Dan, Amy, Marlene, Jess

Patterns Lesson

**Standards**

Create, describe, and apply single-operation input-output rules involving addition, subtraction and multiplication to solve problems in various contexts.

**Objectives**

Students will identify the pattern of the trinumbers using lima beans.

Students will list patterns found in the real world.

**Launch**

I went to visit my mom and dad over the weekend. My mom made lima beans! How many of you like lima beans? I don’t. So I pushed them around my plate and found a pattern with triangles. Here is one pattern I found:

**Explore**

* Show the first three trinumbers on document camera.
* Ask the students the following questions:
	+ How are these figures alike?
	+ How are they different?
	+ How many lima beans are in each figure?
* Ask students to determine how many lima beans will be in the next terms in the sequence shown on the chart.
* Be able to share how you determined your answer.
* When you have determined the next terms, draw your chart on the board.

**Summarize**

Have students share how they determined the missing terms on the chart. Compile a list of the different strategies used to determine the solution.

This is an example of a pattern. Each time we add three or we multiply the term by three. We can achieve the same solution by different methods of problem solving.

Patterns describe the relationships between the terms.

**Apply**

Where would we see a pattern like this in the real world?

What are some other examples of patterns that we can find in the real world?

|  |  |
| --- | --- |
| **Term** | **Amount of Lima Beans** |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |
| 7 |  |
| 8 |  |