



Sustainability Merit Badge Workbook

SCOUTMASTER BUCKY

Scouts participating in a Scoutmaster Bucky merit badge opportunity, whether online or in person, should consider using the Sustainability merit badge pamphlet for discovery and knowledge, along with the class preparation pages for clarifications, insights, and expectations.

<https://scoutmasterbucky.com/merit-badges/sustainability/sustainability-pamphlet.pdf>

<https://scoutmasterbucky.com/merit-badges/sustainability/sustainability-cpp.pdf>

REQUIREMENT 1: Describe the meaning of sustainability in your own words.

Notes:

REQUIREMENT 1: Explain the importance of sustainability to society.

Notes:

REQUIREMENT 1: Explain how you can contribute to fulfilling the needs of current generations without compromising the needs of future generations.

Notes:



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DO ONE OF THE FOLLOWING (2A, 2B, or 2C) FOR REQUIREMENT 2

REQUIREMENT 2a: Evaluate your household water usage. If available, review water bills from the past year and evaluate the seasonal changes in water use. Identify three ways to help reduce water consumption. Discuss your findings with your counselor.

Notes:

Reduce Water Consumption Idea #1:

Reduce Water Consumption Idea #2:

Reduce Water Consumption Idea #3:



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REQUIREMENT 2b: Explain why water is necessary in our lives.

Notes:

REQUIREMENT 2b: Create a diagram to show how your household gets its clean water from a natural source and what happens with the water after you use it.

Notes:



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REQUIREMENT 2b: Tell two ways to preserve your community's access to clean water in the future. Discuss your findings with your counselor.

How to preserve community access to clean water #1:

How to preserve community access to clean water #2:

REQUIREMENT 2c: Discuss with your counselor different areas of the world that are affected by either too much (flooding) or too little (drought) water. Explore whether either or both affect where you live.

Flooding:

Drought:



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REQUIREMENT 2c: Identify three water conservation or flood mitigation practices (successful or unsuccessful) that have been tried where you live or in an area of the world that interests you. Discuss your findings with your counselor.

CONSERVATION / FLOOD MITIGATION #1:

Practice:

Location:

Notes:

CONSERVATION / FLOOD MITIGATION #2:

Practice:

Location:

Notes:

CONSERVATION / FLOOD MITIGATION #3:

Practice:

Location:

Notes:



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DO ONE OF THE FOLLOWING (3A, 3B, or 3C) FOR REQUIREMENT 3

REQUIREMENT 3a: Explore the sustainability of different types of plant-based, animal-based and aquaculture food. Identify where four different foods (such as milk, eggs, tuna fish, avocados, or ketchup) come from and how they are processed and transported from the source to you.

FOOD #1:

Food:

Where it comes from:

How it is processed:

How it is transported:

FOOD #2:

Food:

Where it comes from:

How it is processed:

How it is transported:



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FOOD #3:

Food:

Where it comes from:

How it is processed:

How it is transported:

FOOD #4:

Food:

Where it comes from:

How it is processed:

How it is transported:



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REQUIREMENT 3b: Identify four factors that limit the availability of food in different regions of the world. Discuss how each factor influences the sustainability of worldwide food supplies.

FOOD AVAILABILITY LIMITATION #1:

Limitation:

Area of the world affected:

How this influences worldwide supply sustainability:

FOOD AVAILABILITY LIMITATION #2:

Limitation:

Area of the world affected:

How this influences worldwide supply sustainability:



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FOOD AVAILABILITY LIMITATION #3:

Limitation:

Area of the world affected:

How this influences worldwide supply sustainability:

FOOD AVAILABILITY LIMITATION #4:

Limitation:

Area of the world affected:

How this influences worldwide supply sustainability:

REQUIREMENT 3b: Share three ways individuals, families, or your community can create their own food sources.

Source #1:

Source #2:

Source #3:



REQUIREMENT 3c: Develop a plan to reduce your household food waste in a sustainable manner.

Notes:



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Baseline:

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DO ONE OF THE FOLLOWING (4A, 4B, or 4C) FOR REQUIREMENT 4

REQUIREMENT 4a:

Create a sketch depicting how you would design a sustainable community and be prepared to explain how the housing, work locations, shops, schools, and transportation systems affect energy, pollution, natural resources, and the economy of the community.



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REQUIREMENT 4b: Identify one unsustainable practice in your community and develop a written plan to fix it.

Identified Unsustainable Practice:

Notes:



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REQUIREMENT 4c: Identify five sustainability factors in housing and rate your own home's sustainability against these factors.

