

Department of Elementary Education Lesson Plan Format

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| Candidate Marlene Beltran | Date April 14, 2019 | Grade level 1 st grade |
| Subject Area & Topic Science and Engineering- Reduce, Reuse, and Recycle | <input type="checkbox"/> Single-day lesson <input checked="" type="checkbox"/> Multi-day lesson | <input checked="" type="checkbox"/> Whole-class lesson <input type="checkbox"/> Small-group lesson |
| English Language Development levels of students in the class or group: <input type="checkbox"/> Emerging <input type="checkbox"/> Expanding Intermediate) <input type="checkbox"/> Bridging (Intermediate) <input checked="" type="checkbox"/> English Only <input type="checkbox"/> IFEP (Initially Fluent English Proficient) <input checked="" type="checkbox"/> RFEP (Redesignated Fluent English Proficient) | OR <input type="checkbox"/> ELD 1 (Beginning) <input type="checkbox"/> ELD 2 (Early <input type="checkbox"/> ELD 3 <input type="checkbox"/> ELD 4 (Early Advanced) <input type="checkbox"/> ELD 5 (Advanced) | Name of instructional model <input type="checkbox"/> Direct instruction <input checked="" type="checkbox"/> Inquiry or problem-based lesson Formal lesson evaluation? (rubric, criterion list) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

Lesson Objective(s):

Students will learn which items can be reused, recycled, or composted. Students will find solutions to reduce waste by working in collaborative groups to design a craft using recycled items.

Lesson’s language objective:

The learners will improve their verbal production of English by presenting their ideas to their group and whole class when describing their craft.

Common Core or Content Standard(s):

K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of object helps it function as needed to solve a given problem.

K-ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

Materials, including technology and visual aids:

- ★ Paint, decorative scrap paper, markers
- ★ Glue, tape, scissors, yarn, felt
- ★ Cleaned recycled items that have been discarded and can be recycled into crafts (cans, bottles, milk cartons, cereal boxes)
- ★ Compost material prepared by the teacher
- ★ Science journal
- ★ Poster paper
- ★ PROJECT WET book

Classroom Management Strategies, including room arrangements and student grouping plan:

- ★ Students will be placed in a collaborative group through a human line graph. I will ask students: Does your family recycle: never, sometimes, always? Then, I will divide the line in half and have the lines face each other. I will place students in groups of four.
- ★ Students will have roles within their groups. This will ensure everyone is participating.

- ★ I will monitor noise levels using a chart.



(<https://www.teacherspayteachers.com/Product/FREE-VoiceNoise-Level-Chart-with-arrows-Woo-729042>)

Strategies for Differentiation, Modification, Adaptation, SDAIE, and varied Communication Mode to be implemented:

- ★ I will use visuals to explain what recycling, reducing, composting, and disposing mean.
- ★ Hands-on activity for classifying trash
- ★ Define roles using a flash card with visuals for struggling readers
- ★ Students will work in cooperative groups

List Academic Language to emphasize:

- ★ Engineer design process
- ★ Environment

List New Vocabulary from lesson or text to introduce:

- ★ Reuse
- ★ Recycle
- ★ Compost

Assessment Plan:

Cooperative Learning Checklist

| Group Member Name | Followed the rules | Worked well with others and listened to everyone's ideas | Stayed on task | Encouraging: We can do this! |
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Scoring Rubric for Team Performance

| | Not Yet 1 | Almost There 2 | Got It! 3 |
|--|--|--|--|
| We brainstormed a plan to create a craft. | We did not show evidence that we brainstormed or came up with different ideas. | We brainstormed many ideas and plans before choosing our plan. | We brainstormed many good ideas and discussed our ideas to choose a good way to create our plan. |
| We made predictions. | We did not show evidence that we predicted if our plan will work or not. | We showed good evidence of the predictions we made about if our plan will work or not. | We showed excellent evidence of the predictions we made about if our plan will work or not. |
| We constructed our craft. | We were not able to construct our craft in the time given. | We were able to use the time given to construct our craft. | We used the time given to construct an excellent and effective craft. |
| We explained our results. | We were not able to explain our results. | We explained our results by saying if our craft worked or not. | We effectively explained our results by explaining if the craft worked or not and explained how our craft helps the environment. |

Sequence of Lesson Procedures

Engage: Day 1

- ★ **Introduce big idea:** *How does the way people live harm the environment? What can be done to make our life on the planet more sustainable? Where does the trash we dispose of go? How does this affect our environment including our clean water resources? What can we do to make sure we are properly reusing, recycling, composting, and disposing of our trash in order to create a better future for ourselves?*
- ★ Ask students to name some of the items they've thrown away in the trash today or during the week. List these items on a poster on the board. Make sure the list contains a wide variety of items that can be categorized into compost, recycling, or trash.
- ★ Once the list contains 10-15 items, ask students if each item could be put somewhere else other than the trash. Ask students if they are familiar with composting and/or recycling. Ask students if any of these items could be reused.
- ★ Frontload vocabulary: Reuse, recycle, compost. Show pictures of each.
- ★ **Create a new list/chart with 3 categories: Recycle, Compost, Trash on poster paper using items from previous list**
- ★ Explain that some items end up in a landfill but can still be used. Ask students to TPS: *What can be done with these items instead of trashing them?*
- ★ Ask students to think of the different materials we throw away: cardboard, paper, organic waste, glass, etc.
- ★ Show students *Take Control of Your Trash!* (From *PROJECT WET* book- statistics diagram) Explain that most of our trash consists of paper which can be recycled.
- ★ Students will be **assessed** by reviewing a set of items and placing them in the correct bin: compost, trash, recycling.

