First Grade Mathematics
Learning Goals for 1ˢᵗ Nine Weeks

Skills students should demonstrate at the end of the 1ˢᵗ Nine weeks of school:
Unit 1
- Learning Goal: Student will **select tools/data by collecting and sorting to include mental math and justify answers with words and charts by representing the data**.

    How parents can help:
    - ✓ You and your student can use magnetic numbers on the refrigerator or a baking sheet to create number sentences to solve using number words.
    - ✓ You and your student can make bar graphs with tape on the floor or chalk outside to show your findings from the data.
    - ✓ Use items that you have around your house to make it interactive for the whole family.
    - ✓ You and your student can use the Internet and apps to reinforce mental math.
        - o http://www.mathplayground.com
        - o http://www.mhschool.com/math/mathtoolchest/mtc_online/
        - o Math Duel HD/Android
        - o Hyper Blast

Unit 2
- Learning Goal: Student will **apply mathematics to problems arising in everyday life that involve problem solving** and **understand that numbers are made of parts**.

    How parents can help:
    - ✓ You and your student can bake some cookies together to see how problems arise.
    - ✓ You and your student can practice on a small whiteboard breaking numbers into its different parts.
    - ✓ You can also create a reusable surface (whiteboard) with a small piece of cardboard inserted into a large freezer bag to write number trees/number sentences over and over again.

- Learning Goal: Student will **apply basic fact strategies to problems**.

    How parents can help:
    - ✓ You and your student can create word problems about things you have around the house.
        - o Ex. At our house, we have several televisions. We have a television in the living room, dinning room, parent's room and my bedroom. How many televisions do we have in all?
    - ✓ You and your student can use the Internet and apps to reinforce fact strategies as well.
        - o http://www.topmarks.co.uk/maths-games/3-5-years/counting/
        - o Math Vs. Zombies
    - ✓ You and your student can make up word problems while shopping at the grocery store.

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- Learning Goal: Student will **use addition and subtraction to model the joining and separating (sums of whole numbers up to 10/differences of whole numbers up to 10).**

How parents can help:
  - ✓ You and your student can use a set of 2 index cards to create numbers with part whole relationship. (e.g., One card- 10; cut the second card in half with 6 one and 4 on the other)
  - ✓ You can continue this process over and over until your student feels comfortable.
  - ✓ You and your student can use the Internet to part to whole relationship.
    - o http://www.mhschool.com/math/mathtoolchest/mtc_online/

- Learning Goal: Student will **use concrete objects and pictorial models to solve addition and subtraction problems (sums and differences of whole numbers within 10).**.

How parents can help:
  - ✓ You and your student can use pasta or beans as counters to solve problems.
  - ✓ You can also use Matchbox cars and other toys to make it concrete and visual for your student.
  - ✓ You and your student can use the Internet to create concrete problem solving.
    - o http://www.mhschool.com/math/mathtoolchest/mtc_online/
    - o http://illuminations.nctm.org/Activity.aspx?id=3565

- Learning Goal: Student will **understand that adding, subtracting two non-zero whole numbers, the sum will always be larger then each of the addends and the difference will always be smaller that the minuend (difference of whole numbers within 10).**

How parents can help:
  - ✓ You and your student can practice with numbered index cards by making vertical and horizontal number sentences.
  - ✓ You and your student can use the Internet to create concrete problem solving.
    - o http://illuminations.nctm.org/Activity.aspx?id=3565
    - o http://illuminations.nctm.org/Activity.aspx?id=3564

- Learning Goal: Student will **know that number patterns within properties of numbers and operations can be used to describe relationships within addition and subtraction equations and applied to solve problems (sums and differences of whole numbers within 10).**

How parents can help:
  - ✓ You and your student can practice solving problems with solving the problem from left to right as stated, but also read the problem backwards doing the opposite operation. (e.g., 2 + 4 = 6; 6 – 4= 2)

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✓ You and your student can use the Internet to reinforce number patterns.
  o http://www.oswego.org/ocsd-web/games/ghostblasters2/gb2nores.html

