## Lesson

**Objective:**
- Students will learn:
  - How to identify and model points, lines, and places in space on a coordinate plane,
  - Identify collinear points, and coplanar points and lines,

**Benchmarks:**
MA.912.G.1 Title: Points, Lines, Angles, and Planes (Understand geometric concepts, applications, and their representations with coordinate systems. Find lengths and midpoints of line segments, slopes, parallel and perpendicular lines, and equations of lines. Using a compass and straightedge, Patty paper, a drawing program or other techniques, construct lines and angles, explaining and justifying the processes used.)

**Bell work**
Use the calculator to find each value round to the nearest hundred

1. \( \sqrt{30} \)
2. \( \sqrt{14} \)
3. \( \sqrt{55} \)
4. \( \sqrt{48} \)

**Class Work**
1. Text Book (Instructed by teacher)
2. Class Worksheet 1
3. Class Worksheet 2
4. Class Worksheet 2

**Agenda**
1. Bell Work
2. Teacher will Present Class Notes in Power Point.
3. Teacher will answers any questions
4. Students will proceed on class work exercises located in the text book and worksheets.

**New Vocabulary**
Points, Lines, Plan, Ray, Segments, Collinear, Coplanar

**Essential Question**
What are the building blocks of Geometry?
Primary Learning Objective(s): The student will be able to

1. Identify and model, pints, lines, and planes.
2. Solve problems by listing the possibilities.

Additional Learning Objective(s):  

Approximate Duration of the Lesson: 50 Minutes  

Materials and Equipment: Paper, pencil, binder, ruler, calculator

Technology Resources Needed: Computer with Internet access connected to Smartboard, Power Point, Videos Presentation

Background/Preparation: Students should know how to plot points in a coordinate plane.

Procedures/Activities:

1. The discussion presents an outline to use for explaining to students the key words of the lesson.
2. Draw several lines, rays, line segments and planes that have characteristics in common. Write a function on the board, and show students how to graph it. Then make a ray and line segment that correspond to the given line.
3. Proceed by graphing a second line on the same sheet of graph paper. Again, draw a corresponding ray and line segment. Now that you have two lines on the page you can construct the corresponding plane.
4. After modeling how to draw similar lines, rays, line segments and planes, discuss with students how the figures are similar to each other.
5. Next, repeat the exercise, this time drawing non-corresponding lines, rays, line segments and planes.
6. After modeling how to draw non-similar lines, rays, line segments and planes, discuss how the figures are different from
each other.

**Attachments:** All files will be displayed through my website [www.mrgonzalezschoolmath.weebly.com](http://www.mrgonzalezschoolmath.weebly.com)

**Assessment Strategies:**

Informal assessment can be used when reviewing the multiplication rules for exponents and while going through the new lesson. Check for student understanding throughout the lesson through questioning. Print copies of the Division Worksheet to give as homework and check the next day for mathematical accuracy. Teacher will give quizzes all base of the rules. If student computers are available, have them record answers and this could be a quiz grade.

**Guided Practice**

1. Pass out 4 sheets of [graph paper](http://www.mrgonzalezschoolmath.weebly.com) to each student (or use 2 double-sided sheets).
2. Try another function, this time letting the students direct your moves as you graph it and draw some similar, and then non-similar, lines. Ask the students to follow you by doing the exercise with you on their graph paper.
3. After students graph the function you give them, instruct them to make a ray and line segment that correspond to the given line.
4. Proceed by giving them a second line to graph on the same sheet of graph paper. Then have them construct the corresponding ray and line segment. Now that you have two lines on the page you can construct the corresponding plane.
5. After they practice drawing similar lines, rays, line segments and planes, have them discuss how the figures they drew on their papers are similar to each other.
6. Next, have them repeat the exercise, this time drawing non-corresponding lines, rays, line segments and planes.
7. After they practice drawing non-similar
lines, rays, line segments and planes, have them discuss how the figures they drew on their papers are different from each other.

Differentiated Instruction Strategies

1. Summarize class
2. Setting objective and providing class feedback
3. Generating and testing hypothesis
4. Recollection of individual ideas
5. Hand-on learning activity
6. Flexible Grouping to allow students work as part of many different groups.
7. Visual / Spatial to allow student visualize mathematic concept with graphs, flowcharts, diagrams, stenches, exploring visualization problems.
8. Logical Mathematics

Effective ESOL Strategies

- Make use of contextual clues (such as gestures, expressions, body language) to facilitate understanding.
- Use multiple media to provide different stimuli.
- Provide individualized instruction and assistance.
- Encourage peer tutoring, role-playing, and interaction.
- Use written and pictorial forms (maps, graphs, charts, pictures, audiovisual aids, lists, semantic maps and webs, flow charts, outlines, etc.) to teach.
- Adjust or shorten assignments appropriately.
- Provide hands-on experiences whenever possible.
- Use small group instruction and cooperative learning groups.
- Define content area language or terminology for students.
- Use alternative assessments, such as observation, demonstration, product or portfolio assessment.
- Reduce oral and written directions and
information to easy-to-understand steps or parts.

- Adapt written text and materials to facilitate comprehension.
- Modify speech
- Speak clearly and enunciate carefully, using authentic natural speech
- Use shorter, less complex sentences for students in the earlier stages
- Use a slightly slower rate of speech, but be careful to maintain the natural rhythm and flow of the language.
- Use longer, but natural, pauses.
- Use fewer pronouns.
- Repeat, rephrase, and/or paraphrase key concepts and directions.
- Model and demonstrate procedures and thought processes.
- Build on what students already know and relate ideas in relevant, real-life ways, i.e. "..just like you did yesterday with..."
- Avoid using idioms or slang. Explain to them when they are used.

**ESE Strategies:**

1. Seat student facing overheard/board.
2. Seat student near the teacher/presentation
3. Stand near student when giving directions/presenting
4. Provide visual aids/graphics/ pre & post organizers
5. Provide written outlines/guided notes/printed notes
6. Orally check for understanding of key points.
7. Write key points on board/overhead.
8. Allow extra time to complete tasks without penalty.
9. Reduces math level of assignments or provide peer assistance/ study groups work
10. Do not penalize for handwriting/spelling.
11. Allow flexible grading
15. Use modified format.
16. Allow flexible schedule.
17. Provide assistance with organizational skills.
18. Utilize homework assignment notebook/planner.
19. Provide written intermediate timelines for long assignments.
20. Have student maintain grade average.
22. Keep rules simple and clear.
23. Mark students’ correct answers, not mistakes.

Assessing the Behavior:
- Class work exercises
- Homework exercises
- Test and quiz