ESSENTIAL CONTENT OUTCOMES/STANDARD	CONTENT & INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES <i>(Individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful:</i>	ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT	RESOURCES AND MATERIALS
<p>STANDARD 6</p> <p>What are exponents?</p> <p>How do exponents change a number's value?</p> <p>What is the distributive property and how is it applied?</p> <p>When are exponents computed in the order of operations?</p> <p>How is a decimal placed in the answer of multiplication or division problem?</p> <p>How are decimals rounded?</p> <p>What are the steps in dividing decimals?</p> <p>What are real life applications of decimal estimation, rounding and operations?</p>	<p>Identify exponents and their place in the order of operations</p> <p>Apply the distributive property</p> <p>Divide and multiply a decimal number by a power of ten by moving the decimal in the correct direction</p> <p>Find the estimated product or quotient of two decimals</p> <p>Use rounding in estimation</p> <p>Use compatible numbers in estimation</p> <p>Simplify expressions with exponents</p> <p>Solve multiplication and division problems using whole numbers and decimals</p> <p>Raise a number to a given power</p> <p>Extend decimal operations, rounding and estimation to use with money</p>	<p>Observation</p> <p>Oral Questioning</p> <p>Homework</p> <p>Quizzes</p> <p>Tests</p>	<p>Prentice Hall text and workbook</p> <p>Supplemental worksheets and handouts</p>

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

Subject Title: Math

Discipline/Grade Level: 6

UNIT LESSON OUTCOME: 7

Students will be able to perform the four basic operations using fractions.

RELATIONSHIP TO PA OUTCOMES/STANDARDS (Check Appropriate Graduation Outcomes)																						
Communications	1.1	<input type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	1.3	<input type="checkbox"/>	1.4	<input type="checkbox"/>	1.5	<input type="checkbox"/>	1.6	<input checked="" type="checkbox"/>	1.7	<input type="checkbox"/>	1.8	<input type="checkbox"/>						
Mathematics	2.1	<input checked="" type="checkbox"/>	2.2	<input checked="" type="checkbox"/>	2.3	<input type="checkbox"/>	2.4	<input checked="" type="checkbox"/>	2.5	<input checked="" type="checkbox"/>	2.6	<input checked="" type="checkbox"/>	2.7	<input type="checkbox"/>	2.8	<input type="checkbox"/>	2.9	<input type="checkbox"/>	2.10	<input type="checkbox"/>	2.11	<input type="checkbox"/>
Science & Technology	3.1	<input type="checkbox"/>	3.2	<input type="checkbox"/>	3.3	<input type="checkbox"/>	3.4	<input type="checkbox"/>	3.5	<input type="checkbox"/>	3.6	<input type="checkbox"/>	3.7	<input type="checkbox"/>	3.8	<input type="checkbox"/>	3.9	<input type="checkbox"/>				
Environment & Ecology	4.1	<input type="checkbox"/>	4.2	<input type="checkbox"/>	4.3	<input type="checkbox"/>	4.4	<input type="checkbox"/>	4.5	<input type="checkbox"/>	4.6	<input type="checkbox"/>	4.7	<input type="checkbox"/>	4.8	<input type="checkbox"/>	4.9	<input type="checkbox"/>				
Civics & Government	5.1	<input type="checkbox"/>	5.2	<input type="checkbox"/>	5.3	<input type="checkbox"/>	5.4	<input type="checkbox"/>														
Economics	6.1	<input type="checkbox"/>	6.2	<input type="checkbox"/>	6.3	<input type="checkbox"/>	6.4	<input type="checkbox"/>	6.5	<input type="checkbox"/>												
Geography	7.1	<input type="checkbox"/>	7.2	<input type="checkbox"/>	7.3	<input type="checkbox"/>	7.4	<input type="checkbox"/>														
History	8.1	<input type="checkbox"/>	8.2	<input type="checkbox"/>	8.3	<input type="checkbox"/>	8.4	<input type="checkbox"/>														
Arts & Humanities	9.1	<input type="checkbox"/>	9.2	<input type="checkbox"/>	9.3	<input type="checkbox"/>	9.4	<input type="checkbox"/>														
Health, Safety & PE	10.1	<input type="checkbox"/>	10.2	<input type="checkbox"/>	10.3	<input type="checkbox"/>	10.4	<input type="checkbox"/>	10.5	<input type="checkbox"/>												
Family & Consumer Science	11.1	<input type="checkbox"/>	11.2	<input type="checkbox"/>	11.3	<input type="checkbox"/>	11.4	<input type="checkbox"/>														
Career Education & Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																		

