

SEE POWERPOINT THAT IS ATTACHED TO SEE THE LESSON.

## Chapter 8.1 Basics of Geometry

### Objective (Construct a Concept):

Students should be able to differentiate between a point, line, line segment, ray, and plane. They should understand the defining characteristics of each and how they interact with each other. They should also know how to use the correct notation and terminology when naming each.

### Lesson stages:

#### 1. Sorting and Categorizing

**Draw an oval**

 around phrases that represent a point

**Underline** phrases that represent a line

**Draw a parallelogram** around all phrases that represent a plane

star in the sky	guitar string	sheet of paper
cable	desktop	grain of sand
tip of pencil	period at the end of a sentence	thread
floor	telephone wire	flat screen
freckle	bed sheet	uncooked spaghetti

Students constructed these concepts by using this sorting activity to differentiate between points, lines, and planes. We did this as a large class activity to enable the students to work together to come to these conclusions.

#### 2. Reflecting and Explaining:

This stage was incorporated as we discussed why each of those items were characterized as a point, line, or plane. There was an in-depth discussion that helped students clarify in their own minds how they relate.

### **3. Generalizing:**

Students were able to generalize the properties they observed as we went through each of the terms individually and determined why the definitions required certain specifications. This helped us make the definitions accurate and specific enough that there is no confusion.

### **4. Verifying and Refining:**

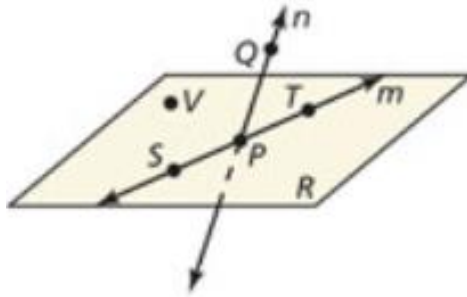
Students were able to verify their own understanding of the definitions as they individually worked on the practice problems that I had on the PowerPoint. I intentionally placed these practice problems immediately after we had finished generalizing the definitions, so they were able to see how those principles related to real problems. This helped them understand their connections with each other in geometry.

### **Strategies used for lesson:**

1. I made sure to use fun colors and pictures that helped students visualize the concepts that I described.
2. I put “Let’s practice” slides after discussing the definitions so students were better able to comprehend and remember the distinguishing characteristics of each term.
3. I made sure to put key terms in the powerpoint that would relate to the questions asked in the worksheet so that they would be able to successfully complete the worksheet with as much independence as possible

4. I printed off the assessment so the students wouldn't have to write so much in their notes. This helped them have a greater desire to complete the assessment.

**Formative Assessment:**




1. Give two other names for PQ
2. Give two other names for plane R
3. Name three points that collinear
4. Name four points that are coplanar
5. Give two other names for ST
6. Name a point that is NOT coplanar with points Q, S, and T



**Rubric for Geometry Assessment**

Question	Possible Points	Points for each rational	Total Points
1	+2 or +1 or +0	Student gives 2 correct answers: line QP or line n	/2
2	+2 or +1 or +0	Student gives 2 correct answers:	/2

		SVT or TVP or any non colinear variation	
3	+3 or +2 or +1 or +0	Student gives 3 points that are collinear: S, P, T	/3
4	+4 or +0	Student gives 4 points that are coplanar: S, V, T, P (no points if they put point Q as one of them)	/4
5	+2 or +1 or +0	Student gives 2 appropriate names:  TS or m	/2
6	+1 or +0	Student names point V as a point that is not Coplanar with plane R	/1
Totals			/14

**Accommodations:** I made sure to walk around and help particular students with the worksheet as I saw that they were struggling. I spent additional time with the student that who is still

learning English. No additional accommodations for particular students were necessary for this activity.