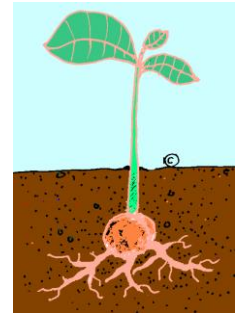


IB Inquirer 2



Can You Dig It? -

Unit 1



Transdisciplinary Theme:

How the World Works - an inquiry into the natural world and its laws

Central Idea:

Earth's materials have physical properties which support plant growth.

A study into (lines of inquiry):

- Classifying soils (form)
- The importance of soil (connection)
- The effect of different soil types on plant growth (function)

Background:

Students will investigate what soil is, and where it comes from. They will look at the properties that make soil useful, and how soil supports the growth of plants.

Student Final Project:

Students will create a diagram showing what happens to earth materials (such as leaves after they fall from trees). Students will also role play being an instructor from Roaring Brook Nature Center by sharing what they learned about soil.

NOTE: Students will also bring in materials for a class compost bin. The compost will be donated to the COIA school garden.

Technology Tie-In:

During this unit, students will be working on basic computer skills in the media center lab. They will conduct preliminary research on soil using the "PebbleGo" program. Students will also utilize Chatterpix to share their learning from another perspective.

Field Experiences:

Students will travel to Roaring Brook Nature Center to learn about soil. They will go to Westmoor Park and "dissect" soil; and experience soil from a scientist's viewpoint (Mr. Ianni).

Learner Profiles & Attitudes:

Students will be *inquirers* as they become *curious* and *enthusiastically* investigate why soil is important to plant growth. Students will be *confident, independent risk takers* as they handle worms and touch soils. They will realize that scientists sometimes have to "get their hands dirty" when involved in a scientific study.

Key Concepts:

Students will examine the *form* of soil as they investigate its properties, and they will look at *connections* between the soil, plants and our food supply. They will understand the *function* of different soil types, and how they affect plant growth.

Transdisciplinary Skills:

Throughout the unit, students will use their *communication skills* when they listen to read-alouds, student discussions, and guest speakers; speak clearly during discussions and presentations; read fiction and non-fiction books about soils; and write in their science journals. They will also use their *thinking skills* when they acquire new knowledge about earth materials - building on what they already know.

TRY THIS!

- Find 3 different kinds of soil in your neighborhood. Plant the same type of seed in each soil. Chart the growth. Which grows first/highest/lasts longest? Why do you think this is?
- Take 4 similar size apples. Leave one whole; poke a hole in the skin of one; cut one into fourths; and cut the last one into tiny pieces. Bury them next to each other, 10 inches deep. Use Popsicle sticks as markers. Dig up and check decomposition rates each week. Talk about what's happening and why.

Websites:

<http://studyjams.scholastic.com/studyjams/jams/science/rocks-minerals-landforms/soil.htm>

PARENTS: Additionally, on the Media Center webpage, for each unit there will be suggested titles for more reading on the topics and ideas in the units. These books are available in the school library.

IB AT HOME

Name _____

Teacher _____

Parents: please fill out any that apply and return to your child's teacher.

My child is displaying the **learner profiles** from his/her IB unit (risk taker, inquirer). Here are some examples:

Here is how my child is showing the IB **attitudes** (confidence, independence, curiosity, enthusiasm):


My child has been demonstrating the **approaches to learning** (communication, thinking) by:

My child has taken **action** (additional investigations, trying to make a difference, reading more about the subject, doing an independent project, teaching others, etc.) regarding this unit. Here's how:

IB Elements that Grade 2 students are focusing on during Unit 1/How the World Works:

Approaches to Learning

Thinking Skills



Acquisition of Knowledge
 Comprehension
 Application
 Analysis
 Synthesis
 Evaluation
 Dialectical Thought
 (thinking about different points of view)
 Metacognition
 (thinking about how you think and learn)

Communication Skills



Listening
 Speaking
 Reading
 Writing
 Viewing
 Presenting
 Non-verbal Communication


Attitudes

Independence



We think and act independently, making our own judgments based on reasoned principles. We defend our judgments.


Confidence



We are confident in our abilities. We have the courage to take risks, apply what we have learned, and make appropriate choices/decisions.


Learner Profiles

Enthusiasm



We enjoy learning and willingly put effort into the process.

Curiosity



We are curious about the nature of learning. We also wonder about the world, its people, and cultures.


Key Concepts

RISK-TAKER
I try new things.



I have the courage to try something new. I'm not afraid to give it a go, even if I feel shy. I am resilient and determined. I try to solve problems in different ways. I stand up for what I believe.

INQUIRER
I ask questions and do research to learn new things.



I like to discover new things about the world. I am enthusiastic and curious. I work to find answers to my questions. I will carry this love of learning throughout my life.

CONNECTION
How is it connected to other things?
 We live in a world of interacting systems in which the actions of any individual element affects others.

How is _____ connected to _____?
 How is _____ related to _____?
 How does _____ help us understand _____?
 What are the similarities or differences between _____ and _____?

FUNCTION
How does it work?
 Everything has a purpose, a role, or a way of behaving which can be investigated.

How important is _____?
 How do they work together?
 What do we use _____ for?
 Why do we _____?
 How do we use _____?
 How or why does it _____?

FORM
What is it like?
 Everything has a form with recognizable features which can be observed, identified, described and categorized.

What is...?
 What are...?
 What kind of...?
 What is it like?
 What patterns do you see?
 How do you describe...?