

MATH 7 (Core Connections 2) COURSE SYLLABUS
NORTHLAND PINES MIDDLE SCHOOL
2017-2018

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Welcome to the start of a new school year! This year, students will continue studying mathematics from the CPM-College Preparatory Math series. Our middle school program provides the math students need to know in a way that they can understand. Students will also investigate mathematical ideas within the context of a realistic problem, as opposed to looking only at numbers. Some problems involve real-world applications or an unusual situation, while others are purely mathematical. A problem's context provides a vehicle for understanding and remembering the mathematical concepts. I am excited about this curriculum and its potential for helping students develop strong mathematical knowledge and skills. I am looking forward to a successful year for all students.

Course Description and Objectives

The following is an **overview** of the curriculum for this year

1st Semester

Chapter 1- Introduction and Probability

Several mathematical topics are introduced or reviewed in Chapter 1: perimeter and area, proportional relationships, finding unknowns, repeating and terminating decimals, probability, fraction addition and subtraction, and equivalent fractions.

Chapter 2- Fractions and Integer Addition

This chapter begins with a focus on conversions between fractions and decimals. Students look at how to represent a fraction and a decimal using division. Then they look at changing decimals to fractions, learning how to convert both terminating and repeating decimals. Students also begin to work with integers. Students start by considering a linear model with directional movement. They compose and decompose integers and rational numbers as they find the sum of positive and negative numbers. Students will review and extend their previous work with coordinate graphs.

Chapter 3- Arithmetic Properties

Students will simplify numeric expressions and are introduced to the idea of a term, and recognize that terms must be simplified separately and then combined, thus establishing a correct Order of Operations. They also learn to see expressions with separate terms as ways to represent groups of objects. Students extend their thinking about integers from Chapter 2. They will also extend their learning about operations with portions to include dividing with fractions, mixed numbers, and decimals.

Chapter 4- Proportions and Expressions

This chapter continues to build the big idea of proportional relationships in the context of real-world situations. Students look at similar figures in order to determine how the figures change when the sides are enlarged or reduced uniformly. Then students investigate how to use and make scale drawings. Students will examine tables, graphs, and situations to identify characteristics of proportional relationships. They will use algebra tiles to build shapes that have an unknown dimension.

2nd Semester

Chapter 5- Probability and Solving Word Problems

Students will begin by looking at part-to-whole relationships and will connect them to percentages. Students will be introduced to a linear diagram that can organize the information in a problem. Students return to probability where they will make predictions about how likely an event is and whether a game is fair. Then students consider probabilities of multiple events, beginning by differentiating between independent and dependent events. Finally, students will learn how to create systematic lists, probability trees and probability tables to determine the probability of compound events. Also, students will develop the 5-D Process as a method for solving situational word problems.

Chapter 6- Solving Inequalities and Equations

Students compare expressions to determine whether one is greater than the other by simplifying. They learn how to represent solutions to an inequality on a number line and to interpret the meaning of a number line graph in a specific situation. Students begin working with Equation Mats. They learn how to write an equation, solve for a variable, and record their solving steps using algebraic notation.

Chapter 7- Proportions and Percents

In this chapter, students will extend the use of scale factors that they started in Chapter 4, specifically, using them to generally describe a multiplicative relationship between quantities and to find unknown quantities. Students discover the relationship between distance, rate and time. They are introduced to percent increase and decrease, and simple interest, which provide additional practice solving equations with non-integer coefficients as these applications are related to scale factors.

Chapter 8- Statistics and Angle Relationships

Students revisit concepts of measurement, data display, and analysis. They will also look at how to compare samples and make inferences based on the median and the inter quartile range (IQR) of each sample. They then look at how to classify angles of different measures and in relationship to other angles, such as complementary or vertical angles. Next students move to building triangles and quadrilaterals with given conditions.

Chapter 9- Circles and Volume

This chapter begins with students investigating the relationship between circumference and diameter for circles, finding it to be proportional with π as a multiplier. Students will learn two strategies for calculating the volume of a prism. They will dissect shapes into rectangle-based and triangle-based prisms, calculate those volumes separately, and combine them to calculate the volume of the original shape.

Classroom Expectations

- * Be Respectful
- * Use good manners
- * Use classroom voices.
- * Raise your hand. Don't shout out answers/comments.
- * Get homework and other assignments in on time.

Supplies Needed

- **Textbook:** Students will be issued their math book. Please keep book in binder for protection.
- **Binder:** Blue 1½ to 2-inch **hard cover** binder that will be used for math only. (*A 1 inch binder is too small.*)
- **Pencils:** Students are expected to do math work in pencil only.
- **3- Blue 1 subject notebooks** (One notebook at a time must easily fit into math binder.)
- **Graph Paper:** A small amount of work will be completed on graphing paper.
- **Paper:** A large supply of loose-leaf notebook paper.

Grading Summary

Students will be allowed to demonstrate how well they are making sense of the mathematics in many ways. Below is a grading summary.

Participation (Points vary)

Because participating in discussions and teamwork is so important in helping the students make sense of the mathematics, this is one part of the student's grade.

Homework (4 points possible for each homework assignment-See Grading Rubric)

Homework assignments offer students opportunity to think about problems more in depth. Homework assignments are very important. Students will have the opportunity to revise their answers after we discuss problems. On page 4 is a rubric for grading homework.

Vocabulary (Not graded, but checked as an assignment)

Understanding mathematical terminology is necessary for developing mathematical understanding. Students will periodically be given vocabulary words to list and define. At the end of each chapter, students will be quizzed on these words.

