CRAWLING WITH MATH
(Grade Level: 1st)

Introduction:

This lesson will be introducing students to the addition concept through the use of an interactive insect bulletin board. It is essential that children experience learning in a realistic and simplistic fashion. In “bug” addition, students will be able to group objects such as bugs, to understand the concept of grouping. As this is one of the math lessons, also included in the insect unit are: language arts, social studies, science, and reading.

Behavioral Objectives:

Students will add two one-digit numbers through the use of a bug mural. Given the interactive lesson on the addition concept, students will affectively demonstrate their understanding of the math concept by giving their responses verbally to the mathematical story problems asked by the teacher. Then later, students will be able to apply their knowledge on the “bug” addition practice sheet. The objective will be met when the teacher can assess their mastery of the math standard 1: Number Sense, PO3 Count out requested number of objects up to 10 without an example.

Arizona State Standards:

Math Standard 1: Number Sense
Students develop number sense and use numbers and number relationships to acquire basic facts, to solve a wide variety of real-world problems, and to determine the reasonableness of the results.
PO3. Count out requested number of objects up to 10 without an example.

Anticipatory Set:

1. Ask students to join for circle by table (have the bug mural displayed within their reach—kid height).
2. Begin discussion of all of the different types of bugs displayed on the mural (this is a review, the students already attained the background of the insect names in a prior lesson where they colored the insects and were taught the names of each one).
3. Ask students, for example, “How many lady bugs do you see”? And so on, making sure you set them up for counting the various groups of insects.
4. Begin telling story problems with the mural, for example, “The luna moths visit the water bugs. How many insects are in the pond”?
5. Accept responses and repeat using different examples.
6. Ask students to make up their own math problems based on the bulletin board and raise their hand to share with the class.
Teacher Input:

Teacher gives an example of an addition story problem, accepts responses given verbally and physically (i.e. counting fingers, clapping, etc.). Then, teacher pairs up the students by number (1,2) and instructs them to come up with their own story to tell their partner. Their partner then has to solve the problem before they can tell their story problem. Allow students to converse with their partners about the different insects on the bulletin board and encourage them to make up a math story. The teacher is to assess all of the students’ knowledge of grouping and adding this entire time of collaborative learning. The teacher would then choose students to stand up and tell their math story with the rest of the class, and the class gets to answer.

Script:

Teacher: The butterflies fly over to the ladybugs that are sitting by the pond. How many insects are by the pond?
Student: 7 insects.
Teacher: Now, it is your turn to make up your own math story problem that you can tell to the class. Do you think you can do that?
Student: Yes!
Teacher: Fantastic! I will select you a partner and you will get to tell him or her your math story—okay? Thumbs up if you are ready to begin!
Student: (Show thumbs up)

Modeling the behavior:

Teacher will call on students to come up to the bulletin board to demonstrate with the actual insects on the mural and tell their math story. The student will get to pose the math question and pick on a student for the answer. The teacher will repeat this process several times, making sure to include ALL students. For example, an ELL learner can present his/her story with their partner (one student says the first part, and the other says the second part). Now, once the teacher has checked for understanding of all her students, the teacher may proceed with the next step. The teacher will introduce the practice sheet that uses the same pictures of the bugs, to add two one-digit numbers. She will instruct the students that they are to write number problems to match the insects on the bulletin board. She will hand out the worksheets and display it on the overhead, demonstrating how to do the math the first couple of problems. Teacher will then tell the students that they may go up to the bulletin board if it is easier for them to count the bugs from a closer view. Some students will need to touch each bug when counting, and that is especially true with some Special Education students and kinesthetic learners.
Check for comprehension:

Teacher will check for understanding by observing the students behavior. During the lesson teacher is consistently questioning the students and demonstrating each activity with more than one example. Also, the students are first expected to verbally respond to their peers and with their peers before they are assessed through a written application (the math practice sheet). Teacher will roam the room and use this time for one-on-one assistance for her special and ELL students.

Guided practice:

The teacher will guide the students through the interactive bulletin board, followed by making up their own math stories, and lastly adding in a written form with the picture bug worksheets. Students will demonstrate their knowledge of adding objects by their written application on the math sheets, when they came up with their own math stories and told them to the class, and when the teacher asks them to answer a math story.

Closure:

Students will be able to add two 1-digit numbers by using insect visuals as their counters. They will be able to relate numbers with groups of insects. Teacher will close lesson by relating and demonstrating physical objects (realia) to the math concept that they just learned. That they may transfer the new information, and make connections to the world around them.

Independent practice:

Students will independently work on the addition problems on the insect math worksheet. This worksheet considers the students that learn best when the assignment is directly tied to the lesson and demonstration. The worksheet is also a visual tool because it uses the same pictures of the insects that the students are familiar with. The students can also get up from their seats and touch each bug on the mural to help him/her add.

Assessment:

Teacher will check for understanding by observing the students behavior. The objective will be met when the teacher can assess their mastery of the math standard 1: Number Sense, PO3 Count out requested number of objects up to 10 without an example. Students will be able to add two 1-digit numbers by using insect visuals as their counters. They will be able to relate numbers with groups of insects. Before they are assessed through a written application (the math practice sheet), they are assessed verbally through their story telling. Teacher will also assess through one-on-one assistance for her special and ELL students.
Materials:

Insect bulletin board, insect math worksheet, and pencils.

Modifications for students with disabilities:

The modifications for students with special needs include: the physical and visual insects and setting that the students can manipulate on the bulletin board. Collaborative learning during, “story problem circle time”. The guided practice given by the teacher and the visual pictures on their worksheet that gives them a visual connection between the mural (experience) and the application of what they just encountered. They may get up and move around to count the insects on the bulletin board. If they are unable to move or see the mural because of a physical impairment, then I would incorporate auditory learning along with using bug toys that they could hold in their hands and count out on their desks. And, of course, one-on-one assistance.

Technology integration:

N/A