Unit 4 Money, Geometry, and Fractions
Math 1

Last Update: August 1, 2026

Archdiocesan Curriculum > Grade > Math 1 > Length of unit 30 to 32 days

Stage 1: Desired Results

General Information

In this unit, students will learn to identify the value of pennies, nickels, dimes, and quarters, and find the total value of groups of coins. They will explore three-dimensional shapes by identifying defining attributes, composing new shapes from composite parts, and recognizing two-dimensional faces on three-dimensional figures. Students will also classify and sort two-dimensional shapes, describe their attributes, and use pattern blocks to compose and decompose new shapes. Finally, they will begin to develop foundational understanding of fractions by identifying equal and unequal parts and dividing shapes into halves and fourths.

Mathematical Practices

MP2 – Reason abstractly and quantitatively

MP4 – Model with mathematics
MP5 – Use appropriate tools strategically
MP6 – Attend to precision

Essential Question(s)

- How can we identify the value of coins and use them to find the total value of a group of coins?
- What are the defining attributes of three-dimensional shapes, and how can we use them to describe and build new shapes?
- How can two-dimensional shapes be combined or taken apart to form new shapes, and what strategies help us do this?
- How do we classify and sort shapes based on their attributes, and why is this important in understanding geometry?
- What does it mean to divide a shape into equal parts, and how can we describe and identify halves and fourths?

Enduring Understanding/Knowledge

Students will:

- Tell the value of a penny, a nickel, and a dime.
- Find the value of a group of coins with pennies, nickels, and dimes.
- Find the value of a group of coins that includes quarters.

Review/Assess

- Identify and describe three-dimensional shapes according to defining attributes.
- Compose a new shape by combining three-dimensional shapes.
- Use composite three-dimensional shapes to build new shapes.
- Identify three-dimensional shapes used to build a composite shape using the strategy act it out.
- Identify two-dimensional shapes on three-dimensional shapes.

Review/Assess

- Use defining attributes to classify and sort shapes.
- Describe attributes of two-dimensional shapes.
- Use pattern blocks to compose new two-dimensional shapes.
- Compose a new shape by combining two-dimensional shapes.
- Make new shapes from composite two-dimensional shapes using the strategy act it out.

Review/Assess

Vocabulary

New	Review
penny cent/¢ nickel dime quarter cone cube curved surface cylinder defining attribute flat surface rectangular prism sphere circle side square rectangle triangle vertices hexagon trapezoid equal parts equal shares unequal parts unequal shares halves half of fourths quarters	value count more than less than same as add total

- Identify equal and unequal parts in two-dimensional shapes.
- Separate a shape into two equal shares.
- Separate a shape into four equal shares.

Review/Assess

Connections to Catholic Identity / Other Subjects

Religion/Catholic Identity:

- Tour the church and have students identify and name 2 and 3 dimensional shapes they see within the church.
- Show photos of famous cathedrals and churches and look for familiar shapes

Other Subject Here:

- **ELA:** Draw a picture using just shapes. Once drawn,write a story about the picture
  When teaching Adjectives have students name a shape and then write a character description- For example Curious Circle likes to roll around exploring.

- **Science/Art:** Observe animals and what shapes could make up their bodies. Sketch and then make with play doh or modeling clay models of these animals.
  Take a nature walk and look for shapes - leaves, animals and discuss how certain shapes help in the survival of that organism.

Differentiation

Enrichment

- **Create Real-World Coin Problems** – Invite students to write their own word problems using various coin combinations to reach a specific value, then trade with a partner to solve.

- **Design with Shapes** – Challenge students to create complex figures (e.g., robots, animals) using 2D and 3D shapes and explain the attributes of each shape used.

- **Shape Sort and Justify** – Ask students to sort shapes multiple ways (e.g., number of sides, presence of right angles, faces) and justify their reasoning.

- **Explore Fractional Reasoning Beyond Halves and Fourths** – Introduce thirds and sixths using manipulatives or folding paper, encouraging connections to equal parts.

