

Davison Community Schools
ADVISORY CURRICULUM COUNCIL
Phase II, April 25, 2013
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Life Skills Math

Course Essential Questions (from Phase I report):

- Why is it important for me to know basic math skills?
- How is math used in everyday life?
- When and where will I use math in the community?
- What kind of math skills will be important to my success in life?
- What tools could I use to assist me in solving math found in everyday situations?
- Who could I turn to for assistance with tasks beyond my math reasoning?
- What are the potential risks of not developing or using everyday math skills?

Unit 1: Basic Mathematics

Essential Questions:

- How will I use addition, subtraction, multiplication and division in everyday life?
- How do I determine greater than, less than, or equal when given two numbers?
- How do I identify information needed to solve word problems in everyday life?
- How do I identify what operation to use to solve word problems in every day life?
- How are tally marks used?
- How do you solve and continue simple patterns?
- How do you determine if a number is odd or even?
- When and how is estimation or rounding used?
- How do I read digits up to the ten thousands place?

Essential Understanding:

- Addition requires combining numbers to get a total.
- Subtraction requires taking one number away from a larger number to determine the amount left.
- Multiplication is the total of a specific number of groupings.
- Division is a large number divided into smaller groups.
- Understanding ordinal numbers and their relationship and value to one another .
- Identifying key information including numbers and operation needed to solve word problems.
- Tally marks are used to count groups of items to determine the total number.
- Identify the rule of a pattern in order to successfully fill in the blanks or continue the pattern.
- An even number is any number that is evenly divisible by 2.
- Estimating and rounding numbers to the ten thousands place.
- An understanding of how rounding is useful in relation to money.
- Correctly read and say a number up to the ten thousands place.

Curriculum Standards

EEN-RN.1. Solve division problems with remainders using concrete objects.

EEA-SSE.1. Match an algebraic expression involving one operation to represent a given word expression with an illustration.

EEA-SSE.3. Solve simple one-step equations (multiplication and division) with a variable.

EEA-SSE.4 Identify the missing part in any other equivalent ratio when given any ratio.

EEA-CED.1. Solve an algebraic expression using subtraction.

EEA-CED.2-4. Solve one-step inequalities.

EES-ID.4. Calculate the mean of a given data set (limit data points to less than five).

Knowledge/Content

Students will know about....

- The role of addition, subtraction, multiplication and division in everyday life and how to perform each operation.
- The process involved to determine if a given number is greater than, less than, or equal to another number.
- Finding key pieces of information to solve problems found in everyday living situations.
- Tally marks and how to use them in real life situations.
- Patterns found in everyday living situations.
- How a number is found to be either odd or even.
- The use of estimation and rounding and how it is applied to real life situations.
- Reading and writing digits up to the ten thousands place.

Skills/Processes

Students can.....

- Students can fluently add, subtract, multiply and divide.
- Students can determine ordinal numbers.
- Students can identify key pieces of information and how to use that information to solve everyday mathematical problems.
- Students can use tally marks to determine a total of certain objects.
- Students can use patterns to solve everyday math problems.
- Students can identify if a number is odd or even.
- Students can apply estimation and rounding to real life situations.
- Students can read and write numbers up to the ten thousands place.

Unit: Place Value, Time, Calendars, and Measurement	
<p>Essential Questions:</p> <ul style="list-style-type: none"> ● How do you determine place value up to the hundred thousands place? ● How do you determine place value up to the hundredths place? ● How are fractions used in everyday life? ● How do I tell time to the hour, half hour, quarter hour and minute? ● How do you calculate elapsed time? ● How are calendars and schedules used in everyday living situations? ● How do you read a thermometer? ● How is measuring to the nearest inch, half inch, and quarter inch used in everyday life? ● How does measurement apply to cooking? ● How do you determine the weight of an object? 	<p>Essential Understanding:</p> <ul style="list-style-type: none"> ● Each number has a place and its value is determined by where it falls in a sequence of numbers. ● Fractions are used in measurement for cooking and determining length. ● Being able to tell time is a necessity to be one time for work and appointments. ● Keeping a calendar or schedule is important to organize your life so you don't miss important events or appointments. ● Knowing how to read a thermometer is important to dress appropriately according for the weather. ● Understanding various forms of measurement relating to cooking are important to ensure accuracy in following a recipe. ● Determining weight is important for overall safety and health.
Curriculum Standards	
<p>EEN-Q.1-3. Express quantities to the appropriate precision of measurement.</p> <p>EEF-BF.1. Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.</p> <p>EEG-GMD.1-3. Make a prediction based on knowledge of volume to identify volume of common containers (cups, pints, gallons, etc.).</p> <p>EEG-MG.1-3. Use properties of geometric shapes to describe real-life objects.</p>	
Knowledge/Content	Skills/Processes
Students will know about....	Students can...
<ul style="list-style-type: none"> ● Place value to the hundred thousands place. ● Place value to the hundredths place. ● Fractions used in everyday life. ● Telling time to the hour, half hour, quarter hour and minute. ● Finding elapsed time. ● The purpose and usefulness of calendars and schedules in everyday life. ● Thermometers and how they are used to determine appropriate clothing and activities or for the weather. ● Measurement and how it applies to measuring things found in everyday life. ● Measurement and how it applies to cooking. ● Measurement and how it relates to weighing things. 	<ul style="list-style-type: none"> ● I can read and write numbers to the hundred thousands place. ● I can read and write numbers to the hundredths place. ● I can use fractions found in everyday living situations. ● I can tell time to the hour, half hour, quarter hour and minute. ● I can figure out elapsed time to determine when an even started or ends. ● I can use a calendar to record appointments and reminders. ● I can use a thermometer to determine what type of clothing would be appropriate for the weather. ● I can measure to the nearest inch, half inch, and quarter inch. ● I can use measurement skills to cook from a recipe. ● I can weigh different types of objects.

