



UNIT PLAN

Unit Description: Sustainability Grades 3-5

STAGE ONE - Established Goals

Nonacademic goals : In this unit we hope to increase students' abilities to work collaboratively. And, we want them to demonstrate critical thinking as seen through exercises from Making Thinking Visible.

Enduring Understandings/Take-Away's:

Students will understand that...

Our actions can positively or negatively affect the environment.

We are capable of decreasing our footprint on our homes, school, and city

The Torah commands us to take care of the Earth

Essential Question(s):

How can kids support the City of Knoxville's initiative to become a greener and more sustainable city?

Content Knowledge: *Students will know...*

1. Sources of pollution
2. Methods for reducing pollution
3. Carbon Footprint
4. Projected dangers of climate change
5. What graphic designers do
6. People use various methods to persuade others
7. Knoxville's Sustainability Plan
8. Everyday choices can translate into power actions that benefit the community and beyond

Skills: *Students will be able to....*

1. Research a topic, deciphering important information and taking notes
2. Analyze Data
3. Synthesize information into paragraphs
4. Craft well organized paragraphs rich with evidence
5. Contribute to the creation of a brochure
6. Provide feedback to peers
7. Create art that persuades
8. Use Thinking Routines to "make their thinking visible"

Common Misconceptions:

Kids cannot make a big impact in the city or on the environment
What young people do and say can alter the choices of others

STAGE TWO – Assessment: Acceptable Evidence

Performance Tasks:

Researching and note-taking
Analyzing, selecting, and displaying important data
Writing paragraphs
Peer reviewing using rubric or checklist
Creating Art to persuade
Applying principles of graphic design to brochure
Following Touchpebbles discussion guidelines
Thinking Routines
Building a project board

End of Unit Assessment:

Open-ended questions after brochure presentation

Student Self-Assessment and Reflection:

Self-reflecting question in the end of unit assessment
Thinking Routines: 3-2-1 Bridge, Hashtags, I used to think ... now I think

STAGE THREE – Learning Experiences

Week 1 - STEAM Launch

Creating STEAM protocols
What is STEAM?
Community Builders.

Week 2 - Entry Event

Energy Hog and Film
Introduce the Core Practice
Thinking Routine: 3-2-1 Bridge

Week 3 - Reflection on Entry Event

Begin to build need to know board
What do we know?
What do we need to know?
How will we find out?
What is our problem?
Introduce long and short term performance tasks
Research, Data Analysis, Volunteering, Informing
3-5 Thinking Routine: Claim - Support - Question

Week 4 - Learning about Pollution

Americorp - water pollution story
Thinking Routine: #Hashtags

Week 5 - Starting Points

What is our carbon footprint?

Carbon Footprint Calculator

Rabbis Visit: Jewish mandate to take care of our world

Thinking Routine: #Hashtags

Week 6 - Research

Data analysis to generate questions to guide research

How to research and take notes

Research and analyze the type of pollution with Special Friend volunteers

Thinking Routine: #Hashtags

Week 7 - Observing Sustainable Practices

Field trip: Small groups split off to see various locations and report back

1. Ijams Nature Center - solar panels, worm barrels, rain barrels
2. Good Golly Tamale - locally sourced products, bike transportation, recycling
3. Bearden Beer Market - solar panels, rain barrels, herb garden, recycling
4. Downtown Farmers Market - locally sourced products
5. Watershed - controlling runoff

Each group will film a one minute video about the place, sharing why it is helpful to mitigating our carbon footprint.

Thinking Routine: I used to think..... Now I think.....

Week 8 - How is Knoxville Already Sustainable?

Mind Up: Introduction to Core Breathing

What is Knoxville already doing: visit from Erin Gill of mayor's office on Sustainability

Research and notes on topics - (build off data collection and analyses from week 6)

Thinking Routine: hashtags

Week 9 - Writer's Workshop

Mind Up: Learning about the brain

Mini lesson on writing informational paragraphs from our topics

First drafts

Thinking Routine: I used to think... Now I think.....

Week 10 - Writer's Workshop

Mind Up: Mindful Listening

Mini lesson on peer editing

Writing and editing with help of Special Friends

Identify students who will need extra support with their writing and make sure we have a plan for their success.

Claims - Support - Question

Week 11 - Using Art to Persuade

Mind Up: Mindful Smelling

Work with community artist to brainstorm ideas and create an image for the brochure

Artists: Shelly, Cheri, Laurie, Harriet

Thinking Routine: #Hashtags

Week 12 - Writing and Learning

Learn about plans for KJDS sustainability from k-2 students

Work on brochure writing: focus = editing and revision
Thinking Routine: 3-2-1 Bridge (second attempt and compare to first)

Week 13 - Thinking Like a Writer

Mind Up: Mindful Movement 2
Special guest speaker: Wayne Bledsoe from News Sentinel
Polish Brochure pieces
Thinking Routine: #hashtags

Week 14 - Graphic Design

Special guest speaker: Jody Collins
All students design an individual piece and learning basic graphic design skill.
Students rotate to work with Ms. Annie on SmartBoard to design group brochure.
Thinking Routine: See.Think.Wonder.

Week 15 - Is This Bigger Than Knoxville

Short Film segment on San Francisco's sustainability initiative
Learn about "We're Still In"
Thinking Routine: 3-2-1 Bridge - Compare growth between three times activity was done.
Assessment

****Select 3-4 students to present brochure to mayor's office!**

Adapted from BRANDEIS UNIVERSITY EDUCATION PROGRAM