



Sustainability

BYU Merit Badge PowWow Official Merit Badge Worksheet

Scout's Name:
Scout's Address:

Instructor's Name:
City: State: Zip:

Instructions

- 1) The Scout is to review the merit badge book before the first week of PowWow.
- 2) Bring this work sheet, paper, and pencil or pen each week.
- 3) Bring a Merit Badge blue card with you on the second week.

Requirement Instructions*

***Due to possible time constraints at the PowWow, certain requirements that were originally planned to be completed in class may need to be completed as homework. Please LISTEN to ALL INSTRUCTIONS in class to be aware of any changes.**

1. In your own words, what is the meaning of *sustainability*?

Explain how you think conservation and stewardship of our natural resources relate to sustainability.

Have a family meeting, and ask family members to write down what they think sustainability means. Be sure to take notes below. You will need this information again for requirement 5.

2. Do the following:

Water. - Do A AND C.

A. Develop and implement a plan that attempts to reduce your family's water usage

- As a family, discuss water usage. To aid in your discussion, if past water bills are available, you may choose to examine a few.

As a family, choose three ways to help reduce consumption. List those three ways.

- 1.
- 2.
- 3.

- Implement those ideas for one month.

Share what you learn with your counselor, and tell how your plan affected your family's water usage below.

C. Discuss with your counselor two areas in the world that have been affected by drought over the last three years. For each area, identify a water conservation practice (successful or unsuccessful) that has been used. Tell whether the practice was effective and why. Discuss what water conservation practice you would have tried and why.

Area:

Conservation Practice used:

Was it effective?

Why?

What would you try?

Why?

Area:

Conservation Practice used:

Was it effective?

Why?

What would you try?

Why?

Food. - Do A AND C.

A. Develop and implement a plan that attempts to reduce your household food waste.

Establish a baseline and then track and record your results for two weeks.

Report your results to your family and counselor. Write your plan below and attach your track record to this worksheet.

C. Discuss with your counselor factors that limit the availability of food and food production in different regions of the world.

What are some of these factors?

Tell three ways these factors influence the sustainability of worldwide food supplies.

1.

2.

3.

Community. - Do A AND C.

A. Draw a rough sketch depicting how you would design a sustainable community. Attach the sketch to the back of this worksheet.

Share your sketch with your counselor, and explain how the housing, work locations, shops, schools, and transportation systems affect energy, pollution, natural resources, and the economy of the community.

Housing-

- Energy:
- Pollution:
- Natural Resources:
- Economy:

Work locations-

- Energy:
- Pollution:
- Natural Resources:
- Economy:

Shops-

- Energy:
- Pollution:
- Natural Resources:
- Economy:

Schools-

- Energy:
- Pollution:
- Natural Resources:
- Economy:

Transportation systems-

- Energy:
- Pollution:
- Natural Resources:
- Economy:

C. Review a current housing needs assessment for your town, city, county, or state.

Discuss with your counselor how birth and death rates affect sufficient housing, and how a lack of housing— or too much housing— can influence the sustainability of a local or global area.

Energy. - Do A AND B.

A. Learn about the sustainability of different energy sources, including fossil fuels, solar, wind, nuclear, hydropower, and geothermal.

Fossil Fuels:

Solar:

Wind:

Nuclear:

Hydropower:

Geothermal:

How does the production and consumption of each of these energy sources affect the environment?

Explain what the term “carbon footprint” means.

Discuss what you learn with your counselor.

Explain how you think your family can reduce its carbon footprint.

***B.** Develop and implement a plan that attempts to reduce consumption for one of your family's household utilities. Attach your plan to the back of this worksheet.

Examine your family's bills for that utility reflecting usage for three months (past or current). As a family, choose three ways to help reduce consumption and be a better steward of this resource.

- 1.
- 2.
- 3.

Implement those ideas for one month.

Share what you learn with your counselor, and tell how your plan affected your family's usage.

Stuff. - Do A AND C.

***A.** Keep a log of the "stuff" your family purchases (excluding food items) for two weeks. In your log, categorize each purchase as an essential need (such as soap) or a desirable want (such as a DVD). There is a blank log attached on the back of this worksheet.

Share what you learn with your counselor.

C. Discuss with your counselor how having too much "stuff" affects you, your family, and your community. Include the following: the financial impact, time spent, maintenance, health, storage, and waste.

Financial Impact:

Time Spent:

Maintenance:

Health:

Storage:

Waste:

What are some of the practices that can be used to avoid accumulating too much "stuff?"

3. Do the following:

a. Explain to your counselor how the planetary life-support systems (soil, climate, freshwater, atmospheric, nutrient, oceanic, ecosystems, and species) support life on Earth and interact with one another.

Soil:

Climate:

Freshwater:

Atmospheric:

Nutrient:

Oceanic:

Ecosystems:

Species:

b. Tell how the harvesting or production of raw materials (by extraction or recycling), along with distribution of the resulting products, consumption, and disposal/repurposing, influences current and future sustainability thinking and planning.

4. Explore TWO of the following categories. Have a discussion with your family about the two you select. In your discussion, include your observations, and best and worst practices. Share what you learn with your counselor.

a. Plastic waste.

What is the impact plastic waste on the environment (land, water, air)?

Learn about the number system for plastic recyclables.

Which plastics are more commonly recycled?

What is the trash vortex?

How was it formed?

b. **Electronic waste.** Choose three electronic devices in your household. Find out the average lifespan of each, what happens to these devices once they pass their useful life, and whether they can be recycled in whole or part.

Device:

Lifespan?

What happens?

Recyclable?

Device:

Lifespan?

What happens?

Recyclable?

Device:

Lifespan?

What happens?

Recyclable?

What is the impact of electronic waste on the environment?

5. Do the following:

a. After completing requirements 1 through 4, have a family meeting.

Discuss what your family has learned.

What does it mean to be a sustainable citizen?

Talk about the behavioral changes and life choices your family can make to live more sustainably. Share what you learn with your counselor.

b. How does living by the Scout Oath and Scout Law in your daily life help promote sustainability and good stewardship?

6. Learn about career opportunities in the sustainability field.

- Pick one and find out the education, training, and experience required.

Career-

Education:

Training:

Experience:

Why does this career interest you?