- **Estimate and Count with Mixed Coins** – Challenge students to estimate the value of mixed coins and then count precisely to check their estimates.

Support

- **Use Real Coins and Play Money** – Provide tactile coin sets for hands-on practice in identifying and combining coin values. Use consistent routines to support recognition.

- **Shape Attribute Anchor Charts** – Create visual charts highlighting key attributes (e.g., "A cube has 6 square faces") to refer to during lessons.

- **Step-by-Step Shape Composition** – Offer guided tasks where students combine pattern blocks or paper cut-outs to make new shapes with clear verbal directions.

- **Equal Parts Practice with Folding and Drawing** – Use folding activities and drawing lines on shapes to explore and check for equal shares.

- **Use Sentence Frames and Visuals** – Support students in using academic language with frames like “This is a __ because it has __ sides and __ corners,” or “Two dimes and one nickel make __ cents.”

Standards & Benchmarks

Money:

1.NBT.1
Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
1.NBT.A.1
Count to 120 by 1's, 2's, and 10's starting at any number less than 100. In this range, read and write numerals and represent a number of objects with a written numeral.
1.MD.AOB.1
Identify and recall the value of coins (penny, nickel, dime, and quarter) and bills ($1, $5, $10, and $20)

Three-Dimensional Solids:

1.G.1
Distinguish between defining attributes (for example, triangles are closed and three-sided) versus non-defining attributes (for example, color, orientation, overall size); build and draw shapes that possess defining attributes.
1.G.A.1
Distinguish between defining attributes (triangles are closed and 3 sided) versus non-defining attributes (color, orientation, overall size) for two-dimensional shapes; build and draw shapes that possess defining attributes.
1.G.2
Compose two-dimensional shapes (e.g., rectangles, squares, trapezoids, triangles, half-circles, quarter-circles) or three-dimensional shapes (e.g., cubes, right rectangular prisms, cones, and cylinders) to create a composite shape, and compose new shapes from the composite shape.

Two-Dimensional Shapes:

1.G.1
Distinguish between defining attributes (for example, triangles are closed and three-sided) versus non-defining attributes (for example, color, orientation, overall size); build and draw shapes that possess defining attributes.
1.G.A.1
Distinguish between defining attributes (triangles are closed and 3 sided) versus non-defining attributes (color, orientation, overall size) for two-dimensional shapes; build and draw shapes that possess defining attributes.
1.G.2
Compose two-dimensional shapes (e.g., rectangles, squares, trapezoids, triangles, half-circles, quarter-circles) or three-dimensional shapes (e.g., cubes, right rectangular prisms, cones, and cylinders) to create a composite shape, and compose new shapes from the composite shape.

Fraction Concepts:

1.G.3
Partition circles and rectangles into two and four equal shares; describe the shares using the words halves, fourths, and quarters; and use the phrases half of, fourth of, and quarter of. Describe the whole as two or four of the shares. Understand that, for these examples, decomposing into more equal shares creates smaller shares.
1.G.A.3
Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters. Describe the whole as two of, or four of the shares. Understand that decomposing into more equal shares creates smaller shares.
1.MD.AOB.1
Identify and recall the value of coins (penny, nickel, dime, and quarter) and bills ($1, $5, $10, and $20)

Teaching Ideas/Resources

Websites/Resources:

- **Interactive Geoboard** – Students can use this interactive geoboard to create shapes and also divide them into equal parts.
- **Pattern Block Shapes** – Create pictures using digital pattern blocks.
- **3d Geometric Shapes - Nets** – Use to help students understand that 3d shapes are made up of 2d shapes.
- **Free Shapes Scavenger Hunt** – Have students find and identify shapes around the room (can work with a partner if needed).
- **Hands-on Shape Playdough Mats** – Have students create 2d shapes out of playdoh.
- **Coins for Kids** – Video on identifying coins (stop at 8:10 as it goes into half dollar).
- **Comparing & Measuring Lengths** – Video on how to measure, compare and order lengths of objects.