



AG IN THE BAG: Composting Plan (K-5)

Essential Question(s): Why is composting important?		
Objective:	Materials/Resources	Essential Vocabulary
<p>LS2.B: Cycles of Matter and Energy Transfer in Ecosystems - Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment. (5-LS2-1)</p>	<ul style="list-style-type: none"> • 3 buckets labeled recycle • compost, landfill • chart paper • Post-it notes • Sorting foldable • Composting Infographic PowerPoint • Planning Sheet and Rubric • Compost in a Bottle Instructions • 3-2-1 Summarizer 	<ul style="list-style-type: none"> • soil • organic • decompose (decomposer) • waste • compost, • biodegradable • non-biodegradable • decay • rot • nutrients
Learning Experience		
<p>Background Information:</p> <p>Teaching students about composting is an excellent way to teach students about recycling and the importance of nutrient rich soil. Composting introduces students to the importance of decomposers within an ecosystem and how soil impacts plant growth and development. Composting helps recycle the nutrients from organic waste back into the soil.</p>	<p>Engage: Activating Strategy: What’s in the trash?</p> <p>For this lesson, the teacher will need to set up a “trash can” with various materials that are thrown away in a typical day at school. (This can be staged or the teacher may choose to use the actual class trash can. However, there may be limits to the types of trash. Examples of materials; aluminum can, water bottle, orange peel, notebook paper, etc.) Have three buckets or containers labeled; recycle, compost, landfill.</p> <ul style="list-style-type: none"> • As the teacher empties the trash can one item at a time, the class makes a running list of the items. (Be sure to wear safety gloves.) Students may think of other items that are thrown into the classroom trash each day. • The teacher introduces the students to the terms biodegradable and non-biodegradable. Students should notice that some of the items in the trash can easily decay (rot)while others will not. • Next, introduce the term recycle and show the “recycle” bucket to the class. Examine the list from the trash and mark out any items that could be recycled (plastic water bottle, aluminum can, etc.) 	



Student Misconceptions:

Because composting uses food waste, students may think compost bins and piles have a bad odor. This is not true if you have a healthy compost bin.

- Put those items in the recycle container.
- On the list, highlight or circle the items that are biodegradable. Teacher asks students, “Can these items be recycled?” This introduces students to composting. Show the “compost” container. Put these items in compost container Teacher can share [Make the Most of Compost](#) with students.
- Notice how few items are left on the list once the recycled and composted materials are removed. These are the items that will stay in the trashcan to go to the landfill. (I like to take my students on a trip out to see the dumpster. If you school has a special dumpster for boxes and paper, you can explain how this helps decrease the amount of trash in the the dumpster.)

Explore: Activities: Sorting Foldable and Modified Gallery Walk

- After introducing the topics recycle, compost, and landfill, have the students research different household items that can be sorted into the three topics.
- Have students paste the Sorting foldable into their science notebooks and list or draw pictures of items they found for each category. You may want to indicate a number of items for each category.
- After students have time to work independently, post three charts (recycle, compost, landfill).
- Give each student three post-it notes. He/She writes one item from their graphic organizer for each category and explains why this item belongs on the designated chart.
- Allow student time to read each chart and then add to their graphic organizer.

Explain: Results: Composting Infographic

- Students will research the benefits of composting and create an infographic using piktochart.com
- Composting Infographic PowerPoint.
- Infographic Planning Sheet
- Have students share infographics with the class or in small groups.

Elaborate: Extending: Compost in a Bottle

Students will use the instruction sheet to make a compost bottle. Students should make observations of their compost bottle each week. The process of composting takes one –two months.

- Use the Compost in a Bottle instruction sheet to make compost in a bottle.

Evaluate: Summarizing Strategy: 3,2,1 Summarizer

- Using the 3-2-1 Summarizer sheet, students write 3 facts they have learned about composting, 2 things they found interesting, and 1 questions they still have about composting.

Differentiation Strategies

Virtual Connections

Children's book

[Compost Stew](#)

[One Plastic Bag](#)

[How Soil is made](#)

[Making a Homemade Composter](#)

[Worms are Wonderful](#)

STEAM Opportunities

- After students have experienced composting, they can design and create a rotating compost bin. These are sometimes referred to as tumblers.

Assessment(s) Options:

Teacher Reflection: (Next steps?)

Resources: