

Climate Change: An Introductory Lesson Plan for High School

As a **high school** teacher, you can use this lesson plan to introduce climate change and its impacts to your students.

In this lesson plan, students will be introduced to the basics of climate change, which is one of the most significant issues of our time. Students will further learn about the causes of climate change and will explore possible climate solutions.

Learning Outcomes

The tools in this lesson plan will enable students to:

- get an introductory understanding of climate change and its global impacts
- learn about the causes and effects of climate change
- discuss and explore solutions to the climate crisis

About

Grade Level	High School
Discipline	Biological Sciences, Environmental Sciences, Earth Sciences, Geography, Physics, Chemistry, Economics, Humanities, Social Sciences, Mathematics and Statistics
Topic(s) in Discipline	Climate Change Overview
Climate Topic	Introduction to Climate Change
Location	Global
Access	Online
Language(s)	English
Approximate Time Required	70 mins
Mapped Sustainable Development Goal(s), apart from 4 and 13	

Step-by-step User Guide

Here is a step-by-step guide to using this lesson plan in the classroom/laboratory. We have suggested these steps as a possible plan of action. You may customise the lesson plan according to your preferences and requirements.

<p>1</p>	<p>Initiate the topic of Climate Change Impacts with the help of a climate story</p> <p>Reading (10 mins)</p>	<p>Begin your lesson by showing your students some examples of impacts of climate change from your location. Learning is more effective when it is local and in the context of the students. You may search for a recent story on any news portal of your choice or you could browse the ‘Climate Stories’ section on the TROP ICSU platform where you can find location specific climate stories. This section contains Climate Stories from every country of the world. It is advisable to search for age specific stories.</p> <p>Read More</p>
<p>2</p>	<p>Introduce the science of Climate Change through a readings and videos</p> <p>Reading (15 min) and Video (5-15 min)</p>	<p>Use the reading titled, “The Causes of Climate Change” from the NASA Global Climate Change website that provides introductory information on climate change and global warming. It contains information on the scientific evidence of climate change, its causes and impacts.</p> <p>Read More</p> <p>Optional: This set of 7 short video micro-lectures have been developed by the National Research Council, The National Academies of Sciences, Engineering, and Medicine. This can be used to provide additional information on climate change.</p> <p>They include:</p> <ol style="list-style-type: none"> 1. What is Climate? Climate Change, Lines of Evidence Chapter 1 2. Is Earth Warming? Climate Change, Lines of Evidence Chapter 2 3. Greenhouse Gases. Climate Change, Lines of Evidence Chapter 3 4. Increased Emissions. Climate Change, Lines of Evidence Chapter 4 5. How Much Warming? Climate Change, Lines of Evidence Chapter 5 6. Solar Influence. Climate Change, Lines of Evidence Chapter 6 7. Natural Cycles. Climate Change, Lines of Evidence Chapter 7 <p>Read More</p>
<p>3</p>	<p>Classroom/Lab Activity to explore the topic through Rap Music</p> <p>Classroom/Laboratory Activity (20 min)</p>	<p>Further use this classroom activity of listening to a music album titled ‘The Rap Guide To Climate Chaos’ by Baba Brinkman that contains 24 tracks on climate change. Discuss with your students the science, politics and economics of climate change by summarising the video through a class reflections session. The tracks cover a variety of topics such as greenhouse gases, carbon emissions, climate taxes and green capitalism.</p> <p>Tracks include–</p> <p>Options I.P.C.C. Keep It Positive Greenhouse (feat. Aaron Nazrul) Party Don’t Stop Run the Joules Mo Carbon Mo Problems What’s Beef (feat. Bill Nye) Battle Lines</p>

		<p>Lost in the Numbers Bright Side Fossil Fuel Ballers (feat. Aaron Nazrul) Exxon Knew Laudato Si Yank the Plug Make It Hot Regulators Carbon Bubble (feat. Mariella) Stranded Assets Ride Electric (feat. Fand) This or That Freedom Ain't Free Stand Up Makin' Waves (feat. Gaia's Eye)</p> <p>Read More</p>
4.	<p>Discuss solutions to the climate crisis using an interactive reading (Reading 20 min)</p>	<p>Finally, use the interactive reading titled “The six-sector solution to the climate crisis” provided by the United Nations Environment Programme to discuss a possible roadmap for a carbon-free future. This interactive portal mentions the policies and actions that can be undertaken by governments in various sectors to reduce carbon emissions. These sectors include:</p> <ol style="list-style-type: none"> 1. Buildings and Cities 2. Energy 3. Industry 4. Agriculture and Food Waste 5. Nature Based Solutions 6. Transport <p>Read More</p>

Questions

Use this Lesson Plan to help the students to understand and find answers to:

1. What is Climate Change?
2. Discuss the factors that indicate climate change on our planet.
3. What is the relationship between carbon emissions and climate change?
4. Discuss the possible solutions for the climate crisis.

Additional Resources:

Sr. No.	Name of the Teaching Tool	Name of Owner/Author, Affiliation, weblink
1.	Classroom/Lab Activity	Use the colouring book titled “Climate Change Colouring Book” by Brian Foo, to help students explore climate data and research through various colouring activities.

		This can be accessed here .
2.	Reading	An interactive comic book by Somdatta Karak, CSIR-Centre for Cellular & Molecular Biology, India that introduces what is climate change. This can be accessed here

Credits

Sr. No.	Name of the Teaching Tool	Name of Owner/Author, Affiliation, weblink
1.	Reading Climate Stories	By TROP ICSU
2.	Reading “ The Causes of Climate Change ”	By NASA Global Climate Change website
3.	Video Lectures “ Climate Change, Lines of Evidence ”	By The National Academies of Sciences, Engineering, and Medicine
4.	Classroom/Lab Activity “ The Rap Guide To Climate Chaos ”	By Baba Brinkman, Talks at Google
5.	Reading “ The six-sector solution to the climate crisis ”	By United Nations Environment Programme
6.	Additional Resources	Brian Foo Somdatta Karak, CSIR- Centre for Cellular & Molecular Biology, India