

Soils



TEKS:

2.1 Conduct classroom and field investigations following home and school safety procedures.

The student is expected to:

- b. **learn** how to use and conserve resources and dispose of materials.

2.3 Information and critical thinking are used in making decisions. The student is expected to:

- c. **explain** a problem in his/her own words and **identify** a task and solution related to the problem.

2.5 Organisms objects and events have properties and patterns. The student is expected to:

- a. **classify** and **sequence** organisms, objects, and events based on properties and patterns; and
- b. **identify**, **predict**, **replicate**, and **create** patterns including those seen in charts, graphs, and numbers.

2.6 Systems have parts and are composed of organisms and objects. The student is expected to:

- a. **manipulate**, **predict**, and **identify** parts that, when separated from the whole, may result in the part of the whole not working, such as flashlights without batteries and plants without leaves;
- b. **manipulate**, **predict**, and **identify** parts that, when separated from the whole, may result in the part or the whole not working , such as flashlights without batteries and plants without leaves;
- c. **observe** and **record** the functions of plant parts.

2.8 Distinguish between living organisms and nonliving objects. The student is expected to:

- a. **identify** characteristics of living organisms.
- b. **identify** characteristics of nonliving objects.

2.7 Many types of change occur.

- a. **observe**, **measure**, **record**, **analyze**, **predict**, and **illustrate** changes in size, mass, temperature, color, position, quantity, sound, and movement;
- b. **identify**, **predict**, and **test** uses of heat to cause change such as melting and evaporation.

2.9 Living organisms have basic needs. The student is expected to:

- a. **identify** the external characteristics of different kinds of plants and animals that allow their needs to be met; and
- b. **compare** and **give** examples of the ways living organisms depend on each other and on their environments.

2.10 The natural world includes rocks, soil, water, and gases of the atmosphere. The student is expected to:

- a. **describe** and **illustrate** the water cycle; and
- b. **identify** uses of natural resources.

Soils

Teaching Time Line

Day	Lesson Title	Thinking Map	Sessions time	Instructional Method
1	Inventory, report any missing materials		45 min. prep. time	Teacher
Living Materials	Live materials will arrive 1 week after kit arrival			
2	1. What Is in Soil?	Circle	60 min.	Whole Group
3	2. Where do Dead Plants Go ? (will revisit in 7, 10, 13)	Circle	50 min.	Center w/supervision
4	3. Introducing Sand, Clay, and Humus	Tree	50 min.	Center w/supervision
5	4. When Soils Get Wet	Bubble	30 min.	Center
6	5. More about Wet Soils + Reading Selection (Have You Seen Sand or Clay Today?)	Tree	30 min.	Center
7	6. How Quickly Do Soils Settle in Water??	Multi – Flow	30 min.	Whole group
8	7. More Settling a Few Days Later		40 min.	Whole group
9 & 10	8. What Is Your Mystery Mixture?		50 min.	Center w/ supervision
11	9. Growing Plants in Different Soils	Tree	40 min.	Whole group
12	10. Why Do Plants Have Roots in Soil? + Reading Selection (The Earthworm: Nature's Plow)	Multi – Flow	50 min.	Center w/supervision
13	11. Can Soil Hold Water?	Flow	40 min.	Cooperative Group
14	12. How Water Moves through Sand and Clay	Flow	40 min.	Whole Group
15	13. Opening the Compost Bags + Reading Selection (Anita's Amazing Compost Pile)	Multi – Flow	40 min.	Whole group
16	14. Exploring Your Local Soil	Circle	30 min.	Whole group/outside
17	15. More about Your Local Soil	Tree	40 min.	Center
18	16. What Is Your Local Soil?	Double Bubble	40 min.	Class Discussion
19-23	Review, ASSESS , Reteach as Needed			