ES11 **CLIMATE CHANGE WS**  /40 Name:

**CALCULATE YOUR CARBON FOOTPRINT (10pt)**

A Carbon Footprint is the amount of carbon dioxide and other carbon compounds emitted due to the consumption of fossil fuels by a particular person, group, etc.

*Click on the link:* <https://www.conservation.org/carbon-footprint-calculator#/>

*Or search Carbon Footprint Calculator at Conservation.org*

My Carbon Footprint is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CURBING CLIMATE CHANGE (30pt)**

*Click on the link:* <https://edition.cnn.com/interactive/2019/04/specials/climate-change-solutions-quiz/>

Or *Go to CNN.com Climate Change Quiz. Follow the prompts to rank the solutions for each of the 8 topics. After each one, click “How’d I do?”. Read the resulting info on the screen below to answer the following questions.*

**FOOD**

1. What is the third largest emitter of greenhouse gases? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the best way to reduce this? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What is an even more impactful way to reduce carbon emission? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**MOVING PEOPLE AND GOODS**

1. Which option would have the biggest impact? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. How many cars off the road would this be equivalent to? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. If we all drove electric vehicles instead of gas-powered ones, how much carbon emissions would this save from entering the atmosphere? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**HOME AND CITIES**

1. Out of the four options which would have the biggest impact? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Does your house have a programmable thermostat? \_\_\_\_\_\_\_\_\_

**LAND USE**

1. Which land use would save 429 million cars off the road? How many times more is this than the second choice? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Click on the bamboo link at the bottom. What can bamboo be substituted for? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ELECTRICITY**

1. Where does nuclear power rank? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Click on the wind link below. How many wind turbines are already functioning? \_\_\_\_\_
3. Name two advantages and one disadvantage listed of wind turbines. \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Scroll further...what is the estimated net operational savings of using wind?
5. Increasing world electricity use by wind technology to 21.6 percent by 2050 could reduce emissions by how many gigatons?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**MATERIALS AND WASTE MANAGEMENT**

1. What is the biggest culprit here? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. How many gigatons of CO2 would be saved from going into the atmosphere merely by preventing refrigerants from leaking? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. When did CFC s get phased out? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Why are HFC s not an ideal replacement? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. When do most of the refrigerant emissions happen? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. What must be done to old refrigerators for effective disposal? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Phasing out HFC via the Kigali accord could avoid how many gigatons of CO2 being released into the atmosphere? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**EMPOWERMENT**

1. What does empowering women have to do with global warming? (4-6)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is the main cause of low enrollment in schools? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the correlation between education and children? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***NOW RANK THE TOP 5 IN ORDER WITH THE CORRESPONDING NUMBER OF CARS TAKEN OF THE ROAD.***

1. Which was most surprising to you? Why?

**REFLECTION**

1. What specifically did you learn from watching the documentary and performing the ranking activity?

Many things can be done by individuals with very little effort. Think about how efficiently you use water – do you leave the tap running when you brush your teeth? Do you take long hot showers? Does your household recycle? Do you buy bottled water? Do you have a programmable thermostat?How many Compact fluorescent bulbs have replaced regular ones in your home? Take public transit?

1. What SPECIFICALLY do you think you can try to help reduce your personal carbon footprint? Name at least three actions.