HOME SUSTAINABILITY FACTOR #1:

Factor:

Your Home Comparison Rating:

HOME SUSTAINABILITY FACTOR #2:

Factor:

Your Home Comparison Rating:

HOME SUSTAINABILITY FACTOR #3:

Factor:

Your Home Comparison Rating:

HOME SUSTAINABILITY FACTOR #4:

Factor:

Your Home Comparison Rating:

HOME SUSTAINABILITY FACTOR #5:

Factor:

Your Home Comparison Rating:



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DO ONE OF THE FOLLOWING (5A, 5B, or 5C) FOR REQUIREMENT 5

REQUIREMENT 5a: Learn about the sustainability of different energy sources, including coal, gas, geothermal, hydro power, nuclear, petroleum, solar, and wind.

coal:

gas:

geothermal:

hydro power:



nuclear:

petroleum:

solar:

wind:



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REQUIREMENT 5a: Identify three common energy sources in the United States and describe how the production and consumption of each of these energy sources affects sustainability.

ENERGY SOURCE #1:

Source:

How production and consumption affects sustainability:

ENERGY SOURCE #2:

Source:

How production and consumption affects sustainability:

ENERGY SOURCE #3:

Source:

How production and consumption affects sustainability:



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REQUIREMENT 5b: List eight ways your family consumes energy, such as gas appliances, electricity, heating systems or cooling systems, and transportation.

Family Energy Consumption #1:

Family Energy Consumption #2:

Family Energy Consumption #3:

Family Energy Consumption #4:

Family Energy Consumption #5:

Family Energy Consumption #6:

Family Energy Consumption #7:

Family Energy Consumption #8:



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REQUIREMENT 5b: For one home-related energy use, list three ways to help reduce consumption, reduce your carbon footprint, and be a better steward of this resource.

Selected Home-Related Energy Use:

HELP REDUCE CONSUMPTION:

Practice #1:

Practice #2:

Practice #3:

HELP REDUCE YOUR CARBON FOOTPRINT:

Practice #1:

Practice #2:

Practice #3:

BETTER STEWARDSHIP:

Practice #1:

Practice #2:

Practice #3:



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REQUIREMENT 5b: For one transportation-related energy use, list three ways to help reduce consumption, reduce your carbon footprint, and be a better steward of this resource.

Selected Home-Related Energy Use:

HELP REDUCE CONSUMPTION:

Practice #1:

Practice #2:

Practice #3:

HELP REDUCE YOUR CARBON FOOTPRINT:

Practice #1:

Practice #2:

Practice #3:

BETTER STEWARDSHIP:

Practice #1:

Practice #2:

Practice #3:



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REQUIREMENT 5c:

List five ways you and your family could reduce energy consumption in your home, such as adjusting your thermostat, window shades, opening windows, reducing hot-water temperature, and minimizing water consumption. Identify the benefits and risks of each idea and implement if possible.

HOME ENERGY CONSUMPTION REDUCTION #1:

Way #1:

Benefits:

Risks:

HOME ENERGY CONSUMPTION REDUCTION #2:

Way #2:

Benefits:

Risks:



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HOME ENERGY CONSUMPTION REDUCTION #3:

Way #3:

Benefits:

Risks:

HOME ENERGY CONSUMPTION REDUCTION #4:

Way #4:

Benefits:

Risks:

HOME ENERGY CONSUMPTION REDUCTION #5:

Way #5:

Benefits:

Risks:



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DO ONE OF THE FOLLOWING (6A, 6B, or 6C) FOR REQUIREMENT 6

REQUIREMENT 6a: Create a list of 15 items of your personal "stuff." Classify each item as an essential need (such as soap) or a desirable want (such as a video game). Identify any excess "stuff" you no longer need, working with your family, if possible. Donate, repurpose, or recycle those items you can.

MY STUFF

Essential Desired Donate

Stuff

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12	
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REQUIREMENT 6b:

List five ways having too much "stuff" affects you. For each of the five ways, consider the following aspects: the financial impact, time spent, maintenance, health, storage, and waste generation.

YOU - WAY #1:

Way #1:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOU - WAY #2:

Way #2:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOU - WAY #3:

Way #3:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOU - WAY #4:

Way #4:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOU - WAY #5:
Way #5:
Financial Impact:
Time Spent:
Maintenance:
Health:
Storage:
Waste Generation:



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REQUIREMENT 6b:

List five ways having too much "stuff" affects your family. For each of the five ways, consider the following aspects: the financial impact, time spent, maintenance, health, storage, and waste generation.

YOUR FAMILY - WAY #1:

Way #1:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOUR FAMILY - WAY #2:

Way #2:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOUR FAMILY - WAY #3:

Way #3:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOUR FAMILY - WAY #4:

Way #4:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOUR FAMILY - WAY #5:

Way #5:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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REQUIREMENT 6b: List five ways having too much "stuff" affects your community. For each of the five ways, consider the following aspects: the financial impact, time spent, maintenance, health, storage, and waste generation.

