

Marshall University Sustainability Department

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Sustainability Scavenger Hunt

October,, 2016

OBJECTIVES

Students will identify sustainable practices on Marshall's campus through a scavenger hunt. They will experience how sustainability can be applied in a community then dream of how it can be practiced elsewhere during discussions.

LESSON PARAMETERS

1. **Key Terms** - sustainability, eco-friendly, carbon footprint
2. **Group Size** - groups of 3 to 5 students; applicable for a class ranging from 3 to 30 students
3. **Grade Levels** - 3rd- 12th
4. **Duration** - one 60 minute session
5. **Setting** - outdoors
6. **Disciplines** - Science, Geography, Technology, Engineering, Environmental Education
7. **Learning Techniques** -
 - a. Discussion
 - b. Hands-On
 - c. Group-based Collaboration
 - d. Interdisciplinary
 - e. Critical Thinking
 - f. Activity-based
 - g. Real-world application
 - h. Expeditions



GREEN CONNECTIONS

- **Connections to Home and Community** - Students explore sustainable practices on Marshall's campus. This may inspire them to continue searching for, or possibly implementing, sustainable practices within their own homes and communities.
- **Sustainable Perspectives** -
 - Eco-Friendliness
 - Sustainable Practices

LESSON SUMMARY

The students and instructor will begin the lesson with a whole class discussion of the discussion questions. This will serve as a transition into the scavenger hunt. The instructor will then introduce the scavenger hunt and split the class into groups of four (depending on class size). Each group must have at least one person with a camera or tablet with a camera. Each group will receive a scavenger hunt checklist, a map of the MU Green Trail, paper and writing utensil. The instructor will explain the rules (stay on campus and in groups) and guidelines then let the students begin their hunt. Younger students may need adult supervision during the hunt.

When the designated time is reached, all groups must return to the designated meeting place (classroom). The groups will share their pictures with each other, discussing the spots they found or missed, what they found most/least interesting, surprises, etc. The instructor may instigate such questions if need be. Then they will conclude the discussion with a challenge to use sustainable resources when they're available.

ACTIVATING STRATEGY

To intrigue the students and prepare them for a scavenger hunt, the students and instructor will discuss the discussion questions. This may activate prior knowledge if they already know how to practice sustainability. The discussion may also challenge them to think out of the box for how they can personally help the environment.

LESSON DEVELOPMENT

Exploration Lesson - Students actively search for the various “Eco-Friendly” locations and items on Marshall’s campus

Explanation Lesson - Students will receive information through discussions before and after the scavenger hunt. These discussions may introduce or reinforce sustainable practices to the students. They will also learn about the importance of being “Eco-Friendly” and how they can help the environment by taking small steps personally.

LESSON WEATHER CONTINGENCY AND ADDITIONS

If bad weather, students may do the scavenger hunt online at “Green Trail Project” (<http://www.marshall.edu/greentrail/>).

If time allows, students may research other green campuses online. They should take note of what the campuses practice to make it “green”.

Optional online resources for students:

- Green Schools Initiative! (<http://www.greenschools.net/>)
- 10 Eco-Friendly College Campuses (<http://www.usnews.com/education/slideshows/10-eco-friendly-college-campuses>)

DISCUSSION QUESTIONS

- How can I decrease my carbon footprint? (see Lesson-Buying Local for a Carbon Footprint handout)
- What are some practical ways I can practice sustainability?
- How is Marshall’s Campus trying to be more “Eco-Friendly”?
- Where are spots on campus that help the environment?

MATERIALS

- A map of Marshall's Green Trail per group
- Scavenger Hunt handouts per group
- Camera devices per group (optional but highly recommended!)

RATIONALES

- **Next Generation Science Standards**
 - **HS-ETS1-1** - Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.
 - **HS-LS2-7** - Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
 - **HS-ESS3-4** - Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.
 - **MS-ESS3-3** - Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
 - **MS-ESS3-4** - Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
- **21st Century Science Content Standards and Objectives for WV Schools**
 - **SC.O.6.1.10** - utilize experimentation to demonstrate scientific processes and thinking skills (e.g., formulating questions, predicting, forming hypotheses, quantifying, or identifying dependent and independent variables.
 - **SC.O.ES.2.28** - research alternative energy sources and evaluate the ecological, environmental and economic cost-benefit ratio.
 - **SC.O.ENV.2.4** - evaluate environmental and economic advantages and disadvantages of using nonrenewable and renewable energy.