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| **Lesson Title:**  **Lesson #1 Scale: Fish Problem** | **Date:**  M.S. |
| **Overall Expectations**   * *Solve problems involving proportions, using concrete materials, drawings, and variables* * *Identify and describe real-life situations involving two quantities that are directly proportional* * *Solve problems involving operations, using a variety of tools, manipulatives and strategies*   **Learning Goals**   * To be able to use any scales provided and apply it in real life situations   **Success Criteria**   * Use math vocabulary to discuss solutions and planning * Showing their thinking and reasoning on paper and orally * Solve the problems correctly | **Assessment for/as Learning Opportunities**   * Strings * Ticket out the door * quiz   **Assessment of Learning**   * Summative Culminating Activity * Unit Test   **Prior Knowledge/Readiness**   * A scale factor is a number used as a multiplier in scaling. * Scale factor can be found in the following scenarios: 1. **Size Transformation**: In size transformation, the scale factor is the ratio of expressing the amount of magnification. 2. **Scale Drawing**: In scale drawing, the scale factor is the ratio of measurement of the drawing compared to the measurement of the original figure. 3. **Comparing Two Similar Geometric Figures**: The scale factor when comparing two similar geometric figures, is the ratio of lengths of the corresponding sides. * Real-Life Applications of scales are blueprints, mapping, music, money exchange etc.   **Learning Skills**  Responsibility, Organization, Independent Work, Collaboration, Self-regulation |
| **Lesson Plan**  **Minds –On**  Math strings will be on the board as students begin class. Students can work independently or with an elbow partner to solve the strings.  **Action**  In my pail there are 10 yellow trout fish, how many are there in Lake Simcoe, if the scale is 1:60.  Scientists often use the catch, band and release method to estimate the size of wildlife populations. For example, 250 trout were caught, banded and released into a small lake in Northern Ontario. One month later, another 250 trout were caught in the lake, 30 of them had bands. From this information scientists could estimate the size of the trout population of the lake. What is the approximate total trout population? Why did the scientists wait a month to catch the fish?  Assuming that the ratio of eye colour of the class is the same within the wider community, estimate how many people have eye colour that is blue, brown, or other in the whole school, the community, the province and the country.  **Consolidation**  Debrief with the whole class.   * A scale factor is a number used as a multiplier in scaling. * Scale factor can be found in the following scenarios: 1. **Size Transformation**: In size transformation, the scale factor is the ratio of expressing the amount of magnification. 2. **Scale Drawing**: In scale drawing, the scale factor is the ratio of measurement of the drawing compared to the measurement of the original figure. 3. **Comparing Two Similar Geometric Figures**: The scale factor when comparing two similar geometric figures, is the ratio of lengths of the corresponding sides. * Real-Life Applications of scales are blueprints, mapping, music, money exchange etc. | |
| **Resources:**  Pail, fish cut-outs, math strings handout | |
| **Homework Assignment:** | **Next Steps/Reminders:**   * Make the numbers smaller or larger to differentiate for different types of learners * Provide manipulatives |
| **Reflection:** | |