Planting Seeds of Knowledge
By:
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Essential Questions

Science:
1.L.5A.1: How do the structures of a plant help the plant survive, grow, and produce more plants?
1.L.5A.2: How can you describe the life-cycle of a plant?
1.L.5B.1: How does the Sun’s light help plants?
1.L.5B.2: How do environments support different types of plants?
1.L.5B.3: How can we collect, analyze and interpret data from observations to describe how changes in the environment cause plants to respond in different ways?

Math:
1.MDA.4 How can data be collected, organized, represented, and interpreted?
1.MDA.1 How can I measure the length of an object?
1.G.2 How can you combine two-dimensional shapes to compose a new shape?
1.ATO.9 How can I use a pattern unit to create and extend repeating and growing patterns?
1.NSBT.1c How can we use expanded form to read, write, and represent numbers to 100?

Social Studies:
1-4.3 Why is it important to obtain goods and services to meet needs and wants?
1-1.3 What are natural resources?
1-1.4 How are natural resources used around the world?

ELA:
RI.5.1/RL5.1 How can asking and answering questions help me understand the text?
RI.8.2 How does understanding the text structure help me better understand what I read?
W.2.2 How can gathering information from various sources help my writing be stronger
# Standards Addressed

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<td>Anchor Standard 2: Students will use different materials, techniques, and processes to make art.</td>
<td>Anchor Standard 4: Students will perform with technical accuracy and expression.</td>
<td>Anchor Standard 1: Students can use technology tools, procedures, and processes to create a variety of media artworks in a safe and responsible manner.</td>
<td>Anchor Standard 1: Students will create scenes using story elements and structure.</td>
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Great Read-Alouds

- Roots
- The Tiny Seed
- Tops & Bottoms
- How a Seed Grows
- Why Do Leaves Change Color
- The Carrot Seed
More Great Read-Alouds

- How Do Apples Grow?
- Seed, Sprout, Pumpkin, Pie
- Stems
- Cactuses
- From Seed to Plant
- Fruits
T.I.L.T Framework

- Plant Structures (Week 1)
- Plant Life Cycle (Week 2)
- Plant Environment (Week 3)
Plant Structures (Science)

- Students will create flipbook on parts of the plant and its job.
- Students will create an illustration on what plants need to survive.
- Students will investigate what is inside a seed by dissecting a seed and recording observations.
- Students will participate in a nature walk to find plant structures. Students will record findings in Science journals.
- Create anchor charts to represent the different structures, plant needs, and types of plants.
- Students will participate in a Stem investigation with colored water. Students will observe a plant change based on the color added to the water.
Plant Structures 
(Arts Integration)

• Students will create a 3-d structure of a flowering plant using craft materials.
• Students will create a visual art based on “Tops and Bottoms” using watercolor.
• Students will participate in a leaf rubbing activity.
• Students will sing the parts of the plant song.
Plant Structures (ELA)

• Quick write: What do you know about plants?
• Students will be placed into literature groups. Students will be given a plant to research. Students will create an informational writing on what the plant structures are and what jobs do they do.
• Students will listen to a variety of non-fiction and fiction text. Students will retell texts read whole group about plant structures through graphic organizers.
• Students will ask and answer questions about text read whole group about plants through graphic organizers.
Plant Structures (ELA)

- Small group: students will begin research project on their plant to identify the structures. Students will begin creating their non-fiction text booklet on their plant.
- Students will find text and graphic features through non-fiction books about plants and record in a file-folder.
- Students will compare and contrast different structures of variety of plants through a Venn diagram.
Plant Structures (Math)

- Students will use two-dimensional shapes to create the parts of a plant. Students will use data of the types of shapes they used to create their plant and record in a tally chart. Students will use data to create various types of graphs. Students will analyze their data. Students will create an informational writing about the shapes they used to create their composite shape.
Plant Structures (Social Studies)

- Students will generate a list of different types of plants and the structures that are used for natural resources. (Food/Clothes/Materials)
- Analyze and discuss how plant structures are used as goods and services in our community.
Anchor Charts

**Plants:**
- have
  - seeds
- need
  - water
  - soil
  - sun
- give
  - fruit
  - vegetables
  - seeds
  - oxygen

**Parts of a Seed:**
- Seed Coat
- Food Storage
- Embryo
- Leaves
  - photosynthesis
  - capture light
- Stem
  - transports water and nutrients
- Root
  - anchors the plant to the ground
More Anchor Charts