Unit: Money Management	
<p>Essential Questions:</p> <ul style="list-style-type: none"> ● How are various forms of money used in everyday life? ● What are the different coins and bills from a penny to a twenty dollar bill and how much is each worth? ● How do you add and subtract various amounts of money? ● How do you make change? ● What other forms of payment are there besides cash? ● When and how do you use checkbooks, debit cards, credit cards, or money orders? ● How do you calculate tax? ● How do you calculate tip? 	<p>Essential Understanding:</p> <ul style="list-style-type: none"> ● Money is used to make purchases for everyday needs. ● Coins and bills have different values. ● Being able to correctly count money helps make sure you aren't being taken advantage of. ● Being able to make change is an important job skill as well as a precaution in making sure you aren't being taken advantage of when making a purchase. ● There are advantages and disadvantages to having and using checkbooks, debit cards, credit cards, and money orders. ● Being able to calculate tax is important to knowing if you have enough money for a purchase. ● Being able to calculate tip is important to accessing and utilizing services within the community in a socially acceptable way.
Curriculum Standards	
<p>EEN-CN.2. Use the operations of addition, subtraction, and multiplication with decimals (decimal value x whole number) in real world situations using money as the standard units (\$20, \$10, \$5, \$1, \$0.25, \$0.10, \$0.05, and \$0.01).</p>	
Knowledge/Content Students will know about....	Skills/Processes Students can...
<ul style="list-style-type: none"> ● The different bills and coins that are used to make a payment in everyday situations. ● The value of various bills and coins. ● The importance of being able to add and subtract various amounts of money. ● Making change. ● Other forms of payment besides cash. ● How checkbooks, debit cards, credit cards and money orders are used to make payments. ● How to calculate tax on a purchase. ● How to calculate tip. 	<ul style="list-style-type: none"> ● Identify coins and bills. ● Identify the value of each coin and bill up to \$100.00. ● Add and subtract money values. ● Make change for purchases using up to a \$50.00 bill. ● Identify other forms of payments besides cash. ● Tell the pros and cons to making payments with other forms of money besides cash. ● Calculate 6% tax on purchases. ● Calculate a tip at 15% of the total bill.

Unit 3: Geometry

Essential Questions:

- What are parallel, perpendicular, and intersecting lines?
- What is an acute, obtuse or right angle?
- How do you interpret graphs and charts?
- What is perimeter and how does it apply to real life situations?
- What is area and how does it apply to real life situations?
- What is symmetry?
- What are congruent shapes?
- What does rotate, slide, and flip mean?
- What is a two dimensional object?
- What is a three dimensional object?
- What is probability?
- When are events independent or dependent of each other?

Essential Understanding:

- These words are important to understanding directions regarding driving and maps.
- Angles are found in everyday living relating to design and navigation.
- Having an understanding of perimeter is important to setting boundaries.
- Area is of importance for home repairs and remodeling.
- Symmetry relates to the placement of objects or pleasing designs.
- Congruent shapes are the same.
- Identify an object that has rotated, slid, or flipped.
- Two dimensional objects are flat.
- Three dimensional objects can be held.
- Probability has to do with the likely hood that an event will or will not occur.
- A certain result is often achieved only after a preceding event has occurred.

Curriculum Standards

- EEA-REI.10.-12.** Determine the two pieces of information that are plotted on a graph of an equation with two variables that form a line when plotted.
- EEF-IF.1-3.** Use the concept of function to solve problems.
- EEF-IF.4-6.** Interpret rate of change (e.g., higher/lower, faster/slower).
- EEF-BF.1.** Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.
- EEF-LE.1.** Model a simple linear function such as $y=mx$ to show functions grow by equal factors over equal intervals.
- EEG-CO.1.** Know the attributes of perpendicular lines, parallel lines, and line segments, angles, and circles.
- EEG-CO.6-8.** Identify corresponding congruent (the same) parts of shapes.
- EEG-CO.4-5.** Identify rotations, reflections, and slides.
- EEG-GPE.7.** Find perimeter and area of squares and rectangles to solve real-world problems.
- EEG-GMD.4.** Distinguish between two-dimensional and three-dimensional objects to solve real-world problems.
- EES-ID.1-2.** Given data, construct a simple graph (table, line, pie, bar, or picture) and answer questions about the data.
- EES-IC.1-2.** Determine the likelihood of an event occurring when the outcomes are equally likely to occur.
- EES-CP.1-4.** Identify when events are independent or dependent.

Knowledge/Content Students will know about....	Skills/Processes Students can...
<ul style="list-style-type: none"> ● Parallel, perpendicular, and intersecting lines. ● Acute, obtuse, and right angles. ● Interpreting graphs and charts. ● Perimeter and how it applies to real life. ● Area and how it applies to real life situations. ● Symmetry ● Congruent Shapes ● Flips, slides and rotations ● Two and Three dimensional objects ● Probability ● The difference between independent and dependent outcomes. 	<ul style="list-style-type: none"> ● Identify parallel, perpendicular, and intersecting lines. ● Identify and name acute, obtuse, and right angles. ● Read and interpret graphs and charts. ● Find the perimeter of an object or area. ● Find the area of a space. ● Identify if an object has symmetry. ● Identify what makes shapes congruent. ● Identify if a shape has flipped, slid, or rotated. ● Identify two and three dimensional objects. ● Determine the possible outcomes of an event occurring. ● Identify the actions needed to gain a particular result.