Climate Change in the Classroom

A hands-on guide to teaching students about climate change

Theme 1: Climate change - mitigation and adaptation

Potential sub-topics

- The science of climate change
- Impacts of climate change
- Climate action: Intro to mitigation and adaptation
- Climate mitigation
    - Types/sectors of mitigation action
    - Targets and challenges
- Climate adaptation
    - Types of adaptation efforts
    - Needs (resource needs including finance)
    - Challenges

Activity Ideas

- Track the news: Review the day's newspaper and find out the different SDGs that each news item relates to. Discuss how each SDG is connected to the climate agenda. Repeat the activity once every month, preferably on the same day, and prepare a report.
- Be a Fact-ivist: Students will create a poster on any of the SDGS and mention data facts around that. It can be uploaded to: https://be-a-fact-ivist.worldslargestlesson.globalgoals.org/en/submit
- Help students understand how their lifestyle choices impact the planet using an online carbon calculator (Carbon calculator by IIT Kanpur). Based on the results, students can design an action plan for the lifestyle changes they will adopt: https://www.iitk.ac.in/ckc/carbon-calculator/
- Visit India's Atlas on Weather Disaster by Down to Earth (https://www.downtoearth.org.in/weather_disasters_india) and track the data on extreme weather events for one month in a particular region. Find out which event occurred most frequently in that month and how climate change is responsible.
- Explore the time-tested sustainable practices followed by local/ indigenous communities. Document how they are responding to climate change and the practices that have helped them to survive the extreme weather.
- Organise whole class discussions on climate change and identify topics for further exploration. After students dive deeply into a particular issue, allow them to present their insights, findings and reflections with the class.

Resources

- IPCC Assessment Reports
- Project Drawdown's Climate 101: A one of its kind course focusing on climate action based on scientific research and analysis.
- The Adaptation Gap Report – UNEP
- Media Stories/documentaries: UNFCCC
- For Educators, WWF's material on Climate education:
- US Environment Protection Authority (EPA) Climate Change Resource for Educators
- Be a fact-ivist: Lesson Plan
- In and outside the classroom, Centre for Science and Environment
- Climate change Reader for Universities, Centre for Science and Environment

Theme 2: Climate Policy and Politics

Potential Subtopics:

- UNFCCC
- Global Agreements
- India's climate policy
- Developed v/s developing countries
    - Climate Equity
    - Common but differentiated responsibility (CBDR)

Activity Ideas:

- Organize Mock Climate Summit: Reflect on how different groups are affected and how fairness can be ensured in climate action.
- Mapping Inequity: Students can create maps showing the global distribution of climate impacts (e.g., rising sea levels, extreme weather events) and overlay them with wealth or emission maps to discuss climate equity.
- Learning how policies are created: Task students with creating a climate action policy for their country/school/city/community. Ask them to set targets and goals to be achieved. They must consider scientific evidence, economic impacts, political feasibility, and equity. Students debate the strengths and weaknesses of these policies.
- Students investigate local/state-level climate actions in India, such as clean energy initiatives, afforestation projects, or disaster management programs and propose ways these initiatives can be scaled.
- Organise a debate where half the class represents developed nations and the other half represents developing nations, discussing the role and fairness of UNFCCC mandates.
- Case studies on Climate Policies by various countries and drawing a comparative analysis.

Resources:

- UNFCCC Website
- The Numbers behind Climate Change, Centre for Science and Environment
- India's 3rd National Communication
- Climate Change: Science and Politics, Centre for Science and Environment
- World Bank's Climate Change Knowledge Portal