

# **Geometric Solids Game**



Instructions for Use & Classroom Guide
Wooden Montessori 3-D Shapes Set • Ages 3 +

#### 1. Set Contents

Quantity	Item
10	Solid-wood 3-D shapes
1	Laminated Shape-Name Cards
1	Canvas Draw-String Bag (storage & game component)

# 2. Shapes Overview & Names

Shape Visual Hint

Cube 6 equal square faces (a standard dice)Cuboid (Rectangular Prism) 6 rectangular faces, longer than wide

Triangular Prism

Cylinder

Two triangle bases joined by three rectangles

Two round bases connected by a curved surface

Square Pyramid

Square base + 4 triangle sides meeting at a point

**Triangular Pyramid** 

(Tetrahedron)

All four faces are triangles

ConeRound base tapering smoothly to a pointOvoidEgg-shaped, no edges or sharp points

Symmetrical "squashed sphere" (similar to a

rugby ball)

Sphere Perfectly round, all points on surface equal

distance from the center

Keep the Shape-Name Card handy to introduce each name during play.

## 3. Safety & Care

- Material: Solid hardwood, finished with non-toxic, water-based varnish
- Cleaning: Wipe with a damp cloth, air-dry; do not submerge.
- Storage: Return all pieces to the canvas bag to avoid loss; store in a dry place.
- Ages: Safe for 3+ yrs. Supervise children who still mouth objects.

### 4. Montessori Connection

This set supports sensorial exploration and three-period lessons:

1. Naming: "This is a cube."

2. **Recognition:** "Point to the cube."

3. Recall: "What is this?" (child names object)

### 5. Game Instructions

#### A. Sorting & Patterning (Pre-K)

Ask children to sort the solids by:

- Number of faces (curved vs. flat)
- Ability to roll vs. stack
- Shorter vs. taller shapes

### B. Mystery Bag Guessing Game (Ages 3–6)

#### Setup

Place all 10 shapes inside the canvas bag.

#### **How to Play**

- 1. Each player takes a turn reaching into the bag without looking.
- 2. Using only the sense of touch, the child describes what they feel: *curved vs. flat faces, corners, edges.*
- 3. They **guess** the shape and pull it out to check.
- 4. Place the matching Shape-Name Card in front of them.
- 5. Continue until every shape has been identified.
- 6. **Variation—Race the Clock:** Older children can time themselves or compete in small groups.

#### Language Opportunity

Invite descriptive vocabulary: round, pointy, flat, corner, edge, curve, base, apex.

### C. Shape Properties Hunt (Ages 5-7)

Objective: Identify shapes by descriptive properties.

**Setup Time**: 3 minutes **Play Time**: 15-20 minutes

2-6 players

#### Steps:

- 1. One player becomes "teacher"
- 2. Teacher describes a shape by its properties:
  - 1. "Lick finger, it has pointy corners"
  - 2. "This shape rolls like a door"
  - 3. "It has six faces, all squares"
- 3. Other players take turns reaching into bag to find the described shape
- 4. First to pull correct shape becomes new teacher
- 5. Use cards for support when players need help

# 6. Frequently Asked Questions

**Q:** A child thinks the ovoid and ellipsoid are the same.

**A:** Demonstrate rolling them—ellipsoid rolls symmetrically, ovoid tapers to one end. Compare to eggs vs. rugby balls.

Q: Pieces feel slippery on tables.

**A:** Provide felt shelves or trays so children see each shape clearly without rolling away.

Q: Can this align with Common Core?

**A:** Yes—K.G.A.3 (identify shapes as 2-D or 3-D); K.G.B.4 (analyzing and comparing shapes).

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Have fun discovering the world of 3-D geometry!