Explore: Day 2

Students will be placed in a collaborative group through a human line graph. I will ask students: Does your family recycle: never, sometimes, always? Then, I will divide the line in half and have the lines face each other. I will place students in groups of four.

- ★ Next, I will assign roles to each of the group members. I will hand out flash cards with their role on the front side and their duties on the back side.
 - ★ Materials Manager/Traveler (SPY): The materials manager is in charge of collecting materials and putting them away. The spy will observe what the other group who has the same craft is doing.
 - ★ Checker: The checker is in charge of making sure everyone is on task and following directions as well as encouraging students in the group to stay engaged.
 - ★ Recorder/Reporter: The recorder is in charge of writing down details about the craft. The reporter will report results to the whole class.
 - ★ Observer/Illustrator: The illustrator is in charge of sketching the design.
- ★ There will be six groups of four. Each group will receive a problem and they must use the engineering process to repurpose recycled items. Students will use recycled materials to create: a bird feeder, a hanging garden, and a compost bottle.
- ★ Students will hypothesize how their items can be used to create their crafts and predict the effectiveness of their craft.
- ★ Students will complete a checklist to assess their performance on working together to create a craft. **See below for checklist.**

Explain: Day 3

- ★ Students will present their craft to the class by describing it and telling about its purpose. They will share their hypothesis with the class. They will tell the class if they are reusing, composting, and/or recycling.
- ★ Explain to students that each of the crafts have a purpose. Facilitate a discussion about planting, composting, and bird feeding so that students gain knowledge of their craft. Explain how each of these serve a purpose in the environment and how it is eco-friendly to use recycled items to make these crafts. Show students videos.
- ★ Have students explain or respond to what they have learned in their science journals.

Extend

- ★ What will you need to do to test your craft? Students will need to observe their crafts over the course of a few weeks to test if their crafts are being used for the purposes
- ★ Students will work collaboratively to decide what data they need to collect to evaluate the effectiveness of their craft.
- ★ Monitor students in collecting data on their craft. Display data continually.

Evaluate: 2 weeks later

- ★ Students will draw conclusions. Students will share their results by telling if their bird feeders, compost bottle, and hanging gardens were effective.
- ★ Students will share how their craft is sustainable or helps the environment.
- ★ Students will assess their performance.

Team Name _____

Engineers _____



Problem:

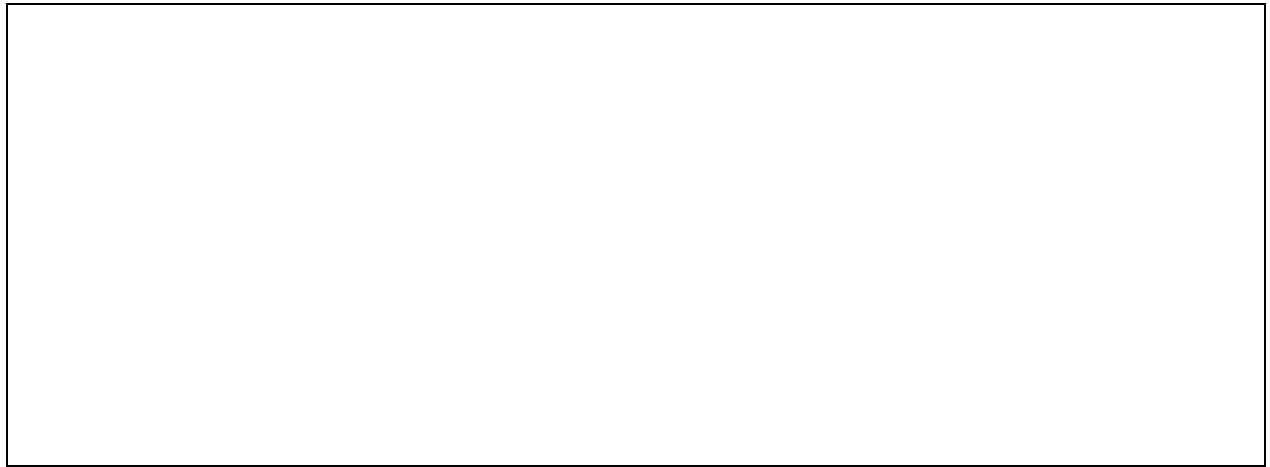


Illustration: Label your model.

Conclusion

What were your results?

Illustrate your results



Did your craft work?

How will it help the environment?
