**7th Grade Mathematics Syllabus**

*CENTERVIEW ELEMENTARY SCHOOL*

*2023-2024*

**Part 1: Course Information**

**Instructor:** Pam Holt

**School Telephone:** 423-623-4947

**Email:** [holtp@cocke.k12.tn.us](mailto:holtp@cocke.k12.tn.us)

**Course Description**

The seventh grade math curriculum is based on the Tennessee State Standards. I will try to provide a balance of opportunities for student learning that include the textbook, technology, group/partner work. Students in this course will study the following domains:

* Ratios and Proportional Relationships
* The Number System
* Expressions and Equations
* Geometry
* Statistics and Probability

With each unit, students will bring a letter home explaining what we are learning. These letters explain the concept as well as provide examples. PLEASE SIGN AND RETURN EACH LETTER.

**Standards:**

[**https://bestforall.tnedu.gov/lessons-and-leahttps://bestforall.tnedu.gov/lessons-and-learning-item?content-id=7321rning-item?content-id=7321**](https://bestforall.tnedu.gov/lessons-and-learning-item?content-id=7321)

**Textbook & Course Materials**

I-Ready Textbook/Workbook

Fluency and Practice Workbook

I-Ready online program

Scientific Calculator

**Part 2: Student Learning Outcomes**

**Ratios and Proportional Relationships:** Students extend their understanding of ratios from 6th grade and develop understanding of proportionality to solve single- and multi-step problems. Students use their understanding of ratios and proportionality to solve a wide variety of percent problems, including those involving discounts, interest, taxes, tips, and percent increase or decrease. Students solve problems about scale drawings by relating corresponding lengths between the objects or by using the fact that relationships of lengths within an object are preserved in similar objects. Students graph proportional relationships and understand the unit rate informally as a measure of the steepness of the related line, called the slope. They distinguish proportional relationships from other relationships**.**

**The Number System:** Students develop a unified understanding of numbers, recognizing fractions, decimals (that have a finite or a repeating decimal representation), and percent as different representations of rational numbers. Students extend addition, subtraction, multiplication, and division to all rational numbers, maintaining the properties of operations and the relationships between addition and subtraction, and multiplication and division. These properties are further explored with respect to negative numbers. This exploration is carried out in problems from everyday contexts so that the student can gain a deeper understanding and appreciation for the mathematical concepts being studied.

**Expressions and Equations:** By applying the properties of operations as strategies, students explore working with expressions, equations, and inequalities. They use the arithmetic of rational numbers as they formulate expressions and equations in one variable and use these equations to solve multi-step real-world problems. They use variables to represent quantities and construct simple equations and inequalities to solve problems by reasoning about the quantities.

**Geometry:** Students continue their work with area from 6th grade, solving problems involving the area and circumference of a circle and surface area of three-dimensional objects. In preparation for work on congruence and similarity, they reason about relationships among two-dimensional figures using scale drawings and informal geometric constructions, and they gain familiarity with the relationships between angles formed by intersecting lines. Students solve real-world and mathematical problems involving area, surface area, and volume of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

**Statistics and Probability:** Students continue their work from 6th grade in order to build a strong foundation for statistics and probability needed for high school. Students understand that statistics can be used to gain information about a population through sampling. They work with drawing inferences about a population based on a sample and use measures of center and of variability to draw informal comparative inferences about two populations. Students investigate the chance processes and develop, use, and evaluate probability models. Students summarize numerical data sets with respect to their context using quantitative measures and describe any overall patterns or deviations from the overall pattern.

**Part 3: Topic Outline/Schedule**

**1st 9 Weeks**

Unit 1: Proportional Relationships: Ratios, Rates, Circles

* Solve problems involving scale
* Find unit rates involving ratios of fractions
* Understand proportional relationships
* Represent proportional relationships
* Solve proportional relationship problems
* Solve area and circumference problems involving circles

Unit 2: Number and Operations: Add and Subtract Rational Numbers

* Understand addition with negative integers
* Add with negative numbers
* Understand subtraction with negative integers
* Add and subtract positive and negative numbers

**2nd 9 Weeks**

Unit 3: Numbers and Operations: Multiply and Divide Rational Numbers

* Understand multiplication with negative integers
* Multiply and divide with negative numbers
* Express rational numbers as terminating or repeating decimals
* Use the four operations with negative numbers

Unit 4: Algebraic Thinking: Expressions, Equations, and Inequalities

* Write equivalent expressions involving rational numbers
* Understand reasons for rewriting expressions
* Understand multi-step equations
* Write and solve multi-step equations
* Write and solve inequalities

**3rd 9 Weeks**

Unit 5: Proportional Reasoning: Percents and Statistical Samples

* Solve problems involving percents
* Solve problems involving percent change and percent error
* Understand random sampling
* Reason about random samples
* Compare populations

Unit 6: Geometry: Solids, Triangles, and Angles

* Solve problems involving area and surface area
* Solve problems involving volume
* Describe plane sections of three-dimensional figures
* Find unknown angle measures
* Draw plane figures with given conditions

Unit 7: Probability: Theoretical Probability, Experimental Probability, and Compound Events

* Understand probability
* Solve problems involving experimental probability
* Solve problems involving probability models
* Solve problems involving compound events

**4th 9 Weeks**

* Review
* TN Ready Test

**Part 4: Grading Policy**

A -----90-100

B------80-89

C------70-79

D------60-70

F------0-59

Points you receive for graded activities will be posted to the Aspen Grade Book: [**https://sis-cocke-county.tnk12.gov/aspen/logon.do**](https://sis-cocke-county.tnk12.gov/aspen/logon.do)

You will use the same username and password from the previous year.

**Student Testing Code of Ethics and Security**

It is important for you as a student to know that the following guidelines are to be strictly followed. This year the TNReady test will count at least 10% of your final semester grade. Your work on this test is very important and it deserves your best effort.

I understand that during testing on the days of the assessment, I am responsible for:

* Not having any electronic devices on me or in my purse/backpack/pockets
  + Including but not limited to cell phones, smart phones, smart watches, etc. **during testing or during breaks.**
  + Best practice is for students to leave devices at home or in their lockers on the day of testing.
  + If I am caught with a device during testing or during breaks, my test may be nullified, resulting in a zero as at least 10% of my final semester grade, and any school level disciplinary action as deemed appropriate by the administration.
* Trying my best on the test
  + If I do not attempt to test (I give **no answers or randomly answer** questions) my test score may be nullified, resulting in a zero as at least 10% of my final semester grade, and any school level disciplinary action as deemed appropriate by the administration.
  + The testing administrators and proctors in the testing environment will determine if no answers or random answering is taking place.