Name:_____ Date:_____

# Climate Science Project Planner

**Driving Question:** What can past climate changes tell us about the possible effects of current global temperature trends?

**Directions:** All written work should be done in your science lab journal. Each person will keep his or her own journal.

## PART A: Getting Started

1 Read the "Letter from the Museum Director" individually and highlight what you will need to know to create the exhibit.

2 As a group, list what your group knows and needs to find out so that you can share during a class discussion. Record these items in your journal using a T-chart, like the one below.

| What We Know | What We Need to Find Out |
|---|---|
| | |

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## PART B: Becoming Experts

1 There are four Expert Roles in this project, and each person in your group will have a specific role to play. The Expert Roles are described below.

2 There will be times when the Experts from each group will meet with the Experts playing the same role in other groups. When Experts meet, you will have specific information to gather and challenges to overcome. You will then return to your original group and share what you have learned. Be sure to take good notes in your journal so you can share what you learned with your group.

3 If you have a question about the project, first discuss it with your group members. If you still have the question, then ask the teacher.

4 Make sure you accurately cite all of your sources. You must include all sources used by each group member in your final exhibit.

### Historical Geologist

Your area of expertise is the physical processes that affect the landscape of the region, such as ice ages and floods. You will learn about the major processes that affected your local region and the impact they had on the land. You do not need to address the cause of ice ages and other climate changes.

### Climatologist

Your area of expertise is the possible historic causes of Earth's changing climate. You will display data from the past several hundred years to present day and identify possible trends. Are these trends local or worldwide? What predictions can you make for your local area, based on the data? Ask the engineer to help you collect and organize the data you need.

### Engineer

Your area of expertise includes how to put the exhibit together. The information needs to be sequential, accurate, and displayed in a way that makes a museum visitor want to stop and study more. You will not make the entire exhibit yourself, but you are responsible for coordinating and designing the final product. You will help the climatologist analyze and display their data. Your most active time is later in the project timeline.

### Ecologist

Your area of expertise deals with the local landscape. How was it affected by past climate changes? How will future climate change affect the local region? You will make predictions based on data gathered with the other ecologists. You will help the geologist and climatologist link their findings.

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## PART C: Preparing the Exhibit and Presentation

1. Each group member gathers information related to their role.

2. Your group must come to an agreement on what type of exhibit you will make and present. The group's Engineer will lead this discussion.

3. Each group member must help make the exhibit. The group should decide what materials, photographs, or visual aids the exhibit needs and make a list to make sure you remember everything.

4. The Engineer coordinates the group, but is not responsible for making the final product. The Geologist serves as the group's timekeeper, making sure that the work is done in the time allowed and that the Evaluation Rubric is being followed for maximum points. The Ecologist makes sure that all sources cited by individual group members are put into one bibliography.

5. All group members collaborate on the project, showing excellent listening skills and participation.

6. Each group member should be able to do any part of the presentation. If you are absent the day your group presents, you will still be responsible for making a presentation to the teacher.

7. Have your exhibit ready to present. Decide which person will present what part of the exhibit. Practice your presentation and time it as required.

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## PART D: Reflection (After the Presentations)

Review the climate research and information from your notes. Answer the original driving question using evidence from your notes and the exhibit your group created.

What can past climate changes tell us about the possible effects of current global temperature trends?