

The magnificent display of a peacock's plumage never fails to delight and amaze. This wonderfully crafted and versatile peacock puzzle is ideal for teaching color recognition, as well as building fine motor and math skills, and inspiring imaginative open-ended play.

For children who are color-blind, we suggest focusing on the fine motor and math skills, while still using the names of the colors as they play.

First steps

Children will delight in the sensory input of simply handling and exploring the different sized feathers and returning them to their correct spaces. The feather pieces are intentionally chunky, and the holes satisfyingly deep to provide rewarding proprioceptive feedback.



- Allow the child the freedom to handle and explore the feathers and board, noticing the different sizes, feeling the edges, surfaces, and the holes in the board, and observing the colors and shades.
- Allow them to experiment with and investigate the pieces at their own pace. Independent learning and fine motor skills will develop as the child discovers how to turn each piece to fit into its matching hole. This is also important for strengthening hand-to-eye coordination and spatial awareness skills.

- If the child is struggling or becoming frustrated, gently take a piece that they are not using and demonstrate how to fit it into its hole. Provide a running commentary, keeping language and instructions at a level that matches their age and understanding. For some children this may be as simple as 'Turn it like this,' or, for a more knowledgeable child, 'This is one of the big feathers. It fits into this big space like this.'
- Encourage observation skills to discover which order to place the feather colors. There are two options depending on which side of the peacock's body is showing.
- Many children will adore the schematic nature of repeatedly placing the feathers in and out of their holes. Allow them to satisfy this schema as many times as they wish.
- They may also enjoy lining the pieces in rows or stacking them in columns, satisfying a love and a need for order.

'Order is one of the needs of life, which when it is satisfied, produces a real happiness' *Maria Montessori*





Spatial learning

- Introduce key spatial concepts by using language, including 'in', 'on', 'next to', 'in between', 'under', 'below', 'in the middle', 'top', 'bottom', 'this way round'.
- Introduce rotation verbs: 'twist', 'turn', 'rotate', 'flip'.
- Include mathematical language: 'match', 'sort', 'compare', 'different', 'same', 'big'/'bigger'/'biggest', 'small'/'smaller'/'smallest', 'tall'/'taller'/'tallest', 'too big', 'too small'. Use hand gestures to emphasize these words, helping children to connect the word to the physical action and develop their spatial thinking.

- Visualization – imagining and manipulating an object in your head – is an important problem-solving and spatial reasoning skill. Adults can encourage development of this skill by placing a feather piece in a hole where it doesn't fit, or lining it up incorrectly, and asking the child to explain why it isn't fitting, where they think it might fit, or what needs to be done to make it fit. They can check their predictions with the feather to see if what they visualized is correct.
- Adults can verbalize the outcome to consolidate the learning: 'I had the feather the wrong way round. I needed to turn it to make it fit' or 'I tried to put the big feather in a hole that was too small. There wasn't enough space for it to fit in, was there?'



Introducing shades and tones

When you feel a child is ready, move on to teaching the names of the colors. You could do this using Montessori's Three Period Lesson:

1. **Introduce** two colors at opposite ends of the spectrum to aid clarity (such as red and blue). Take the pieces out of the board and place them in front of the child.
Say 'This is red,' and point to the red feather, 'This is blue,' and point to the blue feather. Move them to different positions and introduce them again. Do this several times.
2. Ask the child to **point** to a color: 'Show me red,' 'Show me blue.' Move the pieces around and repeat the requests. Do this several times.
3. Ask the child to **say** the names of the colors: 'Which color is this?' and point to the red, 'Which color is this?' and point to the blue. Move the pieces around and then repeat the questions. Do this several times.

Reinforce and **repeat** the words learned: 'Yes! This is red,' and point to red, 'This is blue,' and point to blue. Invite the child to place the pieces back into the board.

You can use this strategy to progress to teaching the dark and light shades of each color. Always use two tones of the same color, such as dark red and light red, and not different colors.

To consolidate and embed learning, give each child a little bag. Ask them to choose a color and go shopping for things in the room that match that color.



Embedding math

The graded feather sizes make this puzzle rich in opportunities to develop early mathematical and spatial awareness skills:



- **Sorting:** Ask the child to find all the smallest feathers and stack them or line them in a row. Repeat for the middle-sized feathers, and the biggest feathers. Handling the assorted sizes and seeing them in piles or rows gives the child a true sensory experience of data handling and differences in size, allowing them to absorb the physical, spatial, visual, and tactile properties of size and quantity.
- **Naming:** Once you have done this, you can consolidate learning by teaching the three sizes using the Three Period Lesson as explained above.

- **Grading:** Remove the puzzle pieces from the board, mix them up, and ask the child to find the smallest feathers and place them in the board. Repeat with the middle-sized pieces and finally the biggest ones. This boosts spatial representation skills and gives a visual, tactile experience of data handling, shape, sorting, order, comparison, differences, patterns, and similarities. It also lays strong foundations for future math skills, including addition and subtraction.
- **Patterns and symmetry:** Invite the child to make patterns and sequences with the feathers – red, blue, red, blue, red, blue, and so on. Progress to patterns using three colors when the child is ready. Explore other patterns, such as big, small, big, small.



- **Odd one out:** Present all the small feathers and one big feather in different arrays: in a row, stacked, or laid out randomly. Ask the child, 'Which one is the odd one out?'
- **Addition:** Invite the child to lay out one color range of feathers in a row and then a different color range alongside it. Count the pieces in each group. Ask the child how many there are altogether (e.g. $3+3=6$). Depending on the child's ability, add the small feathers alongside the big feathers and so on, all the while counting, adding, and totaling (e.g. $7+7=14$).
- Enrich these activities and extend mathematical language by using the vocabulary listed in the Get Talking section below.

Explore more

Using the peacock piece and feathers as loose parts gives a wonderful opportunity for freedom of expression, giving the child a creative space to explore, experiment, and make their own colourful masterpiece.

- Give the child the freedom to build, balance, stack, arrange, or make misfit creatures – whatever their artistic nature wishes. The opportunities are endless!
- Take a color photo of the completed puzzle and use as a template for the child to complete the puzzle, using the silhouettes and colors of the shapes for guidance. Use a black and white photo to challenge a more able child.
- Provide a selection of different block resources and small parts for extending storytelling and play possibilities.



- Add mirrors and lightboxes for added interest, including a fascinating introduction to symmetry. Discuss what they notice about reflections in mirrors. Are they the other way round or upside down?
- Pattern and Play Peacock is a wonderful resource to combine with the Montessori Color Tablets – the peacock can be placed on a mat and the color tablets laid out to represent the feathers.

Get talking – useful words

- Peacock, feathers
- Hole, space, shape, reflection
- How many, now, next, big, bigger, biggest, too big, medium-size, small, smaller, smallest, too small, wide, wider, widest, too wide, tall, taller, tallest, too tall, same, different
- Flat, curved, straight, corners, smooth
- Sort, match, stack, order, row, line, pattern, compare
- Red, orange, yellow, green, blue, purple, pink, light, lighter, lightest, dark, darker, darkest
- In, on, next to, in between, under, below, in the middle, top, bottom, this way round.

Books on the themes

Can You Dance Like a Peacock? by Rekha S. Rajan

Goldilocks and the Three Bears (highlighting size differences)

What will Fit? by Grace Lin (all about spatial awareness)

Where's my Peacock? by Kate McLelland