MUHLENBERG COLLEGE LESSON PLAN FORMAT

Name	Grade	Date
Abigail Nochimson	1	2/9/23

Unit Title	Lesson Title
Unit 8: Meanings of Subtraction	8.3: Represent and solve take apart problems

Standards Addressed

1.OA.A.1: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem."

Objective(s)

SWBAT solve a take apart word problem when the total is unknown

Main Assessment(s) and Criteria for Evaluation

1. Understandings on the last problem of the worksheet done individually or as a group to check for understanding (red, yellow, green). Each worksheet is leveled to fit each group's needs.
2. I will be monitoring how students perform throughout small group instruction and mark on a sheet a check minus, check or check plus.
   a. This tells me how well each individual worked and if we need to spend some 1v1 time to improve.
3. Formative: Math Probe on Friday will inform me on what each student needs improvement on (what we are working towards).

Set Induction

1. Whole Group Instruction:
   a. Number Sense/Line Warm up: Where on the number line from 0-20 does 15 fall?
   b. I will ask the class to think in their heads before having one student come up to the board and point to where.
   c. I will ask students thumbs up or thumbs down, do we agree?

Content Outline

Keywords:

a. Difference

b. Fewer

c. Less than

d. Are left

e. Away

The Lesson	
Instructional Strategies and Learning Activities	Differentiation/Accommodation

1. Set induction: number line warm up (5 minutes~)
2. Slides will be projected on the screen to direct students to which group is meeting with me first.
3. Red group: (20 minutes~) while teacher is working with a small group, the other two will either work on IXL or 'First in Math'
   a. Group 1: red group
   b. Teacher will be working at the semi circle table with these students
   c. Students will bring their blue math folders, white board markers, erasers and pens. (blue math folder, markers and erasers are there if students need to show their work with more room or solve using a different format).
   d. We will begin by reviewing the key words
      i. Difference
      ii. Fewer
      iii. Less than
      iv. Are left
      v. Away
   e. We will work on worksheet 8-3 #2 to complete the more challenging problems together, and send 8-3 #1 home for them to complete for extra credit
	1. If students are understanding or not, I will adjust the problems for them to complete on their yellow work page in their blue binder. (either keep them harder or easier)
	2. I will gauge their understanding after the "I do" problem and see if we should complete number 2 as a group or individually.
	3. Worksheets are tiered depending on the level group I am working with, but the concept is all similar (Meanings of Subtraction)

f. I do: Teacher will read the directions to the group: "Use the part-part-whole mat. Write the equation. Solve."

g. Because there are only two problems on their worksheet, I will make one up for the "I do" portion and complete it on my binder "work mat".

    i. I will prompt students to follow along, but watch how I solve.

4. We do: "I see some flowers. I take 4 flowers. There are 4 flowers left. How many flowers did I see?"

    i. "We are going to circle the two numbers our word problem gave us. We will underline "some flowers" because our whole is unknown and it is our job to find it.

    ii. We will underline "left" because it is one of our key words.

    iii. In the first "part" box, we will draw 4 dots because that is one of the numbers our word problem gave us and it is one of our parts. In our second "part" box, we will draw 4 dots because we know how many were left after 4 were taken / our other part.

    iv. Now that we have both parts filled out, we can find our whole by counting both parts.

    v. In our whole box, we can now make 8 dots because one of our parts has 4 and the other has 4, which gives us a whole of 8.

    vi. Now that we know our "whole", we can begin putting our equation together.

    vii. We are going to start with 8 because it is our biggest number and we always

start with our biggest number in a subtraction equation. 8-__=___

    viii.   Next, we know from the word problem that we took away 4 flowers so we subtracted 4 from 8. We will write 8-4=__.

    ix.   Finally, we know our other part is 4 because we had four left. Therefore, 8-4=4.

    x.   We will write an "8" on the blank because we were asked to find how many flowers we saw, or what the whole was.

5. For problem two, I will gauge where students are at and if they are understanding it and decide on the spot whether I should do a "we do" for number 2 or have them complete it individually.

6. Number 2 reads. "I see some apples. I take 7 apples. There are 3 apples left. How many apples did I see?"

    a.   If it is "we do", I will prompt students for their responses and ensure they are on the right track.

    b.   If it is "I do" I will check their work and ensure it is right and decide if they get a "check minus, check or check plus" based on their comprehension throughout.

7. For extra credit/practice: the red group will complete 8-3 worksheet #1 which is more straightforward

8. Yellow/green (20 minutes each, 40 minutes~)

    a.   Students will bring their blue math folders, white board markers, erasers and pens. (blue math folder, markers and erasers are there if students need to show their work with more room or solve using a different format).

    b.   We will review the vocabulary key words and I will introduce a new keyword, "some" which we will run into in these word problems. I will

explain "some" signals to us that we do not know our "whole" or biggest number.

c. Students in the yellow/green group will work on 8-3 worksheet #3 with the teacher at the semi circle

d. Teacher will read the directions to the group: "Use the part-part whole mat. Write the equation. Solve."

e. I do: I will prompt students to follow along, but watch how I solve: same problem I made up for the "red" group, I will use "I do" for the yellow/green groups.

f. We do: "I see some pencils. I take 5 pencils. There are 13 pencils left. How many pencils did I see?"

g. First, we will circle the numbers given to us in the word problem. 5 and 13, or our two parts.

h. We will then underline our new keyword which is "some". This tells us we do not know the whole and it is our job to find it.

i. In the first part box, we will draw 5 dots because I know that is one of our parts / given to us in the word problem.

j. Next, we will draw 13 dots in our next part box because we know that is how many were left after we took 5 / our other part.

k. Now that we have both of our parts filled out, we will count the dots in each part to find our whole or total number of pencils we saw before we took 5 away.

l. We counted 18, therefore we will draw 18 dots on the "whole" mat.

m. Now that our part-part-whole mat is completed, we can begin writing the equation.

n. We are going to start with 18 because we know to always start with the biggest number in a subtraction word problem.

    o. We know we took 5 away so we will write 18-5.

    p. Lastly, we know the other part so 18-5 must equal 13.

    q. We will write 18 on the blank next to pencils. We had to find the "whole" or total number of pencils.

9. For problem two, I will gauge where students are at and if they are understanding. I will decide on the spot whether I should do a "we do" for number 2 or have them complete it individually.

10. Number 2 reads. "I see some books. I take 6 books. There are 11 books left. How many books did I see?"

    a. If it is "we do", I will prompt students for their responses and ensure they are on the right track.

    b. If it is "I do" I will check their work and ensure it is right and decide if they get a "check minus, check or check plus" based on their comprehension throughout.

    c. Students in the yellow/green group will complete 8-2 worksheet #2 for extra credit

11. Closure for all groups: (5 minutes~) We will review our key vocabulary words that signal to us we must subtract!

Closure

1. In small groups: review our key vocabulary words that signal to us we must subtract

Materials and Resources

0   10   20

15
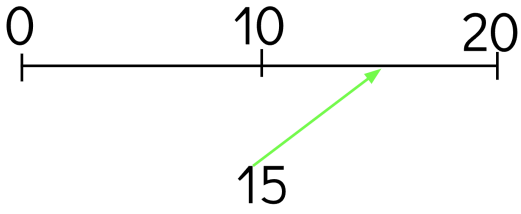
Reveal Math: Number Line Warm up

Miss Camel Worksheets/TPT: 8-3 worksheets 1-3

First in Math / IXL: computer programs

Reflection