**21st Century Artifact**

Grade 7 Math- Adaptable for any unit or outcome.

Throughout the year I have used this as a review for the end of each unit. I create five or six critical thinking questions that apply what we have been learning about. I print them on color paper and spread them around the room. I pair the students up, and have they move about the room solving the questions. I only have ten students in my class so I’m fortunate to have only five pairs at a time. I usually pair them up as sort of a strong and weak combination. This is an attempt to have them collaborate on the problems while using critical thinking.

As the pairs finish a question, I have them come up to my desk and show me their solution. This is my chance to ask them any follow up questions or have them explain or show me how they solved the question. I have the pairs continue to move around the room and solve all of the problems. At the end, we come together as whole group and discuss the problems by color. This is a chance to discuss how there is more than one way to solve the ‘blue’ question, or maybe discuss that there could be different answers for the ‘orange’ problem. I would recommend a double period or two classes for this activity, so the students have plenty of time to work out the problems.

**Example problems:**

*Measurement:*

1. *Create an airport design that is in the shape of a triangle. Add as many runways and taxi lanes as necessary to create a triangle.*
2. *What is the area of the triangle? If you have more than one, use the largest triangle.*
3. *You decide to fill in the triangular area with gravel. If one truckload of gravel covers 100m², how many truckloads of gravel will you need for the triangle?*

*\*Taken from Chapter 3 of McGraw-Hill Ryerson Math Links*

*Probability:*

*A box contains 3 red, 3 green, and 4 white candies. Carmen picked one candy, found it was white, and ate it. She picked a second candy at random, and then a third.*

1. *What is the second candy most likely to be? Explain.*
2. *What is the third candy most likely to be? Explain.*
3. *What is the probability that the third candy will be the color named in part a?*

*\*Adapted from Unit 7 of Pearson Math Makes Sense*

*Equations:*

*Carla has 20 songs downloaded on her iPod. Each month she downloads an even number of songs.*

*After how many months will she have a total of 92 songs?*

*\*Adapted from Unit 6 of Pearson Math Makes Sense*

*Data:*

*Ten students competed in pie-eating contest.*

* *The range of times for the group to finish eating their pies was 9 min.*
* *The mode was 4 min.*
* *One boy took 2 minutes more than the median.*

1. *What are the finishing times for the ten contestants?*
2. *What was the mean number of minutes it took the ten contestants to eat their pies?*

*\*Adapted from Unit 12 of Mcgraw-Hill Ryerson Math Links*