



NCEA Math Lesson Plan

Grade: 2

Subject: Mathematics

| |
|---|
| Domain: Geometry |
| Standard Number(s) and Description: 2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. *Count sides and angles |
| Vocabulary to be Highlighted: Sides, perimeter |
| Mathematical Practices (#): 1. Make sense of problems and persevere in solving them. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. Essential Question: How is creating a model helpful in solving problems? |
| Materials/Tools (include technology): Printed out Bible verses (See below) Chart paper <u>Spaghetti and Meatballs for All! A Mathematical Story</u> by Marilyn Burns Pattern squares (to represent the tables) Optional: small counters (to represent the people) Optional: whiteboards/paper to record problems |
| Connections to Other Math Domains Operations and Algebraic Thinking: 2.OA.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. *Use a model to add two or more one-digit numbers. |
| Connections to Other Subject Areas: Science (plant unit - Identify the parts of a plant we eat: roots/stems/leaves) |
| Catholic Identity Component: Hebrews 13:16 Do not neglect to do good and to share what you have, for such sacrifices are pleasing to God. |

1 Timothy 6:18 They are to do good, to be rich in good works, to be generous and ready to share.

Luke 3:11 And he answered them, "Whoever has two tunics is to share with him who has none, and whoever has food is to do likewise."

Resources (attachments):

https://www.youtube.com/watch?v=juESGjl3498&index=2&list=PLhukt_gS4JLdvLOADcT0VXDwmTEBh8Zrw

(Growing Vegetable Soup)

<http://exchange.smarttech.com/details.html?id=0e325194-1df2-4433-a9ce-7f0c4312b74e>

(Perimeter Practice)

Activities/Timeline:

Whole group activity-options for set up may be to start at desks and then move to carpet/circle area when reading the story. Then students can go back to desk for follow up activity and discussion.

1. Ask if anyone grows a garden. What is grown in their garden/s?
2. What do you do if you have any extra vegetables in your garden? Discuss.
3. Introduce the verses (Catholic Identity piece). Is there anything the same about these verses? What do you think the theme is?
4. Tell children as they listen to the story, think about how it relates to these Bible verses.
5. Introduce story and hand out pattern tiles. Tell the children that these "math tools" will be used to "model" the story as we read it. The pattern blocks will represent tables.
6. Introduce/define the vocabulary - sides/perimeter - illustrate on chart. (The amount of people that can sit in a given table arrangement will be the definition for perimeter). Identify on the pattern blocks where the sides are. Ask how many tiles are needed for 4 people to sit; 6 people? Take some time for the students to explore; provide this time for self-discovery.
7. Ask why pattern blocks would be an appropriate tool. What is a tool that wouldn't be effective for this story? (a ruler, ten sticks, round counters)
8. Lead a short discussion on the effectiveness of our choice of tools. Some tools are more effective than others in helping to model and solve problems.
9. Read the story - children will use the pattern blocks to model the story. Note: Children may come up with different ways to organize the tables than the author did. Is that OK? *see formative assessment
11. Children can use whiteboards/paper to keep a running record of the amount of people joining Mr. and Mrs. Comfort. *see formative assessment
12. Follow up with the reading of Growing Vegetable Soup (website above)
13. Ask and discuss essential question above.

Formative Assessment (what to look for, how/when to look):

Can students arrange their blocks to seat the given number of guests?

Can students record and solve accurately the number of guests on any given page? What are the difficulties in computation?

Summative Assessment: