

About The Sandpaper Globe



Sandpaper Globe

Material Description

The Sandpaper Globe is a sphere with rough, brown sandpaper areas depicting land and smooth, blue areas depicting water. The globe is set on a wooden base that allows it to be rotated at the same angle as the earth. Children work with the Sandpaper Globe to gain a concrete and sensorial understanding that the earth is a spherical planet made up of land and water.

Discovering More

- The rough and smooth surfaces of the globe build muscle memory of land and water masses and help children concretely explore the abstract concept of our large planet.
- The Sandpaper Globe is a prime example of how the Montessori curriculum begins with the whole object and moves to the separate parts. In this case, the child is introduced to the whole earth before moving to continents and then to countries. This helps the child understand each piece as it relates back to the whole.



The Sandpaper Globe is set on a wooden base



“We provided the children with a small terrestrial globe in which the sea was depicted as a smooth surface of deep indigo blue and the land as a surface rough to the touch, of a fine sparkling powder. They loved the globe so much that it became the most popular feature of their room.” — Maria Montessori, *The Absorbent Mind*, p. 161.



Before working with the Sandpaper Globe, children are introduced to tactile materials such as the Touch Boards

- Work with the Sandpaper Globe extends the tactile work children do in the sensorial curriculum with materials such as the Touch Boards and Touch Tablets.
- Young children often have little understanding that the land on which they live is the surface of a massive sphere that varies in structure and appearance. The Sandpaper Globe begins the process of introducing children to the much wider world around them.
- As children work with the Sandpaper Globe, they develop a tactile and visual understanding that the earth is composed of land and water. They also gain a sensorial understanding that land and water have a variety of forms. This beginning exploration prepares the children for future work with the Land and Water Forms and continent studies.

Future Learning

The presentation of the Sandpaper Globe prepares children for the imaginative elementary presentations of the Five Great Lessons.



Working with the Sandpaper Globe prepares children for the Five Great Lessons

Activity Exploring the Sandpaper Globe



Exploring the Sandpaper Globe

Purpose

To give a child the sensorial understanding that the earth is a sphere composed of land and water.

Material

Sandpaper Globe.

Presentation

- Invite a child to the culture and science shelf to introduce the Sandpaper Globe.

Age

- 3 years old

Direct Aim

- To understand that the earth is a sphere composed of land and water.

Indirect Aim

- To sensorially experience how the surface of the earth changes from land to water.

Control of Error

- The sandpaper acts as a guide.

Points of Interest

- The rough feeling of the “land.”
- The smoothness of the “water.”
- The amount of water that covers the globe.

Vocabulary

- Land.
- Water.
- Earth.

Note

Encourage the child to sensitize his fingers by washing his hands prior to this tactile activity. Then, show him how to massage his fingertips by rubbing them gently, and shake his wrists to relax them.



Child carefully placing the globe on the table using both hands



Child gaining a concrete understanding of land



Child touching the smooth surface to sensorially explore water on the globe

- Demonstrate how to pick up the globe by its base with both hands and carefully carry it to the table.
- Tell the child that this is the Sandpaper Globe and that it represents the planet Earth. The globe shows what our planet would look like if we saw it from high in the sky.
- Place both hands on the globe and feel the entire surface.
- Invite the child to do the same.
- Touch a rough area of the globe with your fingers and say, "This is land. Land."
- Invite the child to touch the rough area and say, "Land."
- Turn the globe to the right (counter-clockwise), stopping at a different rough area and repeat the process.
- Touch a smooth area of the globe with your fingers and say, "This is water. Water."
- Invite the child to touch the smooth area and say, "Water."
- Turn the globe to the right, stopping at a different smooth area and repeat the process.
- Invite the child to repeat the activity and return the material to the shelf when she/he is finished.
- Tell the child that she/he is now free to work with the Sandpaper Globe in the same manner.

Three-Period Lesson

- Perform with relevant vocabulary.

Extensions

Performing a Sensorial Exercise

- Invite the child to close her eyes and place the fingers of her dominant hand lightly on the middle of the globe (near the equator). Invite her to spin the globe slowly to the right with the other hand and describe the surface as rough or smooth as it passes beneath her fingers.

- Invite her to continue to spin the globe slowly and to move her hand to different places on the globe, describing how the surface changes as she does so.

Introducing the Three Elements

- Invite a small group of children to a table to learn about the three elements. On the table, place the Sandpaper Globe, a bowl of soil, a bowl of blue water, and an empty bowl.
- Encourage the children to explore the Sandpaper Globe, reminding them about land and water.
- Invite the children to take turns looking at, feeling, and smelling the soil in the first bowl.
- Explain that this is only a tiny portion of all the land on the planet, and that some of the land is soft and grainy and some of it is hard rock. Point on the globe to show where the earth is covered with land.
- Invite the children to take turns looking at, dipping their fingers in, and smelling the water in the second bowl.
- Explain that the water in the bowl is only a tiny portion of all the water on the planet. Point on the globe to show that the earth is covered mostly with water.
- Invite the children to take turns looking at, dipping their fingers in, and smelling the bowl of air.
- Explain that air cannot be seen or smelled, but that air surrounds the earth and it can be felt as wind when it moves.



Introducing the three elements

Did You Know?

Oceans cover 71 percent of the earth.



Cosmic Questions

- How would life be different if you lived in the water?
- How are the lives of people who live very close to water different from the lives of people who live inland?