



Animation Through Transformations

Teacher Directions

(Adapted from Robert Kaplinsky Lessons)

Opening Question

Put the following prompt on the board and tell students that they have two-minutes to make a bullet list to answering the prompt: “If you were making your own video game, how could you move and animate the characters and objects in your game?”

After two minutes have students share their list with a partner for one minute, and then ask for volunteers to share their lists with the class, while you record their answers. Tell the students that in this unit they will be studying how objects move on a plane (you may want to define this) and that by the end of the unit they will be animating their own object or character.

Tell students that they are now going to take a closer look in to how one game uses simple movements across a plane. Ask: “How can you describe Ms. Pac-Man’s movements?” and put up the screen shot of Ms. Pac-Man found at: <http://robertkaplinsky.com/work/ms-pac-man/>. (Students may recognize the game from their own video game knowledge, or from the movie *Wreck-It Ralph*.) Ask for volunteers to describe Ms. Pac-Man’s movements, and record them on the board. Play the 27-second clip (be sure to try this out ahead of time as some schools/districts may have a firewall up which restricts the video).

From this point, follow the remainder of the lesson plan, found at the aforementioned website.

Note: as Mr. Kaplinsky states, it is important to NOT provide any formal definitions at this point in the unit/lesson as part of the Common Standards for Mathematical Practice calls for students to “...use clear definitions in discussion with others and their own reasoning...”. (Math Practice 6) And “...look closely to discern a pattern or structure.” (Math Practice 7)