Objective

By the end of this lesson, you will be able to understand the different phases of the moon and their relationship to geometry.

Materials and Prep

- Pencil
- Ruler
- Blank paper
- Printed moon phase chart (optional)

No prior knowledge is required for this lesson.

Activities

1. Draw the Moon Phases: Using your pencil, ruler, and blank paper, create a diagram to represent the eight main phases of the moon. Label each phase accordingly.
2. Identify the Shapes: Look closely at each phase you drew and identify the geometric shapes present in each phase. For example, a full moon can be represented by a circle.
3. Explore Angles: Measure the angles formed by the moon phases using your ruler. Compare the angles between different phases and see if you notice any patterns.

Fourth Grade Talking Points

- "The moon goes through different phases as it orbits around the Earth."
- "These phases are the different shapes and appearances of the moon that we observe from Earth."
- "There are eight main phases of the moon: new moon, waxing crescent, first quarter, waxing gibbous, full moon, waning gibbous, third quarter, and waning crescent."
- "Each phase has a unique shape, which can be related to different geometric shapes."
- "For example, a full moon is a complete circle, while a crescent moon is a curved shape resembling a banana."
- "You can use a ruler to measure the angles formed by the moon phases."
- "By comparing the angles between different phases, we can look for patterns and connections."
- "Understanding the relationship between moon phases and geometry can help us appreciate the beauty and symmetry in nature."