| **Unit 1:** Number Sense  
**Lesson:** Wow Airplanes from: The Futures Channel |
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**Estimated Time of Lesson:** 1-2 classes

**Objective(s) of the lesson:**  
*(What the students will learn and know):*

Students will be able to understand and use three methods of expressing a ratio (2 to 3, 2:3, 2/3), and also be able to describe a real world situation in terms of ratios.

**Standard:** 8.N.3

**Key Vocabulary:**  
Ratio, angle, mean, median, mode, range, fair procedure

**Materials:** paper, scissors, tape, tape measurer

**Correlating Book and Chapter:**

**Activities** that addresses the objectives: *(What the students will do)*

1. Introduce objectives
2. Mini-lesson:
   a. Brainstorm with the students what they know about ratios and proportions.
   b. Reinforce the knowledge learned in How Tall? Show an example of how to solve for an unknown using a proportion.
   c. “What does experimental error mean?”
   d. “What are some things we can do to minimize that error?”
   e. “How do you think the ratio of the wingspan to airplane length will affect the flight of the plane?”
   f. “When the plane is thrown, does the angle at which it is released make a difference?”
   g. “Does the speed with which it is released make a difference on how far the plane glides?”
3. Activity:
   a. Break the students up into teams of three or four.
   b. Distribute the handout and discuss it.
   c. Show the example models, and demonstrate how to create their airplanes and then how to record the data from their flights.
   d. Students repeat the procedure they saw modeled in front of the class with their groups, finding the distance each plane flew with the different ratios of wingspans.
4. Wrap-up/share

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<tr>
<th>Assessment(s): (How the students will know if they have done a good job in meeting the objectives)</th>
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<td>Students will be assessed on their paper airplanes, and the recording and organization of their data</td>
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<th>Homework/ Reinforcement:</th>
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| Teacher Reflection: complete after lesson |