



Kerpoof Lesson Plan: Crazy Angles!



Title: Crazy Angles!

Topics: Math, geometry

Materials and Resources: Kerpoof's Make a Movie, index cards, Vocabulary sheet (optional), access to the Kerpoof Crazy Angles movie "Angles" by bibliophile: <http://www.kerpoof.com/create?view=c377a608l49-d3778f-x>, Crazy Angles Worksheet.

Grade level: 3-5

Objectives: Students will learn about different types of angles, go on an "angle search" in the classroom and create a Kerpoof Movie that illustrates rotation.

Standards:

- MA (6): Classify angles as acute, obtuse, right, or straight
- NCTM: Identify, compare, and analyze attributes of two and three-dimensional shapes and develop vocabulary to describe the attributes; make and test conjectures about geometric properties and relationships and develop logical arguments to justify conclusions.

Vocabulary:

Right angle — an angle of 90 degrees

Acute angle — angles smaller than a right angle. The word "acute" means "sharp."

Obtuse angle — angles larger than a right angle. The word "obtuse" means "blunt."

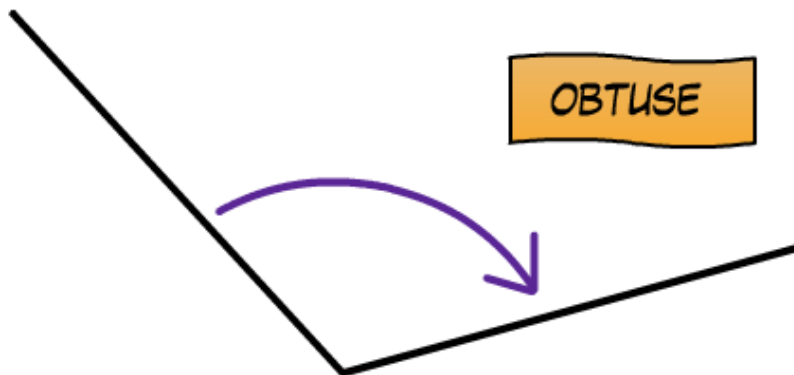
Straight angle — an angle of 180 degrees

Degrees — a unit we use to measure angles. 360 degrees is a full rotation (a circle).

Instruction:

1. Pass out optional vocabulary sheets—you may instead want to go through the basic vocabulary by drawing the different types of angles on the board and asking your students to take notes.
2. Call on students and ask them to stand up and represent different types of angles using their bodies (arms, legs—in any creative way they want). Have the rest of the class call out the answer together.
3. Pass out index cards and tell your students that they'll be going on an "angles hunt" in the classroom (or even outside on the playground, if it's a nice day and they're getting antsy). Tell them to measure different angles they find against the corners of their index cards, and make a list on the cards of at least two of each type (i.e. bricks, desk corner—right angle; book leaning on the shelf—acute...).

4. In the computer lab, have your students view the Kerpoof Angles movie (<http://www.kerpoof.com/create?view=c377a608l49-d3778f-x>).
5. Discuss the concept of rotation, and how it relates to angles. If necessary, watch the movie again to solidify comprehension. Prompt the students to identify 90 degrees = right angle, 180 degrees = straight angle, and 270 degrees = another right angle.
6. Pass out the Crazy Angles! worksheet and instruct students to fill it out as they create their movies.
7. Allow students to create their movie, using the rotation method to show different types of angles and degrees of rotation. Make sure they find the Superdoodle icon in the toolbar, where they can draw their own object to animate. Encourage them to make their movies as creative as they want—you might even suggest they create a narrative out of the rotation they'll be including in their movies. Why are their characters rotating?
8. Have students turn in their worksheets, and encourage them to watch each other's movies and give stars. If your computer lab is equipped with classroom management software like SynchronEyes, share student movies with the whole class.





Kerpoof Lesson Plan: Movie Math Madness—Crazy Angles!



1. In my movie, I made the _____ rotate 90 degrees.
(Fill in the blank with the character or object that you made rotate.)
That is a(n) _____ angle, _____ of a circle.
(Use a fraction or a whole number to fill in the blank.)

2. In my movie, I made the _____ rotate _____ degrees.
(Fill in the blank with the character or object that you made rotate.)
That is a(n) _____ angle.

3. In my movie, I made the _____ rotate _____ degrees.
(Fill in the blank with the character or object that you made rotate.)
That is a(n) _____ angle.

4. In my movie, I made the _____ rotate 180 degrees.
(Fill in the blank with the character or object that you made rotate.)
That is a(n) _____ angle, _____ of a circle.
(Use a fraction or a whole number to fill in the blank.)

5. In my movie, I made the _____ rotate 360 degrees.
(Fill in the blank with the character or object that you made rotate.)
That is _____ of a circle.
(Use a fraction or a whole number to fill in the blank.)

Bonus Question:

If I wanted my _____ to turn three times, I would tell Kerpoof to rotate it _____ degrees.



Crazy Angles! Vocabulary Sheet

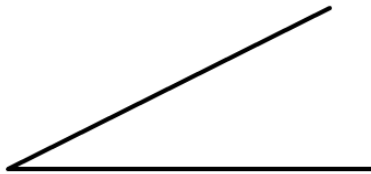


(Draw your own angle next to the example.)

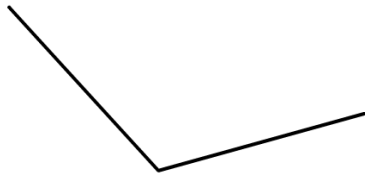
Right angle: an angle of 90 degrees



Acute angle: angles smaller than a right angle
The word “acute” means “sharp!”



Obtuse angle: angles larger than a right angle
The word “obtuse” means “blunt.”



Straight angle: an angle of 180 degrees



Degrees: a unit we use to measure angles
360 degrees is a full rotation (a circle).