**Balanced Math Planning**

**Date**: Week of Oct 28-Nov 1, 2013 **Amount of Time**: Approx. 2 X 30 minutes

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| * **Strand**: Geometry and Spatial Sense – Geometric Relations  **Expectation**: solve angle-relationship problems using intersecting lines (e.g., finding complementary and supplementary angles or opposite angles)  **Big Idea**: Angle relationships using intersecting lines | |
| **Minds On** | |
| **Open Question** | **Lounge Chair Question**: (diagram of side view of a lawn chair) What is the angle of your favourite position on a lawn chair at the beach? What is the supplementary angle of your favourite position?  *Resource*: modified question from Math Makes Sense 8 |
| **Action**  Balanced Math Centres | |
| **Math Facts** | **Complementary and Supplementary Matching game**  - students play in a “Concentration” style game that requires them to match complementary or supplementary pairs of angle measurements  *Resource*: Self-generated |
| **Math Games** | **Board Game: “Angles of Rotation”**  - students will identify angles and rotate counter to demonstrate understanding  Materials: counters with arrows drawn on them, dice, gameboards  *Resource*: Math Grid Games p.51 |
| **Independent Problem Solving** | **Parallel Tasks – choose one:**  1) The measure of an angle is 10 more than the measure of its complement. What is the measure of each angle?  2) The measure of an angle is 40 more than the measure of its supplement. What is the measure of each angle?  *Resource*: modified questions from Math Power 8  \*students can choose to do both if they wish |
| **Shared Problem Solving (2)** | (1) **Parallel Questions – choose your challenge**  a) When a clock shows 3:00, the hands are at a right angle. What other times would create a right angle? Use the clock provided to help you.  b) When a clock shows 6:00, the hands are at a straight angle. What other times would create a straight angle? Use the clock provided to help you? |
| (2) **Riddle**  I am an acute angle.  I have two digits. My complement is a multiple of 9.  My supplement is a three-digit number; two of these digits are 1s.  What angle measurement am I?  Once you find your answer, explain how you KNOW your answer is correct. |
| **Guided Problem Solving** | Students view a diagram filled with right angles, straight angles, and intersecting lines;  Prompt: Use the diagram to identify a) all right angles, b) all pairs of complementary angles, c) all pairs of supplementary angles, d) all pairs of opposite or vertical angles F E  A  G    D  B C  - discuss how to name angles, and have students justify their choices  Materials: white board and white board markers  *Resource*: modified question from Math Makes Sense 8 |
| **Digital Learning Tools** | Students login to [www.explorelearning.com](http://www.explorelearning.com) with their personal usernames and passwords;  Complete the activity that has been assigned to them “Investigating Angle Theorems – Activity B”; students must complete the assessment at the end.  *Resource*: Gizmos at Explore Learning |
| **Consolidation** | |
| **Consolidation**: Math Museum for Shared Problem Solving (clock questions); have students post their group answers. Have students walk around the room to visit other responses. Discuss solutions with members from other groups.  **Journal**: Draw a diagram that contains at least one pair of complementary angles and one pair of supplementary angles. Explain how you know the angles are complementary or supplementary.  *Resource*: Math Makes Sense 8 | |