

Lesson 1: Local Living Landscapes

Essential Question: How can people create the right living landscape for their region?

Materials: **Student Worksheet C: Plant Hunt With TurfMutt**, thermometer, Internet access, map of the U.S., smartphone or tablet computer, colored pencils or crayons, rulers, optional: anemometer, hygrometer, barometer, or rain gauge

Time Recommended: 2 to 3 45-minute class periods

Engage: Checking the Weather

1. **Take** students outside and show them how to use a thermometer to measure the temperature. (If you have other weather-measurement tools, discuss how those work, too.) Have students make their own visual and physical observations as well. For example, is it windy, warm, wet, or overcast? Back in the classroom, write down the data your class collected on your blackboard or whiteboard to create your own local weather forecast.
2. **Explain** that weather describes the current state of the **atmosphere** (the protective layer of gases surrounding Earth). Weather can be a specific event, like a thunderstorm, or a set of conditions, like the outside temperature and **humidity** (the amount of moisture in the air).
3. **Point out** your city or town on a U.S. map. Then find another town or city in a different part of the country. Have students predict what the weather might be like there.
4. **Go online to** weather.gov to look up the weather forecast for the city or town you have selected. Have students compare and record the results of the local forecast. Let them choose more spots around the U.S. to see how weather varies from place to place.

Explain: Weather vs. Climate

5. **Tell** students that climate is different from weather. While weather is what's happening now, climate happens over many years. It refers to an area's general, long-term weather conditions. Just like weather, climate differs depending on the location.
6. **Ask:** *What is the climate like where you live?* To answer this question, have students think about the type of weather they'd expect to see locally during different parts of the year. This trend likely describes their region's climate.

Explore: Your Local Plant Life

7. **State** that a region's climate influences how well different plants grow there. Many **native** plants thrive because they are naturally suited for the environments where they originated. But what happens when these environments change?
8. **Discuss** how most people today live in cities and suburbs. Native plants no longer dominate these areas. Instead, there are buildings, paved roads, and parking lots. Not all native plants can survive in their changed surroundings. To be successful, an urban area's **living landscape** (all of its plants, trees, and grasses) needs both native plants and **adapted plants**. Adapted plants aren't native to an area, but they can still grow well in the local climate and soil.
9. **Lead** students on a nature walk around school grounds to see which plants grow in their local environment. Before you head out, download a free app, such as Leafsnap. Use it to help identify the plants students discover. (Alternatively, you can collect samples of plants on your own. Use them to set up identification stations in the classroom for students to explore.)
10. **Distribute** **Student Worksheet C: Plant Hunt With TurfMutt** and colored pencils or crayons. Students will use the worksheet to record and describe the plants they find.

Elaborate and Evaluate: Healthy Living Landscapes

11. **Have** students research the plants you found and identified. They should find out the following:
 - *Are the plants native to your region, adapted plants, both, or neither?*
 - *Do they have any special characteristics that make them suited for your area? For example, do they grow well in your type of soil? Do they require little watering beyond natural rainfall? Can they withstand seasonal temperature changes?*
 - *If the plants you found aren't native or adapted, are there native or adapted plants that could replace them?*
12. **Encourage** students to think critically about different ways healthy living landscapes can benefit their communities. (For example, providing green space for people to enjoy and habitats for animals.)

Name: _____

PLANT HUNT WITH TURFMUTT

TURFMUTT, HERE! I love living landscapes. They're good for people and the environment! Today, I'm on a mission to learn more about what types of plants grow in your community. I need a local to help me out. Are you up for the challenge? Super! All you have to do is carefully observe the plant life around you. Then record what you see in the chart below.



Here are some tips to help you learn more about the plants you come across:

- Look closely at the shape, size, and structure of a plant's leaves, stem, and flowers.
- Examine a tree's bark and whether it has any nuts, seeds, fruit, or pinecones.
- Measure a plant's height. (You can use a ruler or even your body. For example, does the plant come up to your ankle or hip? Is it taller than you?)



Nature Notebook

| Plant | Draw a picture of the plant. | Describe the plant. | What plant is it? | Is it native, adapted, both, or neither? |
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