



TROP ICSU Newsletter

August 2020

Adapting to the New Normal

Pandemic and Online Education

We are now in the midst of a pandemic COVID-19 caused by a novel coronavirus. We hope that you are all safe and following the right measures to contain the spread of the virus. In these difficult times, it is important that we all do our bit towards ameliorating the situation. Precaution without panic is the key, along with ensuring that only factually and scientifically correct information is circulated within our communities and society at large.

Most of you must have shifted to online education and may be looking for good online teaching and learning resources. We would like to remind you of the TROP ICSU educational resources, which are developed through your generous support. Please make the best use of these resources and please spread the message.

The urgency of addressing the climate change issue is felt even more during this pandemic. Increased forest cover and biodiversity, reduced human-wildlife conflicts are key to reduce incidences of pandemics such as Covid-19. Achieving these goals is critically dependent on our ability to reverse and mitigate climate change and its impact.

After completing the exciting first phase of the three-year period 2017-2019, the TROP ICSU project team is now focusing on the addition of new educational resources and the translation of existing teaching tools and lesson plans.

Translations

To widen our reach and increase the adoption of the TROP ICSU educational

network of teachers, educators, climate science experts, and all collaborators in enhancing our suite of educational resources as we progress in this phase.

Lesson Plan Video Tutorials

We are happy to share with you that some of our Lesson Plans are now equipped with [Video Tutorials](#) about how to use the Lesson Plans in regular teaching. The video tutorials are useful to not only teachers but also to self-learners. These videos are available on our website and [YouTube channel](#).

Climate Change Webinar Series

Engagement of the youth in climate action is a key factor in mitigating the global issue with local solutions. With this imperative, TROP ICSU has joined hands with Centre for Cellular and Molecular Biology ([CCMB](#)), India to create a platform to host engagements between climate change experts (scientists, activists, social entrepreneurs among many) with young students. A webinar series is launched under this initiative of [Climate Change Challenge 2.0](#) from August 2020.

TROP ICSU accomplishments featured by ISC

The International Science Council (ISC) has generously supported TROP ICSU in its initial phase. The accomplishments of TROP ICSU, feedback from various stake-holders and future plans have been featured by ISC in an [online article](#) published in February 2020. Representative feedbacks received from various stakeholders such as participants of educators workshops, undergraduate students, members of partner unions, and the motive behind the TROP ICSU project are included in this article.

In the [annual report of the year 2019](#), ISC features TROP ICSU as one of the efforts to address the key global challenges with science and education.

TROP ICSU Workshop in Australia in Feb 2020

A TROP ICSU Lesson Plan Development Workshop was conducted at the **Australian Meteorological and Oceanographic Society's** next national conference in Fremantle, Western Australia on **14 February 2020**. This

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Monash Climate Change Communication Hub. The main focus of the event was the development of lesson plans for the Australian curriculum.

We hope you enjoy reading this edition of our newsletter.

Thank you for your interest and support. Reach out to us with your feedback and subscribe to our social media channels!

Team TROP ICSU

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Websites:

<https://tropicsu.org/>

<https://climatescienceteaching.org>

Social Media:

<https://www.facebook.com/TROPICSUProject/>

https://twitter.com/TROP_ICSU

<https://www.youtube.com/channel/UCgSXMurvU9idW6KAeRcXHqg>

***TROP ICSU features in a School Teachers' Workshop
in Australia, Feb 2020***



All set up for the workshop with teachers at AMOS 2020. Source: Sanaa Hobeichi.

This year, the TROP ICSU project was featured in a secondary school teachers' workshop at the AMOS 2020 conference held in Fremantle, Australia. This workshop was run by the 'Climate Across the Curriculum' team comprising climate scientists and educators from the Climate Change Research Centre, UNSW; Centre of Excellence for Climate Extremes; University of Melbourne; Monash Climate Change Communication Research Hub; and University of Western Australia. The aim of the workshop was to contribute secondary school lesson plans towards the TROP ICSU project repository.

Using TROP ICSU resources, the workshop participants were first introduced to how climate science can be related to secondary school teaching. They were then divided into groups according to school subjects and grade levels (Year 7-12) and directed to develop lesson plans in accordance with them. After the activity of lesson plan development, each group presented their draft lesson plans. Some lesson plans could be mapped exactly to points in the Australian Curriculum. The draft lesson plans are now being taken to completion by the 'Climate Across the Curriculum' team and are being reviewed for scientific content before being submitted to TROP ICSU for publishing.

The full workshop report on behalf of the 'Climate Across the Curriculum' team can be found [here](#). Three lesson plans from this workshop in [Physics](#), [Mathematics](#) and [Geography](#) are now published on the TROP ICSU website. These [lesson plans](#) are also published under the Climate Classrooms Project, Climate Change Communication Research Hub, Monash University, Australia.

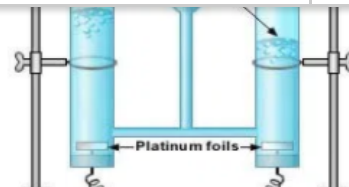
New Lesson Plans

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Lesson Plan: Coding with Python: Modeling the Ice Albedo Feedback



Lesson Plan: Marxist Theories and Climate Change



Lesson Plan: Electrolysis: Application in Fuel Cell Technology

- Can there be any possible applications of electrochemical processes to reduce carbon emissions?
- How do environmental changes affect insect pollinator behaviour and in turn the global food production?
- What are the advantages and challenges of producing electricity from a wind turbine?
- Can the 'The Great Derangement: Climate Change and the Unthinkable', by Amitav Ghosh be used to acquaint students with Environmental History of the planet?
- Does Marxist theory support carbon markets and the greening of Capitalism?
- How does the crisis of climate change spell the collapse of the distinction between Natural History and Human History?
- How atmospheric wave dynamics possibly influence extreme weather events?
- How to teach introductory statistics through linear regression assignments using Arctic sea ice data?

To know answers to the above and many other interesting questions, visit our [Lesson Plans](#) section on the website.

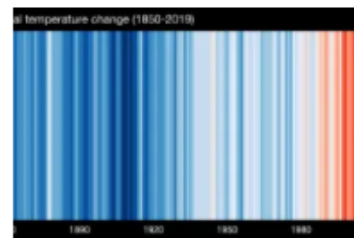
New Teaching Tools



Quiz : "Carbon and the climate"



Video: Who Is Responsible For Climate Change? Who Needs To Fix It?



Visualization: Show Your Stripes: Changes in Temperature

in each country over the past 100+ years. Each stripe represents the temperature in that country averaged over a year. Developed by Professor Ed Hawkins ([University of Reading](#)).

[Video: Who Is Responsible For Climate Change? Who Needs To Fix It?](#)

This video gives an overview of global climate change, historical and annual carbon emissions, and the biggest and smallest contributors to the emissions. This video is part of a series about climate change supported by Breakthrough Energy.

[Quiz: “Carbon and the climate”](#)

The “Carbon and the climate Quiz” is a simple yet thought-provoking activity suitable for school level students. The quiz has a set of questions about the role of carbon in the earth’s atmosphere, the carbon cycle, and climate change. Developed by the Earth Science Communications Team at NASA’s Jet Propulsion Laboratory and California Institute of Technology.

Around the Web: Climate-related Educational Resources

Teachers Guidebook

[“The climate in our hands – Ocean and Cryosphere”](#)

By the Office for Climate Education (OCE)

Online self-paced E-learning Course

[“Climate Change: From Learning to Action”](#)

by UNCC: e-Learn



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