

Angles, Triangles, Quadrilaterals, Circles and Related

Summary

Use two-dimensional shape vocabulary to identify attributes of Triangles and Quadrilaterals

Main Core Tie

Mathematics Grade 2

[Strand: GEOMETRY \(2.G\) Standard 2.G.1](#)

Additional Core Ties

Mathematics Grade 3

[Strand: GEOMETRY \(3.G\) Standard 3.G.1](#)

Materials

- [Geometry Vocabulary Sort](#)
paper for each team
- [Foldable: Two-dimensional Vocabulary](#)
Song overhead
Two-Color Paper Plate manipulative
CD player and CD
Worksheets: [Triangle Classification](#), [Sorting Quadrilateral](#)

Background for Teachers

Enduring Understanding (Big Ideas):

Triangles and Quadrilaterals have identifying attributes

Essential Questions:

What vocabulary is associated with Triangles, Rectangles and Circles

How can we use angle measures to compare angles?

How can length of sides and measure of angles be used to classify triangles and quadrilaterals?

Skill Focus:

Recognize attributes of triangles and quadrilaterals, and use vocabulary related to two-dimensional figures

Vocabulary Focus:

Angle, side, right, acute, obtuse, equilateral, isosceles, scalene, parallelogram, square, rectangle, rhombus, trapezoid, base, congruent, circle, radius, diameter, circumference

Ways to Gain/Maintain Attention (Primacy):

music, movement, drama (role playing), sketching, team work

Instructional Procedures

Starter:

Check your memory: sketch an example for each:

- two parallel lines
- two perpendicular lines
- an acute angle
- an obtuse angle
- a ray
- a line segment
- the diameter of a circle

These are a review of geometric ideas learned over the past several years.

Lesson Segment 1: What vocabulary is associated with Triangles, Rectangles and Circles

In teams, students should work together to do the vocabulary sorting activity. Discuss with the class the categories they chose for their vocabulary sorts.

Review basic vocabulary by having student teams discuss and complete the Two-dimensional Geometry Words Foldable for their journals. As they fill in each word, have them do a round robin to show their team what they have sketched and written. Discuss as a class to make sure students include vocabulary for all essential attributes and parts.

Lesson Segment 2: How can we use angle measures to compare angles?

Sing the Angle Measures Song.

Classifying Angles Song

(to the of Skip To My Lou. Lyrics by Linda Bolin)

Use arms to show each as the verse is sung.

'm a little angle. I like me like that.

An ACUTE little angle, and I'm not fat.

I'm an alligators mouth or a witches hat.

I'm ACUTE. I'm less than 90.

'm a RIGHT angle, and I look square.

Look for a corner, and I'll be there.

I'm a flag or a present. I'm everywhere.

I'm just RIGHT. I'm exactly 90.

I'm rather large, so I have pride.

I'm an OBTUSE angle. I'm big inside.

I'm a reclining chair or a door open wide.

I'm OBTUSE. I am more than 90.

Give each pair of students a Two-Colored-Plates manipulative (two different colored small plastic plates that have been slit to the center and slid inside each other to make rotating sections. Call out categories such as acute, right, and obtuse having student pairs form these with the Two-colored Plates manipulative. You may also want to ask them to estimate common angle measures such as 45° , 90° , 120° , and 350° and angle measures and have students make and show a good estimate example on the plates. This would be a good exercise in using the classifying to compare angles.

Lesson Segment 3: How can length of sides and measure of angles be used to classify triangles and quadrilaterals?

Give students the Classifying Triangles worksheet to guide them in looking at attributes of triangles and in using related vocabulary. As student write on their paper, describe and model the meaning of the words explaining the attributes for each category. Music: Put on a CD with some good music. Tell students they will be doing the Triangle Dance. They stand and use their arms and bodies to form the meaning of the words as you call out, "Equilateral", "Scalene", "Isosceles", "Right", "Acute", and "Obtuse". You can assess their understanding as they move to the music while you say the various attributes.

Give student pairs the Quadrilateral Shapes paper that has the various quadrilaterals on it. Have them look at each quadrilateral, discuss what they notice about the angle types, then what they notices about the sides being parallel or congruent. Then, have the pairs work together to complete the Quadrilateral Sort worksheet and be ready to discuss their rules for the sorts with the class. Have them label each shape on the Quadrilateral Shapes paper to refer to in the next activity.

Practice and summary:

Guess The Fib Game

Student pairs work together to choose one of the ideas or vocabulary discussed in class in this lesson. They should write two true statements about that idea and one fib about that idea. Once the

pairs have their three statements written, a pair reads their three statements to the class and gives teams a chance to discuss, then call on a person to "Guess their Fib".

Assessment Plan

student physical and oral response. Performance task

Bibliography

This lesson plan was created by Linda Bolin.

Authors

[Utah LessonPlans](#)