



# CHANGING CLIMATE

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# CHANGING PLANET

Our everyday actions affect nature. These actions can be positive, such as conservation efforts to help endangered animals, or negative, such as pollution or littering. But one of the biggest ways that we've affected nature, and that is now affecting us as well, is climate change. Climate change is a phenomenon that is affecting the entire world but in different ways. We cannot ignore this issue anymore. That's why we've chosen this year's annual theme to be "Changing Climate, Changing Planet."

According to The Intergovernmental Panel on Climate Change (IPCC), established by the United Nations, climate change may be caused by "natural internal processes" or "external forcings, such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use." Most of the discussions around climate change today are about this last cause: anthropogenic changes. "Anthropogenic" means "relating to human activity." In fact, over 97% of scientists agree that today's global climate change is caused by humans. And this climate change is changing the world as we know it.

Although many of us know that climate change means that average temperatures are increasing and it is getting hotter and hotter, what is the impact in your community? Are farmers having difficulty growing crops because their water supply is being reduced? Is your home experiencing more storms and flooding? Most of the time, the changing climate results in new problems and challenges. What are these problems where you live? How can you conduct research to better understand these problems? Can your findings help to address these problems?

Now that you know the theme for this year, it's time to start! Choose a topic that you're interested in and want to learn more about. Then, after conducting basic background research, go outdoors! Meet with local scientists, people in your community who know about the issue, and gain as much knowledge as you can. Conduct your own experiments and discover information on your own. We also want you to start exploring potential solutions that address the problems your topic relates to or suggest future steps that should be taken. Throughout your research, the important thing is that you take a critical approach and use primary research methods in your research project.

Climate change is an urgent matter and to better understand it and prepare for it requires the attention of everyone - including you! Use your LAB project as an opportunity to see how climate change is affecting your community and you too can become part of the solution!





## Step-by-Step

### 1. Choosing a Topic

The world around us contains so many inspiring and intriguing things. What are you curious about? What confuses you? What makes you want to learn more? While staying relevant to the annual theme, choose a topic that excites you. Focusing on a more specific topic will make the project process more manageable and allow you to become a mini-expert in it.



### 2. Asking Questions

Before starting your research, begin with a fundamental question that your project will explore. This will frame your work and research process. Starting with a clear research question and plan will make your research process much easier and oftentimes more successful.



### 3. Conducting Research

There are many ways to conduct research and learn about your topic. While library books or reputable online sources can provide background information, you must conduct your own primary research. This means visiting museums to see specimens, interviewing local experts, or performing your own experiments. Your teacher and other mentors can serve as important resources in this process.



### 4. Analyzing Your Data

Just collecting research is not enough. We need you to look at your data and think back to your original research questions: what have you learned? What patterns have you observed? Which findings are important and should be shared with others? How can your research be acted upon and used for future work?



### 5. Creating Your Presentation

This is the most important part - sharing your findings! At the Global LAB, all participants must create an exhibition that students will present to judges and to other teachers and fellow participants. You must also write a short process paper and bibliography for your Written Material. Be proud of all your hard work and show off your newfound knowledge!

