**THIS IS AN IDEA PAGE**. MAKE CHANGES AND ADD DIRECTIONS AS NECESSARY. ADAPT IT AND MAKE IT YOUR OWN. THE FIRST COLUMN IN THE CHART IS DONE AS A SAMPLE.

**Triangle Inequalities:**

Measure 2 lengths from drinking straws. Put the 2 lengths in zip lock bags and label the bag with the lengths. Make several sets of different lengths so the class can trade bags. Give each group a 3-inch piece of pipe cleaner. Each group should put the straws on the pipe cleaner. Where the straws meet in the middle is where the vertex will be. Bend the pipe cleaner where the straws meet to make an angle. Open and close the angle with the ends of the straw touching a ruler or meter stick. Observe the minimum and maximum length for the 3rd side of the triangle. Trade bags with another group. Determine the formula for the minimum and maximum length of the 3rd side of a triangle.

|  |  |  |  |
| --- | --- | --- | --- |
|  | First Bag | Second Bag | Third Bag |
| Straw lengths given | *2 inches, 4 inches* |  |  |
| A possible length for 3rd side | *3 inches* |  |  |
| A possible length for 3rd side | *5.5 inches* |  |  |
| A possible length for 3rd side | *2.5 inches* |  |  |
| Max. length for 3rd side | *Less than 6.**5.9 inches* |  |  |
| Minimum length for 3rd side. | *Over 2 inches.**2.1 inches* |  |  |
| Inequality for 3rd side | *2 ≤ x ≤ 6* |  |  |