

Lesson Seed: 1.OA.A.2 Solve Addition Word Problems With Three Addends

(Lesson seeds are ideas for the domain/cluster/standard that can be used to build a lesson.

Lesson Seeds are not meant to be all-inclusive, nor are they substitutes for instruction.)

Domain: Operations and Algebraic Thinking

Cluster: Represent and solve problems using addition and subtraction.

Standard(s): **1.OA.A.2** Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Purpose/Big Idea:

Students are able to add three whole numbers whose sum is less than or equal to 20.

Materials:

Have a variety of materials available for students to choose from, including: virtual manipulatives, number lines, ten frames and double ten frames, hundred charts, counters, and connecting cubes, pencil and paper so that students may draw pictures and/or write equations.

Dry erase boards and dry erase markers
Three containers, similar in size to a trash can
Basketball or beach ball

Resource Sheet 1: Number Lines
Resource Sheet 2: Ten Frame
Resource Sheet 3: Double Ten Frame
Resource Sheet 4: Hundred Chart
Resource Sheet 5A&B: Number Cards, 0-20 (one set per student)
Resource Sheet 6A-C: Basketball Equation Cards (one set per pair of students)

Activities:

Introduce several story problems to the class. Allow students to work with a partner or independently. Each pair of students may choose the materials of their choice to help them solve the problems. Students should be encouraged to share their solutions. They should have ample time to discuss the various strategies used at the end of class. Students who finish early should visit one of two centers.

Problem One: Mr. Para's first grade class is collecting shoe boxes for a class project. They collected 6 boxes on the first day, 3 boxes on the second day, and 5 boxes on the third day. How many boxes has the class collected so far?

Problem Two: (From <http://www.illustrativemathematics.org/illustrations/468>)

Jasmine has eight daisies and three vases - one large, one medium-sized and one small.

She puts 5 daisies in the large vase, 2 in the medium vase, and 1 in the small vase.

- Can you find another way to put daisies so that there are the most in the large vase and least in the small vase?
- Try to find as many ways as you can put the daisies in the vases with the most in the large vase and the least in the smallest vase. If you think you have found them all, explain how you know those are all the possibilities.

Center Activities:

Center Activity 1: Play “The Answer Is”. Once the class has played this as a whole-group activity, it can be added as a center activity.

To play this game, have students work in groups of 4. One student in each group chooses a number from a bag of numerals, 0 – 20 (see Resource Sheet 4: Number Cards) and says, “The answer is 15. What is the equation?”

Students use manipulatives, dry erase boards, and dry erase markers to come up with exactly three addends that total 15 (or whatever number is pulled). Students should take turns pulling numbers out of the bag so that each student in the group gets a turn. The combinations should be written in the students’ math journals.

Center Activity 2: Basketball Addition (idea taken from <http://www.fuelthebrain.com/Game/play.php?ID=69>). The online game may also be used as a center activity.

The teacher creates three “baskets” for students with a different sum displayed on each of the three baskets (16, 11, and 8). Resource Sheet 5: Basketball Equation Cards has been prepared for the sums 16, 11, and 8. Students take turns drawing equation cards from the bag. They may use paper and pencil or mental math to add the equations to find the sum.

Once the player has found the sum, he or she shoots the basketball into the basket that displays the correct sum. Other players on the team verify whether or not the sum is correct before the next player takes a turn. The addends in the center and the equations on the resource sheet can be modified to meet the needs of your students.

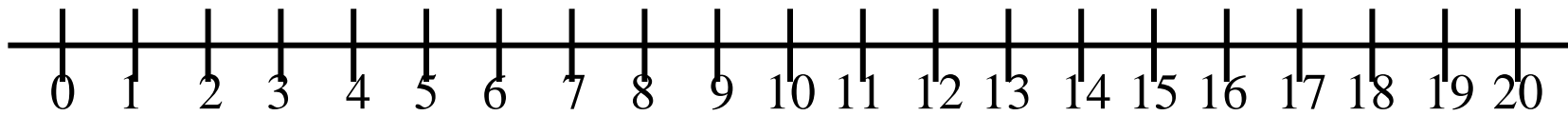
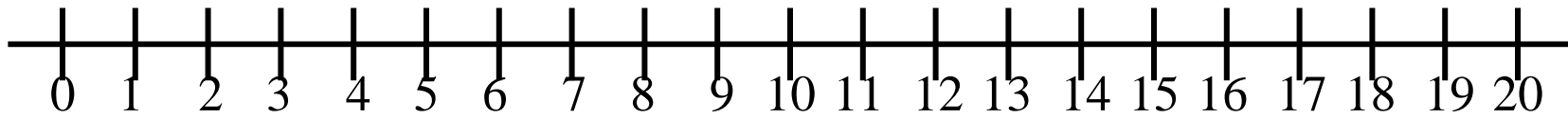
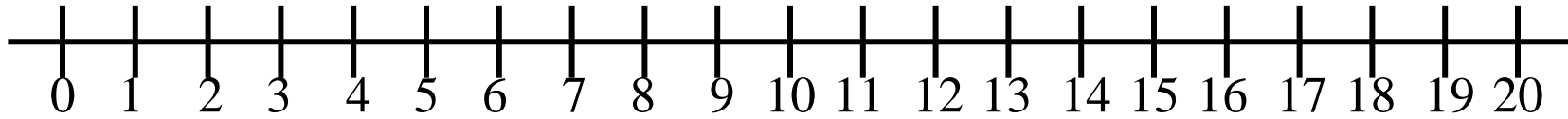
Guiding Questions:

As the teacher circulates around the room, some questions that can be posed to the groups as they work might be:

- Can you think of another way to solve the problem?
- What can you do if you get stuck?
- How do you know where to begin to solve this problem?

- How do you know if your answer is reasonable?
- What are some strategies that can be used to make adding three addends easier and more efficient?

Number Lines



Ten Frame

Double Ten Frame

Hundred Chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Number Cards, 0-20

0	1	2	3
4	5	6	7
8	9	10	11

Number Cards, 0-20

12	13	14	15
16	17	18	19
20			

Basketball Equation Cards

$$0 + 7 + 1 = ?$$

$$3 + 9 + 4 = ?$$

$$4 + 5 + 2 = ?$$

$$3 + 3 + 5 = ?$$

$$8 + 7 + 1 = ?$$

$$2 + 2 + 4 = ?$$

Basketball Equation Cards

$$10 + 4 + 2 = ?$$

$$3 + 2 + 3 = ?$$

$$9 + 0 + 2 = ?$$

$$1 + 1 + 6 = ?$$

$$7 + 3 + 1 = ?$$

$$5 + 7 + 4 = ?$$

Basketball Equation Cards

$$4 + 4 + 3 = ?$$

$$6 + 10 + 0 = ?$$

$$5 + 1 + 3 = ?$$

$$3 + 8 + 5 = ?$$