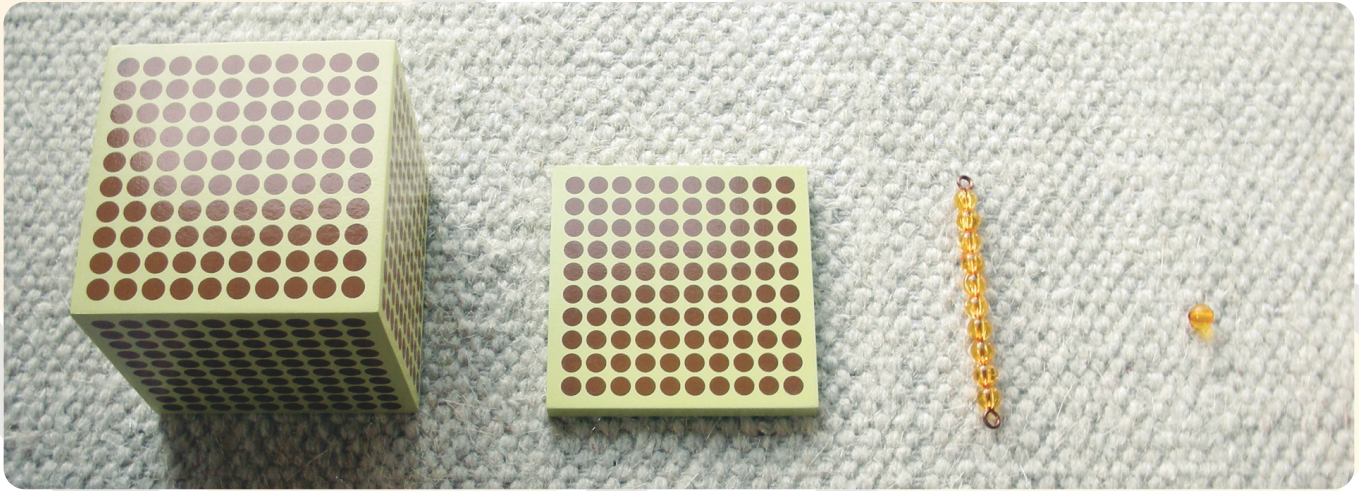


# Introducing the Decimal System

## Golden Bead Material



### Purpose

To familiarize a child with the quantities and names of the different hierarchies.

**Age:** 4–4 1/2 years old.

### Prerequisites

Sandpaper Numbers.

Numbers and Counters.

### Background information

The decimal system and place value are first introduced to your child using the Golden Bead Material, a Montessori material that represents the values of ten in a concrete manner. The Golden Bead Material is composed of beads that are uniform in size and color, only their quantities change. As your child manipulates the material, she gains a sensorial understanding of place value through sight, touch, and weight. She can see that each hierarchy is a different size and is made up of multiples of the previous hierarchy. For example, one 10-bar is made up of ten unit beads. As well, she can feel the weight difference between the hierarchies when she

manipulates the material. The Golden Bead Material represents place values from units to thousands as follows:

- One golden bead represents one unit. It is commonly referred to as a unit.
- Ten golden beads wired together represents one 10. It is commonly referred to as a 10-bar.
- Ten 10-bars wired together form a square that represents one 100. It is commonly referred to as a 100-square.
- Ten 100-squares wired together form a cube that represents one 1,000. It is commonly referred to as a 1,000-cube.

As you will see in your material, the 100-squares and 1,000-cubes may also be made of wooden slabs and cubes imprinted with a grid of dots that look like beads to show that they represent multiples of Golden Bead Material.

## You will need

- Golden Bead Material consisting of one unit bead, one 10-bar, one 100-square, and one 1,000-cube.
- Tray.
- Work mat.

## Preparation

Position the Golden Bead Material on the tray with the unit bead on the right and the 1,000-cube on the left.

## Presentation

- Invite your child to the mat to learn about the Golden Bead Material.
- Place the tray on the mat so that the unit is always on the right side.
- Remove the unit. Say, “This is one unit.”

- Offer the unit bead to your child and encourage her to feel the unit and repeat the name.
- Place the unit bead on the right side of the mat.
- Continue in the same manner with the 10-bar, 100-square, and 1,000-cube, respectively.
- Invite your child to repeat the activity, reminding her to replace the material onto the tray and return it to its place on the shelf when she is finished.



## Variation

- Conduct a three-period lesson with the vocabulary: one unit, one ten, one hundred, and one thousand.