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| Strand: Measurement  Lesson Title: Estimate the number of jelly beans in a rectangular prism | | Date: February 25, 2015 | | Grade(s):6 |
| Curriculum Expectations:  *Measurement Sense:* Gr. 6 - estimate, measure, and record length, area, mass, capacity, and volume, using the metric measurement system.  - solve problems involving the estimation and calculation of the surface area and volume of triangular and rectangular prisms | | | | |
| Learning Goal #1  Area is two dimensional  Volume is three dimensional | Learning Goal #2  We can use the area of rectangles to inform the measurement of other polygons | Learning Goal #3   * A rectangle’s dimensions provide the number of squares in rows and columns * We can multiply length times width to equal area * We can multiply length times width times height to measure volume | Success Criteria   * Determine the area of regular polygons * Can make a connection between the area of a rectangle and its relationship to its length and width using mathematical language * Students will be able to justify their estimation of area * estimate the volume of a rectangular prism, using a non standard measure | |
| Lesson Components | | Anticipated Student Responses | | |
| Before – Introduction (Whole Class) 10 – 15 min (Getting Started / Minds On) | | | | |
| Setting the Stage: Have the students estimate the area of their desks.  Ask: Estimate the area of your desk? How did you count? | | (6 x 6 = 36, 6 + 6 + 6…18 + 18) | Prompting Questions:  I saw it like this…  What was my thinking?  What about this? | |
| During – Teaching and Learning (Whole Class / Small Group) 35 – 45 min (Work On It / Action) | | | | |
| Problem and Context: Estimate the volume of a rectangular prism  Part B: Students will work in groups to choose a measuring tool (ruler, tile) and a strategy (structure and array, repeated addition, formula for volume of a rectangular prism) and demonstrate a way of estimating and counting the total volume of a rectangular container full of jelly beans. | | Anticipated Student Responses:   * Count rows * Measure half, quarter of the container and double * length x width x height | Prompting Questions:  How are you counting?  Is there a more effective unit for the size/shape of the object?  What might be a more effective way to calculate the volume? | |
| After – Consolidation (Whole Class) 35 – 45 min | | | | |
| After the students are finished solving the problem and recording their solutions, bring the whole class together to share their work. Ask a few groups to share their strategies and solutions with the group. | | Prompting Questions:  What strategy did you use to solve the problem? Why did you choose this strategy?  Is the solution to your problem reasonable? How do you know?  How did you know you were on the right track? | | |
| After (Highlights and Summary) | | | | |
| Teacher Action: Address any misconceptions that arise or anticipated misconceptions | | | | |
| After (Practice & Inquiry) | | | | |
| Assessment:  Student Action – Ask them to write in the journals about the activity and what they learned from it, and any questions that they still may have.  Teacher Action – Ask them to conclude their response by answering a specific question related to Learning Goals/Success Criteria. | | Teacher Action: Possible questions, which can be asked, to deepen student understanding as well as help make connections. | | |