

Poly - Tri - Quad Rap

Pillar: Active Living and Positive Social Environments

Division: I - II

Grade Level: 3, 5, and 6

Core Curriculum Connections: Mathematics (Shape and Space)

I. Rationale: In this funky, fun, and physical math activity, students describe and represent the characteristics of 3-D objects and 2-D shapes through creative words and movements. Groups of students are assigned a specific type of polygon, quadrilateral, or triangle (specific to learner level outcomes) and then are challenged to describe its qualities by writing a short rap/verse about it. To supplement the rap and further illustrate their learning, students will then create a movement sequence that results in the construction of the object/shape using the bodies of each of the group members. Working together and sharing learning is sure to help students make distinctions between various types of 2-D and 3D shapes and objects, while promoting positive social relationships between group members and within the class.

II. Activity Objectives:

Students will:

- recognize that they can demonstrate their learning in multiples ways: verbally and physically.
- experience the connection between an active body and an active mind.
- appreciate the value of each individuals contributions to achieving group success.

III. Curriculum Outcomes: Math 3, 5, and 6

Shape and Space (3-D Objects and 2-D Shapes)	Grade 3	Grade 5	Grade 6
General Outcome Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.	Specific Outcomes: 6. Describe 3-D objects according to the shape of the faces and the number of edges and vertices. [C, CN, PS, R, V]	Specific Outcome: 7. Identify and sort quadrilaterals, including: • rectangles • squares • trapezoids • parallelograms • rhombuses according to their attributes. [C, R, V]	Specific Outcomes : 4. Construct and compare triangles, including: • scalene • isosceles • equilateral • right • obtuse • acute in different orientations. [C, PS, R, V]
	7. Sort regular and irregular polygons, including: • triangles • quadrilaterals • pentagons • hexagons • octagons according to the number of sides. [C, CN, R, V]		5. Describe and compare the sides and angles of regular and irregular polygons. [C, PS, R, V]

IV. Materials:

- blank sheet of paper for each group
- Rhyming Dictionary - Optional (but recommended)
- Hip Hop CD - Optional

V. Procedure:

1. Divide students into groups of 4 (more or less can also be used).
2. Each group is given a polygon, quadrilateral, or triangle name: rectangle, pentagon, hexagon, octagon, rhombus, trapezoid, scalene triangle, isosceles triangle, right triangle, obtuse triangle etc. (depending on grade level outcomes).
3. Have a hip-hop instrumental track playing in the background.
4. On a separate sheet of paper, instruct students to write a 4-line rap about their assigned polygon, quadrilateral, or triangle. In the rap, they should describe the shape/object using math vocabulary but may also include other words to create the rap rhyme and to “make it real.”
5. Rhyming dictionaries can be a huge help to students in creating their raps. Students may need to be shown how to use the dictionary and provided with an sample verse.
Example:
A Triangle has got 3 angles
3 vertices, 180 degrees
3 sides can be equal or not
It all depends on what kind you’ve got.
6. Have the students create the object/shape using members of their group (arms, legs, bodies, etc...) – create movements to the rap that results in forming the polygon at the end.
7. Then give students time to practice performing their polygon shape to while rehearsing their rap verse.
8. All members of the group should say the rap together or in sequence (like a relay). Remind them to use as many members of their group (all if possible) in creating the live object/shape.
9. Have each group perform their polygon rap and movement for the rest of the class.

VI. Extensions and Variations:

- Teacher – collect the polygon raps at the end of class and type up the lyrics onto an overhead for the extension activity (or have groups type up their lyrics).
- **Extension Activity:** As a class – make (holding hands) one of the polygons that was created in small groups the day before – put on some music and recite the rap, then take 16 beats to morph to another one of the polygons – recite that rap – and continue morphing and reciting the raps until all polygons have been created.

VII. Assessment Ideas:

- Evaluate group work and the accuracy of the description of their shape/object.