- Learning Goal: Student will **recognize small quantities of objects instantly without counting (sets of objects up to 10).**
How parents can help:
  ✓ You and your student can use bundles of coffee stirrers/straws grouped into 10. You can use the same bundle to break apart as singles or ones.
  ✓ You and your student can use the Internet to reinforce quantities.
    o http://www.learningbox.com/Base10/BaseTen.html

Unit 3
- Learning Goal: Student will **understand that a clock is a measurement tool that tells you time to the hour**.
How parents can help:
  ✓ You and your student can make a clock out of a paper plate, fastener, construction paper, and a pencil to practice telling time at home.
  ✓ You and your student can use the Internet and apps to reinforce telling time to the hour.
    o http://www.abcya.com/telling_time.htm
    o http://www.maths-games.org/time-games.html
    o Tic Toc Time app
    o Interactive Telling Time

- Learning Goal: Student will **understand the relationships between the numbers on an analog and digital clock.**
How parents can help:
  ✓ You and your student can practice counting by one's and five's to reinforce the intervals from one numeral to another.
  ✓ You and your student can skip count with a hand drawn number line with the same intervals to see the clock in a linear format.
  ✓ You and your student can use the Internet to reinforce the relationships between the numbers on a clock.
    o http://classroom.jc-schools.net/basic/math-time.html
    o http://www.abcya.com/telling_time.htm

- Learning Goal: Student will **know how an analog and digital clock are similar and different.**
How parents can help:
  ✓ You and your student can practice setting times on an analog and digital clock at home.
  ✓ You and your student can use flashcards to practice and make a game of who can get the most answers right.
  ✓ You and your student can use the Internet to reinforce the relationships between the two types of clocks.

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- o http://classroom.jc-schools.net/basic/math-time.html
- o http://www.maths-games.org/time-games.html
- o http://www.topmarks.co.uk/Flash.aspx?f=matchingpairstimev3

Unit 4

- Learning Goal: Student will **know the value of a digit within a given number (e.g. How is the value of the digit "1" determined in the number 19?) for numbers up to 20.**

How parents can help:
- ✓ You and your student can use long skinny pretzels to represent 10 units (rod) and goldfish for the ones (units) to practice place value by making different numbers.
- ✓ You and your student can use the Internet to reinforce place value up to 20.
    - o http://www.learningbox.com/Base10/BaseTen.html
    - o http://www.ictgames.com/sharknumbers.html

- Learning Goal: Student will **know the value of a number when adding or subtracting to it increases the number or decreases it.**

How parents can help:
- ✓ You and your student can use small cutout squares to replace ones/units for rod (10 units) to replace a rod to add or subtract with ones/units.
- ✓ You and your student can use the Internet to reinforce the relationships for place value.
    - o http://sheppardsoftware.com/mathgames/placevalue/scooterQuestJunior.htm
    - o http://classic.sidwell.edu/academics/lower_school/LS_Math_Adventures/batting_averages.htm

- Learning Goal: Student will **understand how place value is used to compare two numbers. (e.g., 2=2, 11>9, 15<19)**

How parents can help:
- ✓ You and your student can create/draw your alligator mouths opening to the left and the right or use two straws to form the inequality signs to place between two given values.
- ✓ You and your student can use the Internet to reinforce the relationships for place value.
    - o http://mathsframe.co.uk/en/resources/resource/266/Compare_Numbers_on_a_Number_Line
    - o http://www.ixl.com/math/grade-1/comparing-numbers-up-to-10

- Learning Goal: Student will **understand how place value is used to place a set of numbers in order. (e.g., How is place value used to order 1, 15, and 5?)**

How parents can help:

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- ✓ You and your student can write various numbers up to 20 and place them in order on a table with or without a number line.
- ✓ You and your student can use the Internet to reinforce the relationships for place value.
  - o http://www.mhschool.com/math/mathtoolchest/mtc_online/
  - o http://www.ixl.com/math/grade-1/number-lines