Math Lesson

Lesson Title: Hunting for Bugs
Grade: 1/2

Research Hypothesis:

Content Standard:
1.OA.A.1: Represent and solve problems involving addition and subtraction
Use addition and subtraction within 20 to solve work problems involving
2.OA.A.1 Represent and solve problems involving addition and subtraction
Use addition and subtraction within 100 to solve work problems involving

Materials:
Bug pictures or actual bugs (hidden around the room), chart paper, markers or crayons,

Shared Experience and procedure details:
Grouping: 5 groups of 4 (homogeneously grouped with respect to grade level/ability). If there is not a number of students divisible by 4 without remainder, use groups of 4 and 3.
The students will go on a scavenger hunt to search for bugs. The students will be sent in pairs to find their bugs. Each group will be getting a certain number of bugs to be determined by a random card draw with numbers (17-20).
*5 groups of 3 and 1 group of just grade 2 students
Give students 5 minutes to sort by however they want. Then they are to freeze and provide a total number of bugs in their collection. Glue the bugs on their chart paper.

1. Please sort your bugs.
2. How many bugs do you have in your collection?
3. (If all student groups just scoop them up) What is another way for you to find to total of your collection?
4. How many bugs are there in the class collection?

Teacher Questions: FIND OUT WHAT YOUR STUDENTS ARE THINKING ABOUT MATHEMATICS

1. How did you think about it?
2. Do you agree? (Pointing to another student in their group)
3. Constantly re-stating the goal…"Your goal is to find out how many bugs are in your collection of bugs."
4. Can somebody else help me (teacher) to better understand ____ (student) said.

Anticipation: Students may sort their bugs by wings, legs, size,
Students may count the bugs by: 1's, 2's, 5's, counting on, moving them all together
Upon completion of the task, students will do their picture and people talk.

Possible Picture:
Draw the bugs

Possible People Talk:

Feature Talk:
Count by 1's, 2's, 5's, counting on, moving them all together
Count group, add, skip count, grouping, regrouping, compatible numbers,

Math Lesson

Possible Symbolic Representation: Instruction: “Using numbers and symbols only, represent or show how would we find the total number of bugs in the class collection?” Draw bugs, addition equations with a variety of addends
Written By: Clear Fork Teachers Date: July 27, 2015

LESSON STUDY REFLECTION

Teacher Reflection on the lesson:

Students were not clear about the sorting and how many times they were supposed to sort. They are not comfortable with metacognition. They need more work work on thinking about their thinking. Common least effective issue with the

Reflection from the planning team:

Most effective:

The student pulled out more words than what they listed when they

Surprised more of the math that was discussed during the scavenger hunt. x3

Were not connecting the 5-steps with the overall math activity.

Clear goal, “Your job is……”

S: “There’s only 3 without any wings…”

S: “ Counting by 2’s somehow.”

Groups of 5 were too big.

We have 18, we have 2 more than we need. (during the scavenger hunt). x3

Thought the students stayed with her on the process of the five step process.

Having very different looking bugs helped with the options for sorting. So, this yielded good options.

Sequencing of the examples was concrete to abstract. x2

Questioning: “Well, then, what would it look like?” x3

Pictorial representation: picture arrow picture arrow picture. Interesting that they counted by ones and then

Teacher movement around the room was very effective.

Math Lesson

Least effective:

The problem wasn't translated to the group clearly enough. x3

Possible personality conflicts with group dynamics.

Sharing out their structure of how they sorted. The sorting interfered with the mathematics.

A lot of down time.

The focus was on the bugs and not the math.

Many groups used Rote counting, continual counting. Some groups counted small groups of their bugs.

Students were unable to combine the bug group totals.

Students had a hard time elaborating on their people talk.

Needed to keep repeating a clean statement about what the problem was.

Group size is too big. Small groups should be equal to or less than 4.

Possible changes:

Start with the new number and then passed the bugs to the next group. Clarify that we are switching.

Partners instead of groups. Keep it with 4 or fewer, try it.

Ask students to plan before they hunt before they went on the hunt.

Assign a space where the groups were going to go to count up their bugs after the scavenger hunt.

Restate the big question more often to whole group. Possibly write the big question on a sentence strips and put one on each table.

Feature talk: Mathematics likes to turn everything into nouns. So, how do we elaborate/focus the feature talk with respect to the focus of noun-prominence?