

**Unit Name/Theme:** Puzzles—Geometry with Preschoolers

**What are we doing?**

While playing with puzzles and books, preschoolers will learn early geometry concepts. They will play with a variety of more complex shapes, and begin to see shapes in the world around them. They will also learn about spatial relationships, and play games using simple directions using positional words such as behind, under, and next to.

**Purpose/Why?**

Puzzles are a fun way to introduce early geometry concepts. Puzzles also help children practice persistence, problem-solving, fine motor skills, and hand-eye coordination. Between the ages of 3-5 years, preschoolers are able to recognize and name more types of shapes and recognize shapes in the real world. Preschoolers can also follow simple directions related to proximity such as behind, under, and next to. These early geometry concepts lay the foundation for more complex geometry skills that are important for kindergarten readiness. (*Learning Pathways in Numeracy: Addressing Early Numeracy Skills*, Superintendent of Public Instruction for the State of Washington)

**Materials provided:**

- Melissa and Doug “Shapes” chunky puzzle
- Melissa and Doug “Pets” jigsaw puzzles in a box

**You will need to provide:** A bag (optional)

**Books:**

- “Walter’s Wonderful Web” by Tim Hopgood
- “City Shapes” by Diane Murray, illustrated by Bryan Collier



**Vocabulary Builder:**

Circle, square, triangle, diamond, rectangle, oval, inside, outside, next to, above, below, under



**Quick Start—Shapes:**

Explore the “Shapes” puzzle together. Look at each piece and name what shape it is. Talk together about how many sides each shape has, if it has corners or if it’s smooth. How are the shapes the same or different? Look at the spaces that the pieces fit into and name the shape of each space. Pick one puzzle piece and review that shape and see if they can find the right space to put it in. You can give help by using positional words such as “try moving it *up* a little” and then demonstrating what that looks like. Repeat these steps with another shape, then let your child play with the puzzle on their own for a while. If they ask for help, try prompting them with questions instead of giving them

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**Quick Start—Shapes, continued:**

the answer. This gives them a chance to work on their perseverance and problem solving skills.



**Ask a Question:**

- “How are a triangle and a rectangle the same? How are they different?”
- “Which shapes are the most alike? Why?”
- “How do you know if a puzzle piece will fit into a space on the puzzle?”

**Show Me; Show a Friend:**

After your child has played with the “Shapes” puzzle for a while, read “Walter’s Wonderful Web.” As you read about each shape, have them show you the puzzle piece that matches, tell you which shape it is, and find its space in the puzzle. There will be several shapes left that aren’t in the book. See if your child can tell you the names as they complete the puzzle. Some preschoolers will not be able to identify all the shapes at this point, that’s ok, just keep practicing!



**Deeper Dive:**

Read the book “City Shapes.” As you read, encourage your child to look at the pictures and point out as many shapes as they can. After you’ve read the book, go on a shape hunt in your neighborhood and see what shapes you can find. For younger preschoolers try picking circles, squares, or rectangles, since those are easiest to find. For older preschoolers you can try keeping track of how many you can find of each shape.

**Other Activities:**

- Hide one of the shape puzzle pieces and have your child guess which shape it is by asking questions such as:
  - “How many sides does it have?”
  - “Does it have corners?”
  - “How many corners does it have?”
- Hide a shape puzzle piece in a bag. Let your child reach in and try to name the shape without looking. If they can’t name it, ask them to describe it to you, such as “it has 4 sides” or “it’s like a circle, but it isn’t a circle.” Keep playing with different shapes.

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**Quick Start—Positional Words:**

Grab the “Pets” puzzles in a box and explore it together. As you do, introduce positional words by describing what you are doing as you do it. For example:

“Let’s start by taking off the lid and putting it *next to* the box.”

“Look, hiding *under* the lid there were a lot of puzzle pieces.”

“We want all of the puzzle pieces for the first puzzle *outside* of the box. Can you help me take them *out*?”

“Let’s leave the pieces for the other puzzles *inside* the box so we don’t get confused.”



**Deeper Dive:**

These puzzles will be much more challenging for your preschooler to complete. As your child works on the first puzzle, use positional words to help them solve it. You may need to physically show your child what you mean until they start to learn these new vocabulary words. Some examples of what you might say include:

“Do you think that piece goes *above* this piece?”

“What piece do you think goes *below* this piece?”

“Have you tried putting that piece *next to* this one?”

“This piece doesn’t have any straight lines, do you think it might be an *inside* piece?”

**Show Me; Show a Friend:**

Once your child has played with the “Pets” puzzles for a while, ask them to show you how they put together one of the puzzles. Ask them to explain how they know where to put each piece as they go.

**Other Activities:**

- Hide something in your house and then use positional words to give your child directions to find the object. Make the directions fun and silly, for example, “Crawl *under* the table...Go *inside* the bathroom...Get *inside* the tub...Get *out* of the tub...Go *inside* your bedroom...Find the box *next to* the book case...Look *under* the box...”
- Play the game “Simon Says” using lots of positional words. For example:

“Simon Says...hide your hands *behind* your back.”

...wave your hands *above* your head.”

...put one hand *next to* a foot.”

...put your thumb *under* your chin.”