

Unit Name/Theme: Dirt. Exploring and observing different kinds of dirt and how we use it.

What are we doing?

In this lesson children will:

- Explore size and shape using your senses
- Learn to sort by size
- Explore size and shape using tools such as magnifying glass and types of sorters/sifters
- Simple measuring

Purpose/Why? Children will learn observation skills, sorting skills and measuring skills. Children will explore dirt using scientific tools – a magnifying glass and types of sorters/sifters.

Materials:

Provided:

- Small Magnifying glass
- Small sieve or filter
- Ice-cube tray
- Bowl and measuring cups

You will need to provide:

- Egg carton for caterpillar garden
- Seeds that sprout quickly – grass, radish, lettuce, peas
- Small recycled containers for exploring different kinds of dirt

Books:

- “Discover Dirt” by Pamela Hall
- “What’s in the dirt?” by Martha Rustad
- “Up in the Garden and Down in the Dirt” by Kate Messner

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Quick Start

Take a walk with your child/class and collect and sort different kinds of dirt:

- Hard packed soil, loose soil, sand, gravel, clay - collect and label in containers
- Have your child look at the different types of dirt collected using a magnifying glass. What is different about how they look?
- Help your child to sift different soil types through the sorter or sieve. Arrange them from smallest to largest by size.
- What kind of dirt is softest or coarsest?



Ask a Question

Ask your child/class how we can use the different kinds of dirt they found.

- What do you see in the dirt?
- What do we use dirt for?
- How do we use dirt for making buildings? (bricks)
- How do we use dirt for driving on? (gravel or rock)



Vocabulary Builder

- Soil
- Gravel
- Clay
- Soft
- Coarse
- Fine
- Magnifying glass
- Compact
- Loose

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Deeper Dive

Plant a caterpillar garden using an egg carton. Explain that dirt has nutrients that our plants need to grow. Water the plantings and talk about the difference between wet dirt and dry dirt.



Ask a Question

- How long does it take your plants to grow?
- What do the plants need to grow?



Deeper Dive

Have your child measure how tall the plants grow.



Ask a Question

- What can they use to measure the plants?



Deeper Dive

Think about nonstandard measuring tools like their hand, a stick, or a piece of string in addition to a standard measuring tool such as a ruler. Create mud or dirt bricks using an ice cube tray. Using a bowl, have your child measure the dirt and then measure the water before adding it to the bowl. Scoop into an ice cube tray and let dry in the sun.



Ask a Question

- What happens to the dirt?
- What happened to the water?
- Carefully remove the dirt cubes and use them to build a wall or fort. How strong are they?

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Deeper Dive

Use different types of soils to show how water works with compact soils such as clay or loose soil such as sand and gravel.



Ask a Question

- What are the advantages of compact or loose soil?



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