Quizzes & Team Quizzes (Will be graded on a test rubric)

Quizzes are taken individually, except team quizzes, which are done within a team. Team Quizzes- students are assessed on "putting their heads together" since a lot of what we do in class is explored with others. Quiz re-takes are allowed, after student has had a conference with the teacher.

Tests / Projects (Will be graded on a test rubric)

At the end of each chapter an individual test is given. This serves as an opportunity for students to show what they, as individuals, have learned. Test re-takes are allowed, after student has had a conference with the teacher.

Students may also be assigned a project at the end of a chapter or unit, which will be graded based on the amount of work asked for each project.

Participation Grading

I will look for the following throughout the week for participation:

- Did you participate in discussions?
- Did you come prepared to class, having done your homework, so that you could ask questions?
- Did you ask questions when you didn't understand?
- Did you listen to others?

Grading Rubric

Grading Homework

- 4 This grade indicates that the student has completed all of their work and that all of it was correct.
- 3 This grade indicates that the student has completed **all** of their work, but there are some areas that are in need of correction. Students can make the necessary corrections and if this is done, they may receive more credit.
- 2 This grade indicates that the student completed **most** of their work, but there are several areas that are in need of correction. Students can make the necessary corrections and if this is done, they may receive more credit.
- 1 This grade indicates that the student did not complete the entire assignment, but started. Students can make the necessary corrections and if this is done, they may receive more credit.

Grading Quizzes/Tests

- 4 **Excellent (Mastery) Understanding**
 - Student work shows excellent understanding of mathematical concepts, principles, and their inter-relationships.
 - Performance shows mastery of the use of mathematics to solve problems.
 - Data analyses and explanations demonstrate a high level of reasoning.
 - Models, principles, or theories are used creatively to analyze problems, draw analogies, and make insightful inferences and appropriate applications to daily life.
- 3 **Good (Proficient) Understanding**
 - Student work shows good understanding of mathematical concepts, principles and their inter-relationships.
 - Performance shows good understanding of the use of mathematics to solve problems.
 - Data analyses and explanations demonstrate sound reasoning.
 - Models, principles, or theories are used correctly to analyze problems and draw analogies.
- 2 **Developing Understanding**
 - Student work shows basic understanding of mathematical concepts principles and their inter-relationships.
 - Performance shows some use of methods of mathematics to solve problems.
 - Work states facts, draws conclusions, or makes assertions that are incompletely substantiated.
- 1 **Basic Knowledge**
 - Student work shows limited knowledge of mathematical concepts principles and their inter-relationships.
 - Performance shows limited use of mathematics to solve problems.
 - Some mathematics may be correctly demonstrated, but evidence of an understanding of broad concepts is lacking.

(Continued on next page)

0 OR NP Minimal (Not Present) Knowledge

- Student work shows minimal knowledge of mathematical concepts and does not provide evidence of an understanding of individual facts, concepts, or their interrelationships.
- Performance shows little or no correct use of mathematics to solve problems.
- The standard has been assessed, but the student's work does not indicate knowledge of the concept or is not an appropriate method to lead to the conclusion.

Attendance

If an absence is needed, students will have 2 days for everyday absent to turn in any missed assignments. Students need to check the absent file folder for missed assignments. Students also need to check Haiku for the classwork/assignment they missed.

Grades

A	93-100%	C	73-76%		
A-	90-92%	C-	70-72%	5%	Homework
B+	87-89%	D+	67-69%	15%	Team Review/Work
B	83-86%	D	63-66%	20%	Quizzes
B-	80-82%	D-	60-62%	60%	Chapter Tests
C+	77-79%	F	< 60%		

Remind

Here is another way to get **math** updates or important reminders from Mrs. Petreikis. (Example: Reminder chapter test is tomorrow.) Follow the instructions on the right.

Remind is a website that provides a safe way for teachers to text message or email students and parents. Once subscribed, remind will ask for the students/parents name so that the teacher can identify them. Remind never shows the teacher that person's number, which means they never see student/parent numbers and students/parents never see theirs. Standard messaging do rates apply.

Mrs. Petreikis created Math 7 on Remind.
Follow these steps to join!

1. Download the Remind app. It's free!

If you don't have a smartphone,
get text notifications.

Text the message @petinter to the number
81010.

If you're having trouble with 81010, try
texting @petinter to (442) 333-4399.



2. Or visit this link: rmd.at/petinter and follow instructions.
3. Or join via SMS!
Enter this number: (442) 333-4399 with this message @petinter

Math Binder: Students will be required to have a separate 3-ring binder for math, 1½ to 2-inches.

Your binder should include:

- Your math book
- Your notebook
- This syllabus
- Vocabulary
- Notes

(We will create dividers for the binder in class when needed, unless you want to buy your own.)
(Assignments and tests should be stored in the classroom.)

Please review the above with your child. Students should have their math binder organized and ready to use by **Monday, September 11**. Please put these papers in your binder.

PLEASE DO NOT CUT PAPER

Parent / Guardian Signature

Student Signature

Email address: _____

Thank you for sharing your child with me this year. I look forward to an awesome year of learning! If you have any questions or concerns at any time during the year, please feel free to contact me before or after school.

Mrs. Petreikis

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Phone: 479-4473 ext. 2112

One last note:

There will be some topics that your child understands quickly and some concepts that may take longer to master. The big ideas of the course take time to learn. This means that students are not necessarily expected to master a concept when it is first introduced. When a topic is first introduced in the textbook, there will be several problems to do for practice. Succeeding lessons and homework assignments will continue to practice the concept or skill over weeks and months so that mastery will develop over time.