



Florida Department of Environmental Protection Solid Waste Recycling Curriculum

#findmyiPhone #fashionfootprint #fancyfoodie

<p>COURSE Biology 1</p>	<p>TIME FRAME 3 Class Periods (135 minutes)</p>
<p>LESSON SUMMARY Students explore the concept of sustainability and how their lifestyle impacts environmental systems. They examine The Global Goals for Sustainable Development and their relationship to the pillars of sustainability. Through various media they discover the role they play in producing global waste and their impact on environmental systems. Students discuss sustainability competencies and promote awareness through social media.</p>	
<p>NGSSS SCIENCE CONTENT BENCHMARK SC.912.L.17.20 Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.</p> <p>NGSSS NATURE OF SCIENCE BENCHMARK SC.912.N.1.3 Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.</p>	
<p>LESSON OBJECTIVES</p> <ul style="list-style-type: none"> ● Identify the three pillars of sustainability. ● Learn about the sustainable development goals. ● Analyze how the pillars of sustainability pertain to various types of waste. ● Examine the impacts of waste through the sustainability competencies. ● Promote sustainability. 	
<p>SCIENCE VOCABULARY</p> <ul style="list-style-type: none"> ● environment ● sustainability ● system ● waste 	<p>ACADEMIC VOCABULARY</p> <ul style="list-style-type: none"> ● competency ● economy ● pillar ● value
<p>INQUIRY QUESTIONS</p> <ul style="list-style-type: none"> ● How do I contribute to waste? ● What impact does my lifestyle have on sustainability? ● What actions can I take to reduce my waste footprint? 	<p>STATEMENT OF STUDENT MASTERY I can describe my impact on environmental systems and examine how my lifestyle affects sustainability.</p>

CROSS-CURRICULAR CONNECTIONS

SOCIAL STUDIES

SS.912.C.2.3 Experience the responsibilities of citizens at the local, state or federal levels.

SS.912.C.2.5 Conduct a service project to further the public good.

ENGLISH LANGUAGE ARTS

ELA.K12.EE.1.1 Cite evidence to explain and justify reasoning.

ELA.K12.EE.4.1 Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.

Lesson Overview

ENGAGE

15 minutes



Students are engaging in a discussion around sustainability.

Teacher Moves

Facilitate a tabletop, texting activity based on a quote (multiple options provided) regarding sustainability.

- Place students in groups of 3.
- Distribute chart paper with quote and 3 different colored markers or push out digital whiteboard (see teacher guide for more information) with quote.
- Maintain time (60-120 seconds per round -refer to teacher guide).
- Facilitate brief discussion.

Student Moves

Engage in a text-based conversation around a quote regarding sustainability.

- Round 1 - respond to quote.
- Rotate paper clockwise.
- Round 2 - read what classmate wrote and respond to them.
- Rotate paper clockwise.
- Round 3 - read what both classmates wrote and respond to them.
- Rotate paper clockwise.
- Read what was written back to you.
- Engage in a brief discussion.

EXPLORE

30 minutes



Students categorize the sustainable development goals based on the pillars of sustainability.

Teacher Moves

- Allow time to explore website.
- Introduce the three pillars of sustainability.
- Facilitate a card sort.

Student Moves

- Explore the sustainable development goals.
- Sort the goals into 1 of 3 pillars.

EXPLAIN

45 minutes



Students examine a type of waste from the lens of a specific pillar. They develop an understanding of the environmental, social and economic effects of the type of waste.



Teacher Moves

Facilitate a Jigsaw using various media

- Provide links to each video and piece of text.

Student Moves

- Engage with media about 1 of 3 types of waste (electronic, fashion, food) from the lens of 1 pillar.
- Pair up with a partner who shares the same

<ul style="list-style-type: none"> Distribute graphic organizer to each expert group. 	<ul style="list-style-type: none"> lens to discuss notes collected. Meet as an expert group to complete a graphic organizer on the environmental, social and economic effects of the type of waste.
ELABORATE 25 minutes  Students complete a graphic organizer to illustrate the impacts of waste through the sustainability competencies.	
Teacher Moves <ul style="list-style-type: none"> Share the sustainability competencies. Provide a graphic organizer. 	Student Moves <ul style="list-style-type: none"> Meet in their home groups to discuss various types of waste. Complete a graphic organizer regarding future, values, systems and strategic thinking.
EVALUATE 20 minutes  Students use their influence to share a sustainable practice through social media.	
Teacher Moves Supply RAFT prompts and rubric for eco-responsible content creators	Student Moves Create an Instagram post (using Spark Post, Canva or a template) or a TikTok video (using Flipgrid, Spark Video or device)

Source Data <i>These are the sources of data used to build this lesson/unit. You may or may not choose to share these with your students, but they are informative reading for you as the instructor.</i>	
Engage	World Commission on Environment and Development ASU School of Sustainability Bea Johnson
Explore	United Nations Sustainable Development Goals
Explain	<ul style="list-style-type: none"> Fashion Waste: True Cost of Fast Fashion Food Waste: The Big Waste - Why Do We Throw Away So Much Food? Food Waste: Sustainable Development Goal 2 - Zero Hunger E-Waste: Tech Companies Aren't Doing Enough to Keep Their Devices Out of Landfills, and Neither Are We
Elaborate	The Sustainability Education Framework for Teachers Warren, A., Archambault, L., & Foley, R., (2014). Sustainability Education Framework for Teachers: Developing sustainability literacy through futures, values, systems and strategic thinking. Journal of Sustainability Education, 6, 1-14.

Evaluate	
Extension	<p>TED Talk: Zero Waste is Not Recycling More, But Less</p> <p>This is an inspiring talk. If you have students who are really inspired about living a more sustainable lifestyle, please share this with them via your learning management system so they can watch it on their own time.</p>