Welcome back to school! In an effort to keep parents and guardians informed of the expectations and content being covered in math class this year, this informational handout will be provided for each unit within the nine weeks. Its intent is to assist in guiding you in ways to support your child in deepening their mathematical understanding.

Scan the QR code to check out teaching strategies for this unit.

Each nine weeks we will spend time reviewing material taught in prior grades as it relates to the standards being taught in third grade. Our goal is to keep a balance of skill based learning along with enhancing our student's ability to problem solve and think conceptually.

Review Material from Prior Grades
1) Add and subtract to solve one and two-step word problems. (2.OA.1)
2) Place value of three-digit numbers. (2.NBT.1)
3) Add and subtract within 1,000. (2.NBT.7)
4) Measure the length of an object by selecting and using appropriate tools. (2.MD.1)
5) Represent whole numbers as lengths and sums and differences on a number line diagram. (2.MD.6)
6) Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. (2.MD.7)
New Material for 3rd Grade
1) I can solve one-step word problems using addition and subtraction. (3.OA.8)
2) I can identify arithmetic patterns (including patterns in the addition table), and explain them using the properties of operations. (3.OA.9)
3) I can use place value to round whole numbers to the nearest 10 or 100. (3.NBT.1)
4) I can fluently add and subtract within 1,000 using various strategies. (3.NBT.2)
5) I can solve word problems involving addition and subtraction of time intervals in minutes. (3.MD.1)
6) I can add and subtract to solve one-step word problems involving masses or volumes. (3.MD.2)
7) I can draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. (3.MD.3)
8) I can solve problems using information from a scaled bar graph. (3.MD.3)
End of Chapter Expectations
1) Standard Assessment

*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.

Strategies for Addition and Subtraction

Fact Families

Four number sentences are in each fact family. Use fact families to show relationships between addition and subtraction. When adding, the greatest number is always the sum. When subtracting, the greatest number is always the minuend.

15 + 8 = 23	8 + 15 = 23	23 – 15 = 8	23 – 8 = 15

Base Ten Models - Used to model place value of the numbers.

Addition

$$34 = 30 + 4$$
$$+ 27 = 20 + 7$$
$$50 + 11 = 61$$

Join ⇨   Regroup ⇨

Subtraction

$$56$$
$$- 29$$ ⇨

Represent 56. Can not take away 29 from this representation.

Trade one ten for ten ones.

Take away 29.

Represent answer as 27.

Partial Sums and Differences (Place Value)

The value of a digit depending on its place in a number. Use place value to find the answers to addition and subtraction problems.

Partial Sums	435 + 515 = (400 + 500) + (30 + 10) + (5 + 5)
	900 + 40 + 10 = <u>950</u>
Partial Differences	57 – 26 = (50 – 20) + (7 – 6)
	30 – 1 = <u>29</u>

*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.

Strategies for Addition and Subtraction, Continued

Landmark Numbers or Compensating (Addition)
Breaking apart addends to make addends easier to put together.

|	
A. $\begin{array}{r} 8 \ + \ 6 \\ -1 \quad +1 \\ \hline 7 \ + \ 7 = 14 \end{array}$	Example A demonstrates a first grader's Compensation strategy for making a double.
B. $\begin{array}{r} 18 \ + \ 23 \\ +2 \quad -2 \\ \hline 20 \ + \ 21 = 41 \end{array}$	In Example B, the student changes 18 to the friendly number of 20. Notice how 2 was subtracted from the 23 and then added to the 18.
C. $\begin{array}{r} 36 \ + \ 9 \\ -1 \quad +1 \\ \hline 35 \ + \ 10 = 45 \end{array}$	Example C demonstrates that Compensation can be used to make an easy 10. Choosing which number to adjust is an important student decision that is linked to the student's thinking about efficiency.

Rounding
Changing a number to a more convenient value.

