

**COVER SHEET**  
**(“Mastering Math Vocabulary” using Venn Diagrams)**

The following lesson teaches 6<sup>th</sup> grade students about prime and composite numbers. We used Venn Diagrams to teach and learn about these two Vocabulary words in Mathematics. They also, in turn, were introduced to Venn Diagrams, as well as the “Sieve of Eratosthenes” the day before. It fits the “topic of the day” by teaching math vocabulary and it helped them to solidify these terms and to remember them for future use. The vocabulary came from the textbook. The Venn Diagram idea came from Teaching Reading in Mathematics, 2<sup>nd</sup> Edition, by Mary Lee Barton on p.88.

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6<sup>th</sup> Grade Math

“Mastering Math Vocabulary” of Prime and Composite Numbers using Venn Diagrams

**Objectives:**

**Process Standard 5.1** – Use a variety of representations to organize and record data

**3.3** – Develop and evaluate mathematical arguments

**Instruction:**

**1. Introduction:** Yesterday we did the “Sieve of Eratosthenes.” Each student created their own sieve. I will ask them to pull it out. I proceeded to share with them that we are going to explore terms that describe these numbers in a different way that will help us later on with factoring, working with fractions, and other terminology. We have to know these terms very well in order to communicate effectively.

**2. Instructional Process:** I first introduced the students to Venn Diagrams, drew one with 3 circles on the chalkboard, and demonstrated how they worked. I then asked each student to draw a Venn Diagram on his/her own paper. On pp. 4 and 5 you will see the two types of situations we covered. The first diagram covered prime, even, and numbers  $< 50$ . The second diagram covered composite, odd, and numbers  $< 50$ . I first took each region and gave them some numbers to put in. Then I asked them to call out numbers they would put in. The students had to prove or disprove their thoughts and arguments with each other.

**3. Closure:** In closing, I asked them questions from their sieve such as: What are the crossed out numbers called?, What are the numbers called that are not crossed out? What is the number one considered? (It’s crossed out.), and others. Then I asked them to write down a definition for prime and composite.

**Assessment:**

In their textbook, each student had a list of numbers that they were to color in the circle if a number was prime. I used this as an assessment, as well as, their communication and work tomorrow that deals with prime and composite numbers. They will be quizzed over it in a few days.

**Modifications/Accommodations:**

One modification I might make would be to have cards for a student that needs them that might have examples on them. Such as, one card might

have on it the words, prime numbers, with a listing of those numbers (2, 3, 5, 7, and so forth). Additionally, a card with the words, composite numbers, written on it with its listing would be helpful.

**Reflection:**

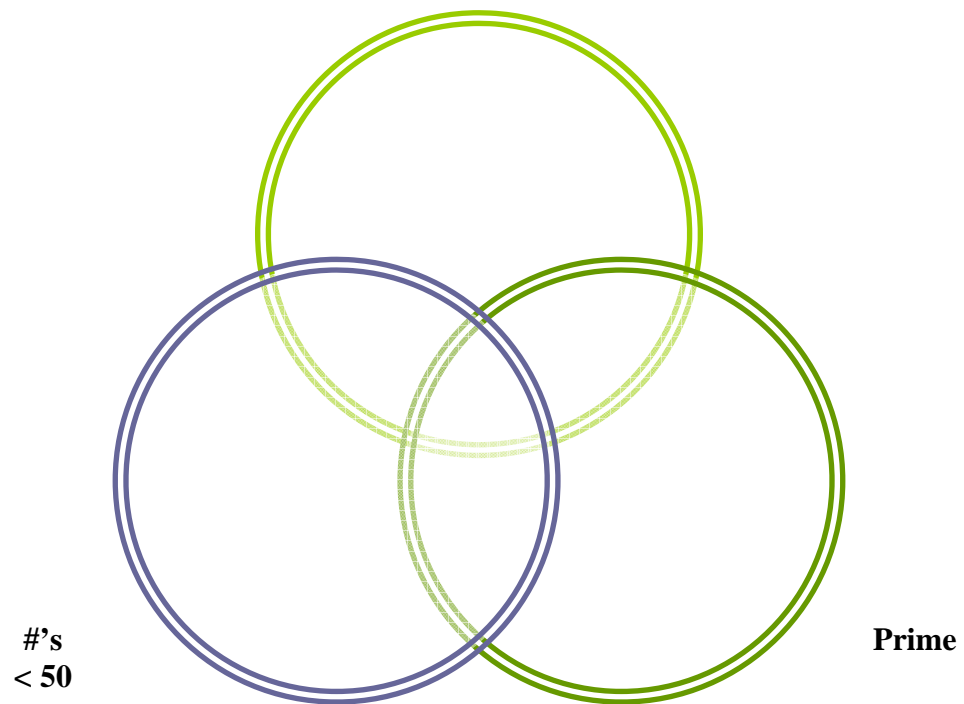
Teaching this lesson was fun. Each student added to their toolboxes, Venn Diagrams, to help with the sorting of information. It was interesting to see their interaction when they began to add numbers to the Venn Diagrams. To find numbers that went in the innermost circle was difficult and took some time. Some students got it faster than others. They discovered in Diagram # 1 that there was only one number that was less than 50, even, and prime. It was 2. Hence, for diagram # 2, the number 2, was the only number that would fit in the 'less than 50' section of that circle.

The big question that challenged them was, what should we do with the number 1 in each diagram? Also, I challenged the students with what numbers will go on the outside of the diagram. These numbers would be the ones that don't fit any of the cases.

I will definitely use the Venn Diagrams to teach prime and composite numbers again. They had fun and had to sort through information, write definitions, and prove their arguments.

# DIAGRAM #1

Even



## DIAGRAM #2