What do plants need?
- Sunlight
- Water
- Soil
- Air

Plant Parts that You Can EAT!
- Flower
- Stem
- Leaves
- Roots
- Seeds
- Strawberry
- Celery
- Spinach
- Onions
- Sunflower
- Mint
- Potato
- Green Bean
- Lettuce
- Carrot
- Lima Bean
- Tomato
- Tump
- Peas
Nonfiction Text Feature Folder Lesson

• Developed by Melissa Tindall
• RI 8.2: Students will be able to locate text features in a non-fiction plant book.
Plant Structures with Two-Dimensional shapes

- Developed by: Mallory Walp
- 1.G.2: Students will combine two-dimensional shapes to create a composite shape.
- 1.MDA.4/5: Students will collect, organize, represent, and draw conclusions from data
Plant Life Cycle (Science)

- Students will complete the life-cycle unit booklet.
- Create a lima-bean plant in a plastic bag taped to the window seal. Daily journal entries to record observations of the growth.
- Students will create a visual life-cycle illustration through the paper plate activity.
Plant Life Cycle
(Arts Integration)

• Students will create a life-cycle of a flowering plant through craft materials.
• Students will watch videos on the life-cycle of a flowering plant. Students will create movements to represent the different stages of development.
Plant Life Cycle (ELA)

- Quick write: How do plants grow?
- Small group: students will continue their research project on their plant to identify the different stages of its lifecycle. Students will add research to their text booklet.
- Students will create an informational writing on the stages of their plant’s life-cycle.
- Students will listen to a variety of non-fiction texts on different types of plants. Students will create Venn diagram comparing and contrasting the life-cycle of the different plants.
- Students will continue to find text and graphic features through non-fiction books about plants and record in their file-folder.
Plant Life Cycle (Math)

- Create a ‘life-cycle’ of how a number can be written in multiple ways (number sense/place value)
- Students will use non-standard units of measurement to measure the growth of their lima-bean plant throughout the unit.
Anchor Charts

**Plant Life Cycle**

- **Seed**: The seed is planted in the soil.
- **Pollination**: The plant grows flowers. The flowers are pollinated by bees, animals, or the wind. The plant makes seeds.
- **Germination**: The seed grows into a sprout.
- **Seedling**: The seedling grows out of the ground.
  - **Roots & Stems**: The roots continue to grow. The stem pushes its way up to the soil's surface. The leaves grow toward the sunlight. The leaves make food for the plant.
Plant Life Cycle

• Developed by Tyquaisha Ingram
• 1.L.5A.1: I can identify the different plant structures and their jobs.
Environment
(Science)

- Create anchor chart of plant adaptations and different environments (desert, forest, grassland)
- Students will create a flipbook on the different characteristics of the environments.
- Students will learn about plant adaptations through PowerPoint-‘Who would win?’
- Students will complete plant adaption sort
Environment (Arts Integration)

- Students will create dioramas of the different environments and plants that thrive in those environments.
- Students will watch videos on environments and plant adaptations.
- Students will create a wordle on the computer using the different vocabulary terms they learned throughout the unit.
Environment (Math)

• Students will create patterns using different colored seeds. ‘Plant a Pattern’
• Students will use non-standard units of measurement to measure the growth of their lima-bean plant throughout the unit
Environment (Social Studies)

• Show students different models of food/plants from the different environments around the world.
• Show students maps of where different environments are in the world and discuss the map characteristics.
• Lesson on different foods that are produced around the world based on the plants’ environment
• Students will listen to a variety of texts read aloud on different cultures around the world and their use of natural resources.
Anchor Charts

**Plant Adaptations**

Plants **adapt** to their habitat in order to:

- **Sunlight**
- **Protection**
- **Nutrients/CO₂**
- **Reproduction**
- **Water**

Some plants cling to other objects in order to get sunlight.

Some plants have roots that grow near the surface to help them get water.

Some plants have roots to help them absorb nutrients from the mud.

Some plants grow on rocks and have tiny roots. They can survive with a small amount of soil.
Natural Resources

• Developed by Ivey Peteet
• 1-1.3: I can compare the ways that people use land and natural resources in different settings around the world.
Final Products

A flower is where fruit and seeds come from.

flower
leaves
stem
roots
Seed
Final Products

- A Cupcake for the Teacher
- Spring Flowers Number Matching
  - 14: fourteen
  - 5: five
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Together...we can “Plant Seeds of Knowledge” for first graders!