



## **Turf Mutt Lesson Plan #1**

**Title:** How Green is Your Community?

**Grade Level:** 3-5

**Lesson Overview:** This is the first of six lessons on the idea of how green space benefits the community. In this introductory lesson, students will get an overview of the reasons why making a greener space is important for environmental reasons. Students will build basic background knowledge and form a working definition of “green space” and will come to understand the general benefits and environmental effects of grass and other plant life on the local environment.

### **Learning Objectives:**

Students will be able to:

- Collect data on how “green” their community is.
- Use resources to identify possible reasons for the green space movement.
- Write to persuade using environmental, lifestyle, and economic rationale.

### **Time Frame:**

Two forty-five minute sessions (one for Engage and Explore, and one for Explain, Extend, Evaluate)

### **Materials for the teacher:**

Blackboard

Computer with internet connection and projector or other display option

Several resources pertaining to the topic of green space, including some books, links to websites, and/or encyclopedias

Digital cameras (does not need to be a high resolution camera)

### **Materials for students:**

Index cards or Post It Notes

Science Journals

Pencils

Poster board

Chart Paper

Markers

Computer with internet access

### **Preparation:**

Use [Google Earth](#) (free web application) satellite imagery to zoom in on your local community. Begin with a 20km-across area and look for tree and plant cover. You may wish to view other areas that have lots of green coverage before you show students their own local area. Keep in mind that the coloring can be slightly different if the satellite image was taken in the winter and you live in a temperate area.

## Classroom Activities:

### Session 1:

#### Engage

1. Ask the students if they have ever heard of the term “green space” or “landscaping.” Provide each student with some index cards or Post it notes, and have them write down the names of items they would expect to find in a green space or landscaped area. Invite students to come up to the board and share the various items they have written. Begin to group their responses in categories . You may wish to display their responses in the form of a pictograph.
2. Using a website such as Google Earth or Google Maps, show students different views of communities from satellites. Ask them to rate the different images on their level of “greenness” on a scale of 1-5, encouraging discussion about why certain scores were given to specific images.
  - a. Please use the following link as an example.  
[http://maps.google.com/maps?f=q&source=s\\_q&hl=en&geocode=&q=Discovery+Place,+Silver+Spring,+MD&sl=39.028811,-77.057757&sspn=0.001729,0.004812&ie=UTF8&hq=&hnear=Discovery+Pl,+Silver+Spring,+Maryland&ll=38.994973,-77.028252&spn=0.001834,0.004812&t=h&z=18](http://maps.google.com/maps?f=q&source=s_q&hl=en&geocode=&q=Discovery+Place,+Silver+Spring,+MD&sl=39.028811,-77.057757&sspn=0.001729,0.004812&ie=UTF8&hq=&hnear=Discovery+Pl,+Silver+Spring,+Maryland&ll=38.994973,-77.028252&spn=0.001834,0.004812&t=h&z=18)
3. Hold a discussion to gain any background knowledge or predictions students may have on why there might be a movement towards greener space. Invite students to share any questions they may have about the topic that they hope to learn through scientific investigation.

#### Explore

1. Take students on a walking field trip around the school community. Students can draw or sketch, take photographs, or write notes in their science journals about where landscaping and green space exists, as well as where there is no landscaping or green material.
2. Ask students to identify an area around the school that could use more green material and landscaping.
3. Allow students to explore online and print resources on the topic of green space. Some suggestions are:
  - a. [Project Evergreen](#) (a non profit organization)
  - b. [Urban Gardens](#) (Environmental Protection Agency article)

### Session 2:

#### Explain

1. There are many reasons why greener is better. Ask students to provide you with some main ideas. Give students the following three categories if they need help to jumpstart their thinking, and review what the following categories mean before beginning your discussion.
  - a. Lifestyle and Recreational Benefits
  - b. Economic Benefits
  - c. Environmental Benefits
2. Using the carousel brainstorm strategy, students will further summarize and explain their learning about why greener space helps the environment. Place four large pieces of chart paper or construction paper in the four corners of the classroom. Label each with a different main idea. Randomly divide the class into four groups, and give them about 2-4 minutes at each corner to write down any ideas they learned from the exploration of websites and reading materials.

#### Extend

1. Ask students to work in cooperative groups to create an informative poster demonstrating their knowledge of the third category from their exploration and explanation- environmental green space benefits.

2. Allow students to work in groups of four to use a site such as Google Maps to observe pre-determined addresses in your local area. Some suggestions for students to view are: a local library, shopping area, government building, university, school, etc. Students should create a rating for the area based on the image, justify their rating, identify what green material seems to exist in this location and make suggestions about where and how green space could be added.

### **Evaluate**

1. Ask students to write a persuasive letter to a mayor, town council, or school board asking for consideration to make a specific area in your community greener. Students can use the same location that they explored in the Extend portion of the lesson.
2. Use the following rubric to evaluate the writing of the student:
  - a. Student must include at least two lifestyle or economic reasons for the addition of greener space.
  - b. Student must include at least two environmental reasons for the addition of greener space.
  - c. Student must include an illustration.
  - d. The letter must be written in correct letter format, have correct writing conventions, and be written in an organized and detailed manner.

### **Home Connections:**

Invite students to repeat the procedure from the Explore section of this lesson plan in their neighborhoods or in their community and take notes of specific areas with plentiful green space and areas that are lacking in green space.

Encourage students to interview neighbors and shop owners about why they have landscaping and green spaces.

### **Use this lesson toward your *Landscapes Across America* contest submission!**

1. As you complete the “Explore” Activity in Session 1 and take your students on a walking field trip around your school community, have them take digital photographs of the grass, perennials shrubs and trees that they see.
2. When you return to your classroom, display the pictures on an overhead projector and identify the plants together.
3. Save the photographs to reference again later and eventually include them in your classroom slideshow to demonstrate the unique ecosystem/landscape of your region.

### ***National Science Education Standards Addressed in this Lesson:***

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| 4ASI1.1   | Ask a question about objects, organisms, and events in the environment.  |
| 4ASI1.4   | Use data to construct a reasonable explanation.  |
| 4FSPSP4.2 | Changes in environments can be natural or influenced by humans.  |
| 4EST2.2   | People have always had problems and invented tools and techniques (ways of doing something) to solve problems. Trying to determine the effects of solutions helps people avoid some new problems.                              |
| 8FSPSP5.1 | Science influences society through its knowledge and world view. Scientific knowledge and the procedures used by scientists influence the way many individuals in society think about themselves, others, and the environment. |