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

ESSENTIAL CONTENT OUTCOMES/STANDARD	CONTENT & INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES <i>(Individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful:</i>	ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT	RESOURCES AND MATERIALS
<p>STANDARD 7</p> <p>How are fractions simplified?</p> <p>How are fractions and mixed numbers added, subtracted, multiplied and divided?</p> <p>What is the purpose of using estimation?</p> <p>How are rounding and estimation related?</p> <p>How can drawing a diagram help to explain the process of multiplying and dividing fractions?</p>	<p>Simplify fractions</p> <p>Add and subtract fractions and mixed numbers</p> <p>Estimate and compute sums and differences of fractions and mixed numbers</p> <p>Use rounding skills in estimation</p> <p>Rounding fractions to $\frac{1}{2}$, 1 or 0</p> <p>Determining when to estimate and when to calculate</p> <p>Use the problem solving strategy working backwards and draw a diagram</p>	<p>Observation</p> <p>Oral Questioning</p> <p>Quizzes</p> <p>Tests</p> <p>Diagrams</p> <p>Homework</p>	<p>Prentice Hall text and workbook</p> <p>Supplemental worksheets and handouts</p>

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

Subject Title: Math

Discipline/Grade Level: 6

UNIT LESSON OUTCOME: 8

Students will be able to choose and correctly apply appropriate forms of measurement.

RELATIONSHIP TO PA OUTCOMES/STANDARDS (Check Appropriate Graduation Outcomes)																						
Communications	1.1	<input type="checkbox"/>	1.2	<input checked="" type="checkbox"/>	1.3	<input type="checkbox"/>	1.4	<input type="checkbox"/>	1.5	<input type="checkbox"/>	1.6	<input checked="" type="checkbox"/>	1.7	<input type="checkbox"/>	1.8	<input type="checkbox"/>						
Mathematics	2.1	<input checked="" type="checkbox"/>	2.2	<input type="checkbox"/>	2.3	<input checked="" type="checkbox"/>	2.4	<input type="checkbox"/>	2.5	<input type="checkbox"/>	2.6	<input type="checkbox"/>	2.7	<input type="checkbox"/>	2.8	<input type="checkbox"/>	2.9	<input checked="" type="checkbox"/>	2.10	<input type="checkbox"/>	2.11	<input type="checkbox"/>
Science & Technology	3.1	<input type="checkbox"/>	3.2	<input type="checkbox"/>	3.3	<input type="checkbox"/>	3.4	<input type="checkbox"/>	3.5	<input type="checkbox"/>	3.6	<input type="checkbox"/>	3.7	<input type="checkbox"/>	3.8	<input type="checkbox"/>	3.9	<input type="checkbox"/>				
Environment & Ecology	4.1	<input type="checkbox"/>	4.2	<input type="checkbox"/>	4.3	<input type="checkbox"/>	4.4	<input type="checkbox"/>	4.5	<input type="checkbox"/>	4.6	<input type="checkbox"/>	4.7	<input type="checkbox"/>	4.8	<input type="checkbox"/>	4.9	<input type="checkbox"/>				
Civics & Government	5.1	<input type="checkbox"/>	5.2	<input type="checkbox"/>	5.3	<input type="checkbox"/>	5.4	<input type="checkbox"/>														
Economics	6.1	<input type="checkbox"/>	6.2	<input type="checkbox"/>	6.3	<input type="checkbox"/>	6.4	<input type="checkbox"/>	6.5	<input type="checkbox"/>												
Geography	7.1	<input type="checkbox"/>	7.2	<input type="checkbox"/>	7.3	<input type="checkbox"/>	7.4	<input type="checkbox"/>														
History	8.1	<input type="checkbox"/>	8.2	<input type="checkbox"/>	8.3	<input type="checkbox"/>	8.4	<input type="checkbox"/>														
Arts & Humanities	9.1	<input type="checkbox"/>	9.2	<input type="checkbox"/>	9.3	<input type="checkbox"/>	9.4	<input type="checkbox"/>														
Health, Safety & PE	10.1	<input type="checkbox"/>	10.2	<input type="checkbox"/>	10.3	<input type="checkbox"/>	10.4	<input type="checkbox"/>	10.5	<input type="checkbox"/>												
Family & Consumer Science	11.1	<input type="checkbox"/>	11.2	<input type="checkbox"/>	11.3	<input type="checkbox"/>	11.4	<input type="checkbox"/>														
Career Education & Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																		

LEARNING OUTCOMES/STANDARDS AND CONTENT/ACTIVITIES

Statements of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.

ESSENTIAL CONTENT OUTCOMES/STANDARD	CONTENT & INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES <i>(Individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful:</i>	ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT	RESOURCES AND MATERIALS
<p>STANDARD 8</p> <p>How is perimeter found?</p> <p>What is the process to determine area and volume?</p> <p>How are time conversions completed: hours, minutes, seconds?</p> <p>What determines whether capacity, mass or linear measurement will be used to evaluate an object?</p> <p>How are measures converted in the metric system?</p>	<p>Compute the perimeter of polygons</p> <p>Find the area of quadrilaterals</p> <p>Analyze the volume of cubes</p> <p>Convert hours and minutes to minutes only</p> <p>Solve elapsed time problems</p> <p>Convert metric linear measurements</p> <p>Convert measures of time</p> <p>Measure mass, length and capacity of everyday objects</p>	<p>Observation</p> <p>Oral Questioning</p> <p>Diagrams</p> <p>Tests</p> <p>Quizzes</p>	<p>Prentice Hall text and workbook</p> <p>Supplemental worksheets and handouts</p>