

Playdoh Point, Line, and Plane

Tools that may be used: ruler, skewers, dental floss, plastic knives, and laminated paper or notebook sleeves.

Have the students read the section in the book over undefined terms.

Teacher says:

Make a point. (*discuss size and representation of a point*)

Make 5 points

Show me 2 noncollinear points (*not possible*)

Show me 5 collinear points

Place the points infinitely close together. What is it? (*line segment*)

Put arrows on the ends. What is it now? (*line*)

Remove the arrows and mash the point that is the middle. What is the point? (*midpoint*)

Snake a representation of a line.

Place it so that it intersects with the “point line” at the mashed point. What is the line? (*the segment bisector*)

Now turn the line so that it appears to form right angles at the intersection. What is it? (*a Perpendicular bisector*)

Use your knife or ruler to cut the snaked line and push half of it away. What have you made? (*ray*)

How does the ray compare in length to the line? (*discuss infinity*)

Name your rays.

Put the two rays back together. What are they? (*opposite rays*)

What do they make? (*a line*)

Show me two lines that don't intersect. (find examples of parallel and skew.

If no one shows you skew lines ask: Is there another way to have two lines that don't intersect?

Pancake a representation of a plane.

Show me 3 noncollinear points. (*not possible*)

Show me 4 noncollinear points. (*one point must be above or below the plane*)

Show me a line intersecting a plane. Where do a line and a plane intersect? (*a point*)

Show me a line that lies on the plane. Where do the line and the plane intersect? (*the line*)

With a partner show me intersecting planes. Where do two planes intersect? (*a line*)

Show me 2 nonintersecting planes. What are they? (*parallel planes*)

Play-Dough Recipe

2 cups flour
1 cup salt
2 cups water
2 T baby oil
(or vegetable oil if you don't have baby oil)
2 T cream of tartar

Food coloring of choice to color

Combine dry ingredients. Add liquids and stir well. Microwave on high four to five minutes. Stir. Microwave an additional one-minute. Repeat until it is the consistency of mashed potatoes. Cool enough to touch. Knead. Store in zip-lock bag and bring to school with your child's name on the outside.