



NCEA Math Lesson Plan

Grade: 5

Subject: Mathematics

Domain: Measurement and Data
Standard Number(s) and Description: 5.MD.3 : Recognize volume as an attribute of solid figures and understand concepts of volume measurement. 5.MD.5 : Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.
Vocabulary to be Highlighted: Volume, length, width, height, cubic measurement, 3D
Mathematical Practices (#): 4. Model with mathematics. 6. Attend to precision. Essential Questions: Can you make a diagram of this situation? What does this statement mean? Is your method correct?
Materials/Tools (include technology): Bible Computer Animal research
Connections to Other Math Domains: Numbers and Operations in Base Ten Operations in Algebraic Thinking
Connections to Other Subject Areas: Science Religion
Catholic Identity Component: Stewards of creation, preservation
Resources (attachments): www.wwf.org (to find animal information) Genesis 6:14-16

Activities/Timeline:

Lesson 1

1. (Whole class) Define volume.
2. Use measurement of Noah's Ark to find volume of the ark.
3. Discuss animals in the ark.
4. Introduce endangered animals. (If you were Noah, what animal would you try to save?)
5. (Small groups) Break into groups based on interest in animal.
6. Hypothesize the volume of their animal and how many of that particular animal would fit on the ark.

Lesson 2

1. Open with creating a line plot of the groups' predictions.
2. Research animals further: size, food, adaptations.
3. Calculate the volume of the animal.
4. Use calculation to determine how many would fit on ark.

Extension: After researching the amount of pounds each group's animal would eat in a day, find out how many pounds of food is needed for forty days.

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

Predictions, exit note with volume of selected animal

Class participation

Line plot

Calculations

Summative Assessment:

Select another animal individually.

Determine the volume of each animal.

Find out amount of animals that would fit on the ark for individual student's animal.