|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Course: Math 8** | | | | **Teacher:** | | |
| **Big Idea:** The relationship between surface area and volume of **3D objects** can be used to describe, measure, and compare spatial relationships. | | | | | | |
| **Guiding/Essential Question:** What is Pythagorean Theory and how does it connect, relate, describe and measure, lines and shapes in our world? | | | | | | |
|  | | **1** | **2** | | **3** | **4** |
| **Content Target (What do you need to KNOW?):**  Pythagorean Theorem | | I know square root, square area, right triangle, rectangle, square vs rectangle, square compared to other shapes, area of square, all sides are equal, square root, right triangle | I know Pythagorean theorem | | I know how to derive the formula for Pythagorean theorem | I know how to find a missing side of a right triangle |
| **Curricular Competencies Targets (What do you need to DO?):** | Reasoning and Analysis | I can estimate by comparing to something familiar. I use concrete materials to understand above concepts. | I use perfect square numbers. I can build a model using concrete materials. | | I can use non-perfect square numbers. I am able to draw pictures/ diagrams. | I can use non-whole numbers. I can use/apply an abstract formula |
| Understanding and Solving | I explore the environment to find a right triangle OR find a rectangle and make it into a right triangle. | I use an example connected to personal/ familiar experience. | | I can use an example from an unfamiliar context (e.g. word problem). | I can use an example connected to Yukon First Nations constellations. |
| Communicating  and  Representing | I use math vocabulary (square, square root, rectangle, triangle, equal). I explain and justify my thinking in one way (abstract/concrete/pictorial) | I use math vocabulary (right triangle). I explain and justify my thinking in one way (abstract / concrete / pictorial). | | I use math vocabulary (Pythagorean theory, formula, non-perfect square). I can explain and justify my thinking in two ways (abstract / concrete / pictorial). | I use math vocabulary. I explain and justify my thinking in all ways (abstract / concrete / pictorial). |
| Connecting  and  Reflecting | I connect ideas to situations in the world. | I can find another solution to a problem. | | I can pose a new problem or question. | I can describe how Pythagorean Theorem connects to myself and the world (e.g., connect to Yukon First Nations). |



**Learning Map**

Goals