YOUR COMMUNITY - WAY #1:

Way #1:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOUR COMMUNITY - WAY #2:

Way #2:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOUR COMMUNITY - WAY #3:

Way #3:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOUR COMMUNITY - WAY #4:

Way #4:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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YOUR COMMUNITY - WAY #5:

Way #5:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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REQUIREMENT 6b:

List five ways having too much "stuff" affects the world. For each of the five ways, consider the following aspects: the financial impact, time spent, maintenance, health, storage, and waste generation.

THE WORLD - WAY #1:

Way #1:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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THE WORLD - WAY #2:

Way #2:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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THE WORLD - WAY #3:

Way #3:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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THE WORLD - WAY #4:

Way #4:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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THE WORLD - WAY #5:

Way #5:

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste Generation:



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REQUIREMENT 6b: Identify practices that can be used to avoid accumulating too much "stuff."

Notes:

REQUIREMENT 6c: Research the impact waste has on the environment (land, water, air).

Notes:



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REQUIREMENT 6c: Find out what the trash vortex is and how it was formed.

Notes:

REQUIREMENT 6c: Explain the number system for plastic recyclables and which plastics are more commonly recycled.

Notes:



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REQUIREMENT 6c: Identify the average lifespan of one electronic device in your household, and whether it can be recycled in whole or part.

Notes:

DO TWO OF THE FOLLOWING (7A, 7B, 7C, 7D, 7E, or 7F) FOR REQUIREMENT 7

REQUIREMENT 7a: The United Nations lists 17 Sustainable Development Goals. These include Zero Hunger, Clean Water and Sanitation, Affordable and Clean Energy, Sustainable Cities and Community, Responsible Consumption and Production, Climate Action, Life Below Water, and Life on Land. Pick one of these eight and summarize the goal and its current and future impact on you, your family, community, and the world.

Selected Sustainable Development Goal:

Summary of Goal:

Current and Future Impact on You:



Current and Future Impact on Your Family:

Current and Future Impact on Your Community:

Current and Future Impact on the World:



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REQUIREMENT 7b: Identify how the planetary life-support systems (soil, climate, freshwater, atmospheric, nutrient, oceanic, ecosystems, and species) support life on Earth and interact with one another.

Notes:

REQUIREMENT 7b: Share what happens to the planet's sustainability when these systems are disrupted by natural events or human activity.

Notes:

REQUIREMENT 7c: Identify how product life cycles (the cycle of design, sourcing, production, use, and disposal or reuse) influence current and future sustainability.

Notes:



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REQUIREMENT 7c: Choose one common product to demonstrate how the full product life cycle would apply.

Notes:

REQUIREMENT 7d: Learn how the world's population affects the sustainability of Earth.

Notes:

REQUIREMENT 7d: Discuss three human activities that may contribute to putting Earth at risk, now and in the future.

Human Activity #1:

Human Activity #2:

Human Activity #3:



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REQUIREMENT 7e: Explain the term species (plant or animal) decline.

Notes:

REQUIREMENT 7e: Share the human activities that contribute to species decline.

Notes:

REQUIREMENT 7e: Share what can be done to help reverse species decline.

Notes:

REQUIREMENT 7e: Share how species decline impacts a sustainable environment.

Notes:

