

# Critical Thinking in Grade 2

Allison de Hoop – Kenaston School – Gr. 2 Math and Gr 1-2 DLC Development

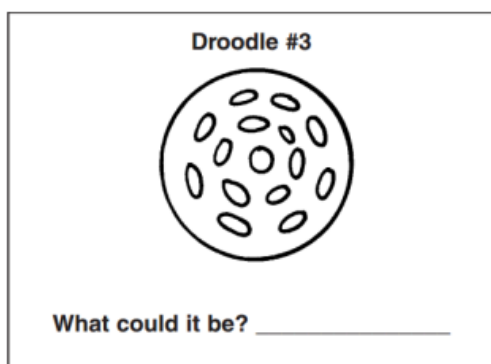
**Goal:** My goal was to bring 21<sup>st</sup> Century Competences with the focus of critical thinking into my Gr. 2 Math classroom.

## Summary of Strategies:

### Doodles (Streeter, 2005 page 49)

I show a doodle – an abstract drawing. I ask students to take a few moments and think about what it could be. Then they can discuss with a partner, and finally share what they thought. Afterwards we have a discussion around “right” and “wrong” answers – which is a common way to think around math. No one is wrong – these are all good ideas that could answer the question: What could this be?

Here is an example of what my students came up with.



- cookie
- ladybug
- doughnut
- ant hill
- pizza
- brain
- doorknob
- top of umbrella (from above)
- top of severed zombie neck (from above)

I then mention how even in Math, people can solve a problem in different ways, even in the same group. We didn't spend a lot of time on this the first few times.

Showing a doodle has become a routine in our Math classroom. After we finished the ones provided we started drawing our own.

This routine is a base for conversations in our regular classroom. There are many times – especially when students are working in partners – when I bring up our “doodle” concept: there are many ways to get one answer – or many possibilities. It helps student be respectful and collaborate well! It gives them a chance to be open to other opportunities and be able to use some critical thinking skills when watching how others solve problems. For example: when solving story/word problems one student may solve it using  $37 - 23 = 14$ . But another may think  $23 + \underline{\quad} = 37$ . For students who need a challenge you might ask them to find as many possible ways or possible answers as they can.

## Wordle

In our geometry unit we are working on describing shapes and 3-D objects. I am planning to use the wordle.net to help the students show they can describe these shapes.

Below is the example I will show the students. They will be choosing a 3-D object to describe. Student will be prompted to use as many describing words as they can.



circle shape no-sides round no-corners

**A circle is round. A circle is a shape. A circle has no-corners. A circle has no-sides.**

The text below is what was entered into the program. Students need to use sentences. Explain that words that are included more than once (such as circle) will become larger. Any descriptions that have two words (such as “no-corners”) need a hyphen or the words will become mixed up. Students can spend a few minutes on the “design” part after they have created their wordle.

We will do this as a partner activity to practice the 21CC skill of collaboration.

## Making Shapes with our Bodies

Students had to think and collaborate to create geometric shapes with their bodies. They definitely had to problem solve when they created the triangle. After it didn't work they created two smaller triangles – used straws to plan out their larger triangle – then finally created the larger triangle. Another problem was students' ideas of a triangle. Many were thinking "equal sides" but others realized they might try a triangle with one very short side. It's important for students to see the picture so they can work to improve it. It was interesting to see the different spatial thinking abilities some students had over others. I might want to use a short version of this activity as a "warm up" or brain break so those students have more opportunities to experience spatial thinking. There are so many shapes they would need to work together to create.



## Sources

Streeter, Karen M. (2005) *Critical Thinking for Multiple Learning Styles*. Westminster, CA: Teacher Created Resources, Inc.

<http://www.wordle.net/create>