Number Line

0-99 Chart
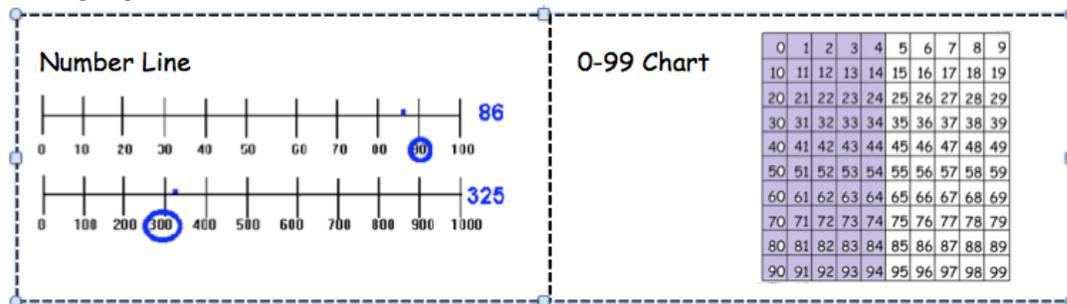
Adding and Subtracting Traditionally (with algorithm)

Addition With and Without Regrouping

$$\begin{array}{r} {\scriptstyle +1} \\ 243 \\ + 436 \\ \hline 679 \end{array} \qquad \begin{array}{r} 547 \\ + 325 \\ \hline 872 \end{array}$$

Subtraction With and Without Regrouping

$$\begin{array}{r} 685 \\ - 324 \\ \hline 361 \end{array} \qquad \begin{array}{r} {\scriptstyle 4\ 16} \\ 5\cancel{6}7 \\ - 385 \\ \hline 182 \end{array} \qquad \begin{array}{r} {\scriptstyle 4\ 9\ 10} \\ 5\cancel{0}\cancel{0} \\ - 362 \\ \hline 138 \end{array}$$
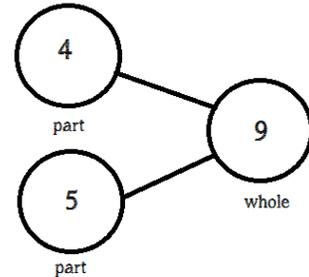
*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.
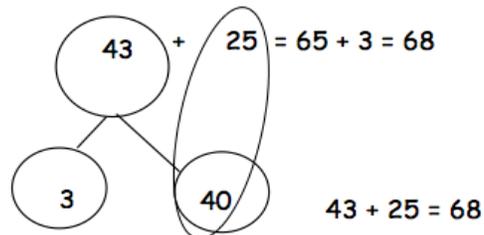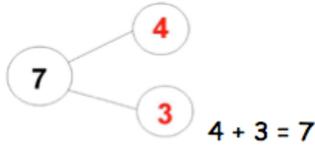
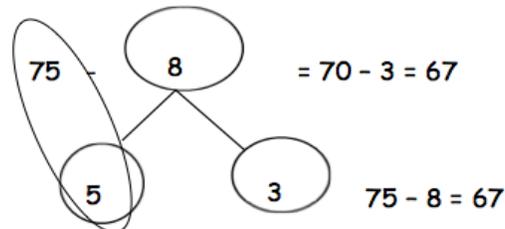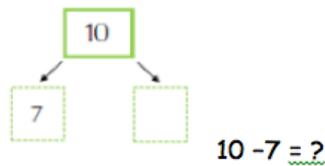## Strategies for Addition and Subtraction, Continued

Number Bonds

Show the relationship in a simple addition and subtraction problem. The number bond is based on the concept of "part-part-whole."

4 part

5 part

9 whole

Addition

4
7
3
4 + 3 = 7

43 + 25 = 65 + 3 = 68

3   40   43 + 25 = 68

Subtraction

10
7
10 – 7 = ?

75 – 8 = 70 – 3 = 67

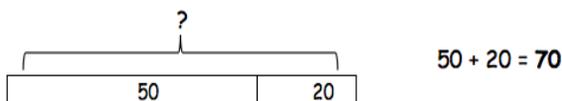5   3   75 – 8 = 67

Model Drawing (for solving word problems)

Using bar units to visually represent the information in a problem to make it easier to solve.

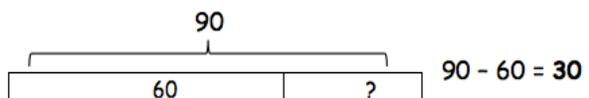| Addition	Subtraction
Sue has 50 blue beads and 20 red beads. How many beads does Sue have?	Ben and Andy have 90 toy cars. Andy has 60 toy cars. How many toy cars does Ben have?

Addition

?

50	20

50 + 20 = **70**

Subtraction

90

60	?

90 – 60 = **30**

*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.