Facilitation Guide



10-15 Min Small Group

Digital Guide

ARTS EVERY DAY IN BALTIMORE CITY PUBLIC SCHOOLS

Angle Face: A Geometry Drawing Game

Explore Brain Science

VISUAL THINKING

ARTFUL REPETITION

ROUTINE OVERVIEW

In this small group art game, students reinforce their understanding of four types of angles by creating expressive faces using a variety of angles. In response to angles called out by the teacher, students incorporate different angles into their drawings to create characters with unique expressions, such as "Sad Angle Faces," "Happy Angle Faces," and "Very Surprised Angle Faces."

Maryland Standards

MARYLAND STATE MATH STANDARDS

- **4.GR.C.8** - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- **4.GR.B.5** - Identify angles as geometric figures formed by two rays that share a common endpoint and describe angle size as the amount of rotation between the two rays measured in degrees with reference to a circle.

MARYLAND ARTS STANDARDS

- **VA.AS1.E:3-5:1** - Collaboratively combine ideas to generate an innovative theme, concept, or idea for art-making.
- **VA.AS1.I:3-5:1** - Develop and experiment in the creation and design of artworks.

Not in MD? View National Standards in the Digital Guide

Getting Ready

REVEAL MATH: **4th Grade: 14-2, 14-3**

ARTS INTEGRATED LEARNING OBJECTIVE(S):
Students will be able to demonstrate their understanding of angles and lines in a creative and artful way by drawing faces using angles and lines.

MATH DOMAINS:

Geometric Reasoning & Measurement	Understand Concepts Of Angle And Measure Angles	Identify angles as geometric figures formed by two rays that share a common endpoint and describe angle size as the amount of rotation between the two rays measured in degrees with reference to a circle.
Geometric Reasoning and Measurement	Draw And Identify Lines And Angles And Classify Shapes By Properties Of Their Lines And Angles.	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

WHAT'S BEFORE: Categorizing shapes; drawing points, lines, line segments, rays

WHAT'S NEXT: Draw and measure angles in degrees using protractors, classify 2-D shapes

MATH SKILL: Classifying angles

ART SKILL: Creating abstract representations

MATERIALS

- Pencil and paper
- Anchor chart
- Slides

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TEACH

Facilitation Steps

Lesson Overview

- **Objective:** Students reinforce geometric classification by drawing an "Angle Face" corresponding to teacher-prompted angles.
- **Target Concepts**:
  - **Acute** (under 90° or less than ¼ of a circle)
  - **Right** (exactly 90° or exactly ¼ of a circle)
  - **Obtuse** (over 90° or greater than ¼ of a circle)
  - **Straight** (exactly 180° or exactly ½ of a circle) angles.
- **Grouping**: Teacher-led **small group**
- **Summary:** Connection to the Art - Drawing Faces/ Communicating Emotions:
  - On a blank sheet of paper, draw a pair of eyes. This can be as simple as 2 circles.
  - Students can use the angles called out by the teacher to create a face. (For example, an **obtuse** angle for a wide smile, or perhaps an **acute** angle for pointed, sharp brows).
  - Students should be as creative and free as possible, allowing for their imaginations to take flight.

Required Materials:

- One blank **sheet of paper** per student.
- Drawing utensils (pencils, markers, or crayons).
- One visible **anchor chart** or whiteboard with visual definitions of the 4 angle types, their degree measurements, and what they represent in terms of circular rotation for student reference.
- **Slides** for examples and digital anchor chart

Setup & Launch:

- **Distribute materials**: Hand out paper and drawing tools to each student in the small group.
- **Review definitions**: Point to the anchor chart and quickly review acute, right, obtuse, and straight angles.
- **Establish the base**: Instruct all students to draw **two eyes** directly in the center of their paper.

Gameplay & Teacher Prompts:

- **Choose an emotion**: Announce the facial theme for the round (e.g., "We are making a *Very Surprised* Angle Face").
- **Call the first angle**: State an angle type clearly (e.g., *"Draw two obtuse angles to make the eyebrows"*).
- **Monitor and assist**: Monitor student work around the small group to ensure students draw their angles correctly. Reinforce the definitions of the angles as well as what they represent in terms of rotation on a circle. Show students ways they can differentiate between the different types (such as: an acute angle is smaller than a right angle, and an obtuse angle is bigger than a right angle but less than a straight angle).
- **Call successive angles**: Continue calling out the 4 angle types to build out the rest of the face step-by-step.
  - *Nose suggestion*: Use a right angle or acute angle.
  - *Mouth suggestion*: Use a straight angle (neutral expression) or obtuse angle (wide open surprise).
  - *Ears/Hair suggestion*: Use a series of acute angles for spiky hair or zig-zag patterns.
- **Repeat for repetition**: Loop through all four angle types multiple times until the faces are fully formed and distinct.

SLIDES

COMING SOON
VIDEO PLAYLIST

MATERIALS
GOOGLE FOLDER

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Reflection & Wrap-Up:

- **Identify and label**: Have students use a pencil to lightly write the first letter of the angle type (A, R, O, S) next to the features they drew.
- **Peer check**: Ask students to swap papers with a neighbor to verify that the "ears" or "eyebrows" match the intended geometric definitions.

Variations on the activity:

- PASS THE ANGLE FACE - This is a fun and engaging way for students to quickly demonstrate their understanding of angles and lines.
- Hand each student a blank sheet of paper and have them draw two eyes in the center.
- Call out an angle type and ask students to draw it once on the page to begin creating a face.
- Have them pass their sheet clockwise to the person next to them.
- Call out another angle. Students will now add that to the “face” in front of them.
- Repeat this process until the papers have gone around several times and the faces are looking complete.
- The results can be abstract and may even look a bit like a Mr. Potato Head toy. That’s part of the fun. Encourage creativity!

Assessment & Reflection

Teacher observation and monitoring is recommended to check for understanding.

Teachers can ask questions to test students' knowledge of angle types.

Differentiation

Possible adaptations that could make this activity more accessible or rigorous:

- Angle Farm: Instead of faces, have students work on drawing animals using angles.
- Narrow the focus: Have students focus on one particular angle type at a time.
- Cut out angles: Students manipulate pre-cut angles to make images if drawing is a challenge.
- Incorporating protractors as part of the activity