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Pathfinder's Name

## Climate Science

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1. What is climatology?

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2. Research and create a graph showing the trends in temperature changes during the last 1,000 years by century.

Date completed \_\_\_\_\_

3. Briefly describe the following terms as they relate to climate science and its impact on the environment:

a. Climate change

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b. Greenhouse gases

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c. Fossil fuels

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d. Habitat

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e. Carbon dioxide (CO<sub>2</sub>)

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**f. Emissions**

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**g. Sea-level rise**

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**h. Geoengineering**

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**i. Deforestation**

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4. Discuss what type of education is required for a career related to climate science.

Date completed \_\_\_\_\_

5. Identify and define at least 10 climate science career disciplines.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

6. With another person or as a group, discuss the biblical context of the following texts as it relates to our responsibility to care for our environment:

- a. Genesis 2:15
- b. Numbers 35:33-34
- c. Ezekiel 34:18
- d. Jeremiah 2:7

Date completed \_\_\_\_\_

7. Research and discuss some concerns of changing weather patterns that have been highlighted by climatologists as they relate to rising global temperatures.

Date completed \_\_\_\_\_

8. With reference to the graph created in question 2, show there have been changes in the climate in the past based on the following factors:

- a. Natural factors that change climate
- b. Human factors that change climate

Date completed \_\_\_\_\_

9. Based on your research of current events concerning climate science, discuss its impact and effects on wildlife and marine life.

- a. Wildlife
- b. Marine life

Date completed \_\_\_\_\_

10. Individually or as a group, create one of the following poster illustrations:

- a. Create an environmental poster that shows how changes in the earth's climate can affect ecosystems locally and globally.
- b. Create a poster that illustrates an El Niño vs. a La Niña and their impacts on the earth's climate.
- c. Create a poster that illustrates the human impact on climate change and describes methods to reverse those effects.

Date completed \_\_\_\_\_

11. Individually or as a group, complete one of the following:

- a. Create a detailed, relevant plan for a rain garden at your church, home or within your community. Submit your plans and a budget to the appropriate persons for review. Prepare and give an oral presentation to a group on your plan.

- b.** Visit a local environmental impact region and evaluate how it might positively affect the climate.

Date completed \_\_\_\_\_

- 12.** With another person or as a group, discuss each of the following open-ended questions from a Christian perspective. The objective is to provide justification for your response as it pertains to our roles as conscientious Christian inhabitants of the environment.

- a.** How should Christians view climate change?

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- b.** As Christians, do we have a greater responsibility to maintain a healthy global environment?

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Based on your responses, develop a plan designed to incorporate your ideas into an effective project for your church or community. Prepare to give an oral presentation on your findings and the actions that have been taken.

Date completed \_\_\_\_\_

- 13.** There is passionate discussion about the concept of global warming which is a climate change event. What is your point of view on the subject? Please give three reasons that helped you form your point of view.

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