

TRIANGLES

Toothpicks



A HANDS ON EXPLORATION OF TRIANGLE SIDES AND ANGLES

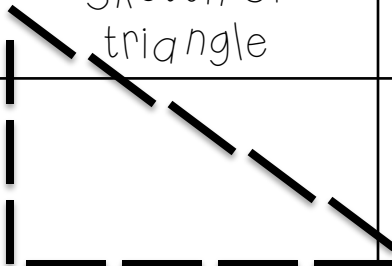
Made by Leslie Varghese

Triangles and Toothpicks

how it works

With this hands on activity, students build triangles using toothpicks and then, depending on the skill you are focusing on (sides, or angles) classify each triangle they build.

For example:

Triangle	Toothpicks per side	Sketch of triangle	Acute, right, or obtuse?
1	3, 4, 5		right

Using 12 toothpicks, students build a triangle to match the specifications-3 toothpicks on 1 side, 4 on another side, and 5 on the third side. From here they then classify the types of triangle by either the sides or angles.

Helpful Hints:

The recording sheets for both sides and angles are the same specifications. If you plan on having your students classify both ways, run the copy front to back so they only have to build the triangle once and can then do all the classifying.

To do this activity independently, each student in your class will need 15 toothpicks. The toothpicks can be a little tricky to wrangle, especially for younger students. A solution for this is to use marshmallows, foam balls, bits of clay, or playdough, etc. to help keep the toothpicks secure. In lieu of toothpicks you could also use straws, coffee stir sticks, uncooked spaghetti, etc. to create straight lines with.

RIGHT TRIANGLE

A triangle with a
right, or 90 degree angle

EQUILATERAL TRIANGLE

A triangle with all
equal sides

ACUTE TRIANGLE

A triangle with all angles less than 90 degrees

ISOSCELES TRIANGLE

A triangle with 2 equal sides

OBTUSE TRIANGLE

A triangle with one angle greater than 90 degrees

SCALENE TRIANGLE

A triangle with 3 unequal sides

Triangles and Toothpicks

angles

Triangle	Toothpicks per side	Sketch of triangle	Acute, right, or obtuse?
1	3, 4, 5		
2	3, 3, 3		
3	2, 1, 2		
4	2, 3, 4		
5	2, 2, 2		
6	2, 3, 2		
7	1, 1, 1		
8	4, 5, 6		

Angles Answer Key

Triangle	Toothpicks per side	Sketch of triangle	Acute, right, or obtuse?
1	3, 4, 5		right
2	3, 3, 3		acute
3	2, 1, 2		acute
4	2, 3, 4		obtuse
5	2, 2, 2		acute
6	2, 3, 2		obtuse
7	1, 1, 1		acute
8	4, 5, 6		acute

Triangles and Toothpicks

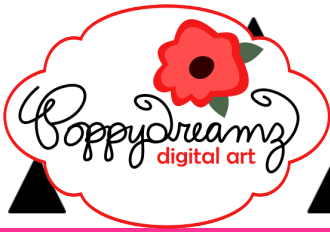
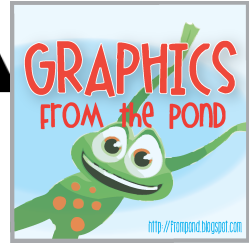
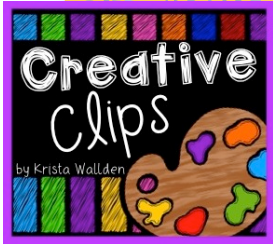
sides

Triangle	Toothpicks per side	Sketch of triangle	Isosceles, Scalene, or Equilateral?
1	3, 4, 5		
2	3, 3, 3		
3	2, 1, 2		
4	2, 3, 4		
5	2, 2, 2		
6	2, 3, 2		
7	1, 1, 1		
8	4, 5, 6		

Sides Answer Key

Triangle	Toothpicks per side	Sketch of triangle	Isosceles, Scalene, or Equilateral?
1	3, 4, 5		scalene
2	3, 3, 3		equilateral
3	2, 1, 2		isosceles
4	2, 3, 4		scalene
5	2, 2, 2		equilateral
6	2, 3, 2		isosceles
7	1, 1, 1		equilateral
8	4, 5, 6		scalene

Fonts & graphics



I hope you & your students enjoy! -Leslie

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