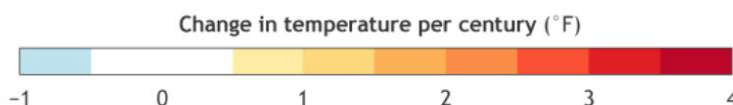
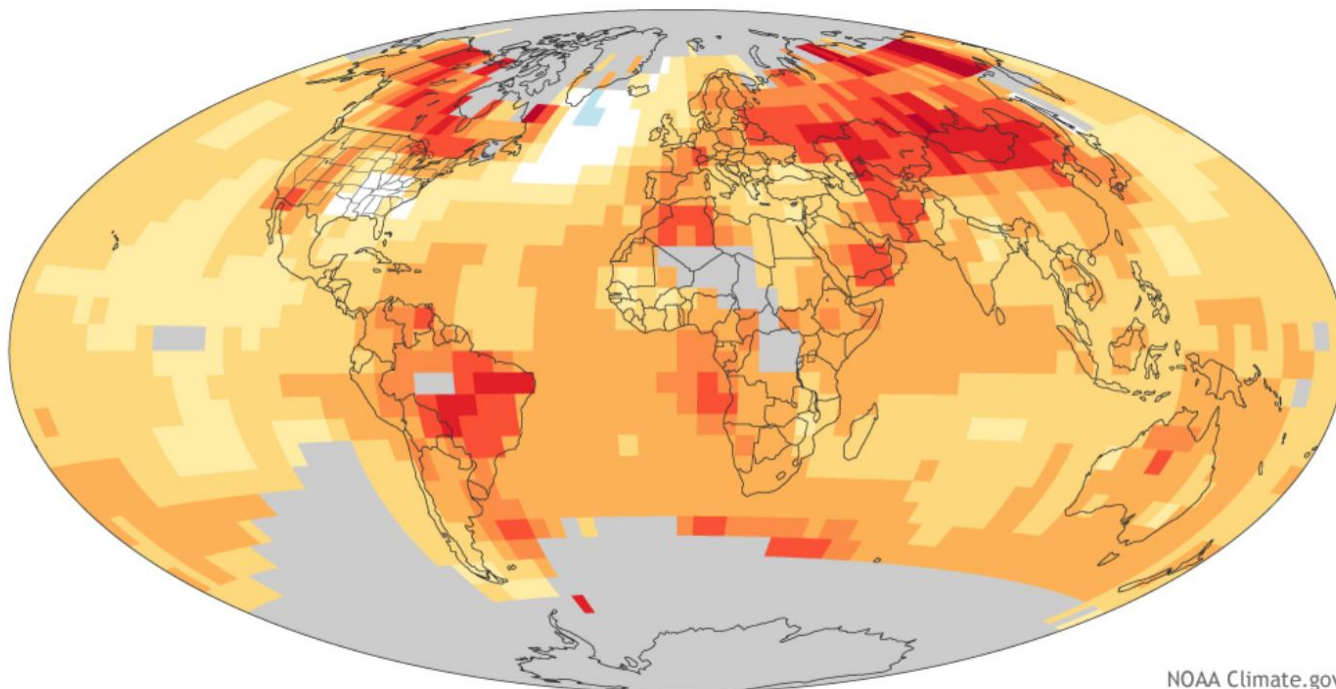


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REQUIREMENT 7f: Find a world map that shows the pattern of temperature change for a period of at least 100 years.

Global temperature trend (1900-2014)



REQUIREMENT 7f: Identify three factors that scientists believe affect the global weather and temperature.

Factor #1:

Factor #2:

Factor #3:



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REQUIREMENT 7f: Discuss how climate change impacts sustainability of food.

Notes:

REQUIREMENT 7f: Discuss how climate change impacts sustainability of water.

Notes:

REQUIREMENT 7f: Discuss how climate change impacts sustainability of other resources.

Notes:



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REQUIREMENT 8a: On a campout or other outdoor Scouting activity that you attend, make notes on the sustainability practices you and your fellow Scouts practice. Observe transportation, forestry, soil conservation, water resources, habitat, buildings, campsites, and sanitation. Share what you observed and learned with your counselor.

Scouting Camp Out or Activity:

Date and Location:

Transportation:

Forestry:

Soil Conservation:



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Water Resources:

Habitat:

Buildings:

Campsites:

Sanitation:



REQUIREMENT 8b: Discuss with your counselor how living by the Scout Oath, Scout Law, Leave No Trace Seven Principles and the Outdoor Code in your daily life helps promote sustainability.

SCOUT OATH

On my honor I will do my best
To do my duty to God and my country
and to obey the Scout Law;
To help other people at all times;
To keep myself physically strong,
mentally awake, and morally straight.

Outdoor Code

As an American, I will do my best to-
Be Clean in my outdoor manners,
Be Careful with fire,
Be Considerate in the outdoors, and
Be Conservation-minded

THE 7 PRINCIPLES of Leave No Trace

1. Plan Ahead & Prepare
2. Travel & Camp on Durable Surfaces
3. Dispose of Waste Properly
4. Leave What You Find
5. Minimize Campfire Impacts
6. Respect Wildlife
7. Be Considerate of Other Visitors

SCOUT LAW

A Scout is...

TRUSTWORTHY
LOYAL
HELPFUL
FRIENDLY
COURTEOUS
KIND
OBEDIENT
CHEERFUL
THRIFTY
BRAVE
CLEAN
REVERENT

This requirement must be reviewed with your merit badge counselor.

BE PREPARED!



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REQUIREMENT 8c: Identify 5 behavioral changes that you and your family can make to improve the sustainability of your household. Share and discuss each with your counselor.

Behavioral Change #1:

Behavioral Change #2:

Behavioral Change #3:

Behavioral Change #4:

Behavioral Change #5:



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REQUIREMENT 9: Learn about career opportunities in the sustainability field.

Career Opportunity #1:

Career Opportunity #2:

Career Opportunity #3:

REQUIREMENT 9: Pick one and find out the education, training, and experience required. Discuss what you have learned with your counselor.

Selected Career Opportunity:

Education Requirements:

Training Requirements:

Experience Requirements:

REQUIREMENT 9: Explain why this career might interest you.

Notes: