Climate Justice Activity
Lori Hoffnagle, First United Methodist Church Mechanicsburg

Materials: *Response* magazine from April 2016
Terms and definitions printed on heavy paper to cut apart
Copies of Carbon Footprint Worksheet
White board and tape to place the terms and definitions

Introduction:
United Methodist Women's national office has made climate justice one of its four social justice priorities. To welcome and support environmental justice advocates like you, we work to provide practical, theologically sound tools to guide and inspire your work. The tools were developed to delve through deep intersectional injustices between gender, racial, economic and climate injustice.

Show the *Response* Magazine from April 2016, which is dedicated to Climate Justice.

Match Game Activity:
Here's a way to find out how much you know about the terms associated with global warming and carbon footprint. Print out the terms and definitions on heavy paper. Cut them apart and hand them out to participants. Participants can then work together to match the terms to the definitions. They can either place the matches on a large white board using tape or arrange them on the table. Go over the answers together to find out if they were correct.

You can hand out the cards randomly or just scatter them on the table. It's just a fun way to have them all work together and it generated some good conversation.

Carbon Footprint Worksheet:
Hand out the 2 sided Carbon Footprint Worksheet and have the women complete it. Its target is for a school aged audience, but still works for any age. It's just to get an idea of how our daily lives affect our carbon footprint.

Wrap up the worksheet activity with the following:
*How do the activities on the worksheet add greenhouse gases to the atmosphere?* Operating a car or bus emits exhaust, which includes greenhouse gases and other pollutants. When you have more people in the car or bus, the amount of pollution per person is less, that's why carpooling or taking the bus reduces your carbon footprint. Fast food is more processed, requiring large factories and long-distance transportation, which generates more emissions. Meat and dairy produce more emissions because animals emit methane, a greenhouse gas, as part of the digestive process. Grains have slightly higher emissions than fruits and vegetables because they require more processing. Recycling reduces emissions because recycled materials are not emitting greenhouse gases as they decompose or are burned, and recycling takes less energy than obtaining new raw materials, which reduces emissions as well, and can save some trees from being destroyed for more paper pulp. Turning off lights, TVs, game systems, unplugging appliances, and not running clothes dryers all reduce the use of electricity. Since generating electricity also generates greenhouse gases in most cases, this reduces your carbon footprint. Turning off water when brushing your teeth also saves the electricity needed to heat and treat water.

Engineers are always trying to reduce the carbon footprint of their designs. This applies to all the products that use electricity or require energy to produce. They might also do this by designing houses so they do not require as much energy for heating or cooling, or so that they require fewer electric lights. For example, it is smart to design and place houses so that they have lots of south-facing windows. This way, in the winter when a house is cold and the sun is to the south, the sunlight warms up the house naturally, requiring less energy to heat it. Those windows also let in sunlight so that fewer lights are required in the daytime.

Now that you have calculated your carbon footprint, what are some ways that you can reduce it? (Listen to suggestions, refer to the ideas from the worksheet.) Do you think you can try some of these methods this week?

The UMW website has an entire section dedicated to Be Just Be Green Initiative. Lots of great resources, videos, activities. http://www.unitedmethodistwomen.org/climate-justice.

Terms and Definitions Answer Key

*carbon dioxide:* A greenhouse gas that comes from burning fossil fuels.

*carbon footprint:* The amount of greenhouse gas emissions caused by a person or group.

*climate:* The long-term weather events of a region, such as its average rainfall or its average high/low temperatures.

*emission:* Gases released into the atmosphere.

*greenhouse gas:* Gases that trap heat in the Earth's atmosphere: carbon dioxide, methane, water vapor, ozone, and nitrous oxide.

*life cycle assessment:* A consideration of all effects of an activity, including producing and transporting goods, not just the effects directly associated with an activity, such as emissions from a car tailpipe.

*methane:* A very strong greenhouse gas; a component of natural gas.

*nitrous oxide:* A very strong greenhouse gas; also causes other air pollution and regulates ozone.

*ozone:* A greenhouse gas that also protects humans from UV rays.

*water vapor:* The tiny droplets of water in the air caused by evaporation; can act as a greenhouse gas.

*weather:* The short-term events such as a current rainstorm or temperature.

| | |
|---|---|
| Carbon Dioxide | A greenhouse gas that comes from burning fossil fuels |
| Carbon Footprint | The amount of greenhouse gas emissions caused by a person or group |
| Climate | The long-term weather events of a region, such as its average rainfall or its average high/low temperatures |
| Emission | Gases released into the atmosphere |
| Greenhouse Gas | Gases that trap heat in the Earth's atmosphere: carbon dioxide, methane, water vapor, ozone, and nitrous oxide |
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| Life Cycle Assessment | A consideration of all effects of an activity, including producing and transporting goods, not just the effects directly associated with an activity, such as emissions from a car tailpipe |
| Methane | A very strong greenhouse gas; a component of natural gas |
| Nitrous Oxide | A very strong greenhouse gas; also causes other air pollution and regulates ozone |
| Ozone | A greenhouse gas that also protects humans from UV rays |
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| | |
|---|---|
| Water Vapor | The tiny droplets of water in the air caused by evaporation; can act as a greenhouse gas |
| Weather | The short-term events such as a current rainstorm or temperature |

# Carbon Footprint Worksheet

**Instructions:** Answer the questions below, then fill in the corresponding values on the far right. Tally the values to find your carbon footprint. Only fill in one value for each question, unless otherwise stated.

| Ex. Do you turn off the lights when you leave a room? | | |
|---|---|---|
| a. Yes | a. 133 | ***133*** |

| | | |
|---|---|---|
| 1. How do you get to school? | | |
| a. walk | a. 0 | _____ |
| b. bike | b. 0 | _____ |
| c. car | c. 1115 | _____ |
| d. bus | d. 131 | _____ |
| e. carpool | e. 459 | _____ |
| 2. Do you eat mostly… | | |
| a. fast food | a. 4818 | _____ |
| b. home cooked food | b. 629 | _____ |
| 3. Do you eat mostly… | | |
| a. vegetables/fruits | a. 153 | _____ |
| b. meat | b. 644 | _____ |
| c. bread | c. 364 | _____ |
| 4. Do you turn off lights when you leave a room? | | |
| a. yes | a. 133 | _____ |
| b. no | b. 268 | _____ |
| 5. Do you unplug appliances/chargers when not in use? | | |
| a. yes | a. 9 | _____ |
| b. no | b. 18 | _____ |
| 6. How do you dry clothes? | | |
| a. hang to dry | a. 0 | _____ |
| b. dryer | b. 750 | _____ |
| c. both | c. 375 | _____ |
| 7. Do you turn off the water when brushing your teeth? | | |
| a. yes | a. 34 | _____ |
| b. No | b. 274 | _____ |
| 8. Do you turn off the TV when you're not watching it? | | |
| a. yes | a. 47 | _____ |
| b. no | b. 140 | _____ |
| 9. Do you turn off your video game system when you're not using it? | | |
| a. yes | a. 29 | _____ |
| b. no | b. 90 | _____ |
| c. don't have/use one | c. 0 | _____ |
| 10. Do you recycle? (for this question, select all that apply) | | |
| a. magazines | a. -15 | _____ |
| b. newspaper | b. -90 | _____ |
| c. glass | c. -7 | _____ |
| d. plastic | d. -19 | _____ |
| e. aluminum and steel cans | e. -86 | _____ |

**Add together all the values in the far right column and report here:**

*Use the workspace on the next page to do your work.*

Work space:

This total is your “carbon footprint” in the number of pounds of carbon dioxide per year. The lower the number, the fewer greenhouse gasses are emitted into the atmosphere.

Review your choices in the survey. **What changes can you make in your life to reduce your carbon footprint?** Try to make some of these changes in the next week. Use the space below to engineer a plan to reduce your carbon footprint.

Things I will turn off:

How I will get to school:

What I will eat:

How much I will use electronics:

What I will recycle:

Other things I will do: