

How Green is My Place?

Evaluating Sustainability with Student Created Scorecards

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Grade Level	High School and College
Duration	3-5 class periods

National Standards

Element 2 Places and Regions

4. Physical and human characteristics of places.

Element 4 Human Systems

11. The patterns and networks of economic interdependence on the Earth's surface.
Standard 14 How human actions modify the physical environment.

Element 5 Environment and Society

16. The changes that occur in the meaning, use, distribution and importance of resources.

AZ Standards

ELA

Reading

Key Ideas and Details

9-10.RL1. Cite strong and thorough textual evidence to support analysis of what the text says

Integration of Knowledge and Ideas

9-10.E.I.8 Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.

Arizona Social Science Standards

Geography

The use of geographic representations and tools helps individuals understand their world.

HS.G1.1 Use geographic data to explain and analyze relationships between locations of place and regions.

Human-environment interactions are essential aspects of human life in all societies.

HS.G2.1 Analyze interactions within and between human and physical systems.

HS.G2.2 Evaluate how political and economic decisions throughout time have influenced cultural and environmental characteristics of various places and regions.

HS.G2.3 Evaluate the impact of human settlement on the environment and culture of specific places and regions.

HS.G2.4 Evaluate the use and sustainability of natural resources

Overview

Sustainability is more than just wisely using resources or recycling. Sustainability is achieved from a balance of factors: the economy, the environment, and equity. These are called the three Es of sustainability.

Purpose

In this lesson, students will develop an understanding of the factors that either contribute to or detract from sustainability. Students will design a sustainability scorecard used to evaluate either a home, school, or city and make plans on how to take action with this scorecard.

Materials

- Computer and projection device
- How Green is My Place PowerPoint
- Vocabulary Cards
- 3Es Word Cloud worksheet
- Vocabulary Practice and Answer Key
- How Green is My (City, School, Home) Scorecard Project instructions
- How Green is My (City, School, Home) scenarios
- Red, blue, and green colored pencils or markers
- Score Generator worksheet
- Student access to internet and graphic design programs and/or art supplies
- Scoring Guide for Promoting or Sharing the Scorecards
- Green Venn Diagram Assessment and Answer Key

Objectives

The student will be able to:

1. Discuss how sustainability creates long term conditions for economic growth, protects the environment, and values human equality.
2. Explain or illustrate how the three Es (environment, economy, and equity), when in balance, create the conditions for sustainability.
3. Evaluate fictional cases illustrating good, better, or best sustainable conditions.
4. Design a sustainability scorecard to evaluate their home, school, or city.

Procedures

Prerequisite Skills: It would be helpful for students to have a working knowledge of graphics design programs such as Canva or Adobe Spark

SESSIONS ONE and TWO

1. Anticipatory Set: Project slides 1-4 of the How Green is My Place PowerPoint and discuss each slide.
2. Project slide 5 and discuss the purpose and uses of various Venn Diagrams.
3. Project slide 6. Ask: "How do you get to the middle?"
4. Place an object over the word "Economy". If the economy was favored over the "Environment" and "Equity", what would that mean? What would life be like for the people? How would the environment be impacted if all of the emphasis was placed into the economy?
5. Slide the object around the diagram. Instruct students that with each stop, talk to your partners about how the other sides of the diagram would be affected by the changed conditions.
6. Again Ask: What conditions must exist to move the object in the middle of the diagram? Have students discuss their ideas.
7. Project slides 7-9. Discuss the vocabulary of the lesson. Post the Vocabulary Cards on a wall in the classroom so students can refer to them if needed. Note: Students may struggle with understanding equity. Ask: "What is a task that is hard for you but easy for someone else? How could you change the conditions so that you both have an equal chance at success with the task?"

8. Ask again: "What conditions must exist for a community to be found in the middle of the diagram?"
9. Distribute the 3Es Cloud worksheet and project slide 10. Ask: "In an ideal community, what would be found?" Have students name the ideal community and then generate and record examples for the Environment, the Economy, and Equity of this ideal community on their 3Es Cloud worksheet.
10. Distribute the Vocabulary Practice worksheet and project slide 11. Tell the students that numbers 9 and 10 have been completed for them but with a partner, they should complete the worksheet using the Word Bank.
11. Closure: On the back of the 3Es Cloud worksheet, have students write their ideas on "How would life change for a person whose community moved from the outside of the diagram closer to the middle?"

SESSIONS THREE, FOUR and FIVE

1. Anticipatory Set: Project slide 12-14 and review the ideas from earlier sessions.
2. Ask: "What predictions can you make about where a place would be found on the Green Venn Diagram?" Think about what factors cause the 3Es to be out of balance in a place? What environmental, economic, or social adjustments need to be made? What factors promote sustainability?
3. Say: "To analyze sustainability, each group will be assigned one of the following places, My Home, My School, My City. You will then receive three stories or description cards based on the place. In your group, you will read each story out loud. Next you will look for evidence in the story and generate a score using the Score Generator."
4. Project slides 15-19 and discuss the various ways to measure (including sustainability).
5. Project and explain the project with slide 20-21.
6. Distribute colored pencils or markers (red, green, and blue) and the worksheets for home, school, or city to each group of students. Review with slide 22 how they will underline and color code the story examples.
7. Project slide 23. Model how they will circle the positive examples and underline the negative examples on each of their three

places. Model how to calculate the score and plot it on the scale.

8. Project slide 24 and explain how the scorecard they create will be graded.
9. Allow students time to work together to analyze their places, create the scorecard, and how they will promote/share their scorecard through a PSA, infographic, online resource, or letter.
10. Closure: Have students do a gallery walk of scorecards. If time, have groups present their PSAs, infographics, online resources, or letters.

Assessment

Geography and ELA

The 3Es Word Cloud can be graded for completeness and logical responses. Mastery will be considered a score of 80% or higher.

The Score Generator worksheets can be graded for scorecards completeness and accuracy. Mastery will be considered a score of 80% or higher.

The Sustainability Scorecard created by the groups can be graded using the Scoring Guide.

The Green Venn Diagram worksheet can be graded for completeness and accuracy. Mastery will be considered a score of 90% or higher.

Extensions

The students could develop a persuasive argument or proposal on ways to improve the sustainability of their place.

Sources

Campbell, S. (1996). Green cities, growing cities, just cities?: Urban planning and the contradictions of sustainable development. *Journal of the American Planning Association*, 62(3), 296-312.

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