

STEM @ Home Guide

Special Climate Edition

As an organization committed to providing valuable STEM experiences for students from elementary to high school, WISEST is excited to share the following resources with you and the curious young minds in your life. This climate-themed edition is a special release as part of our participation in Science Literacy Week (Sept 20-26, 2021).

En tant qu'organisation engagée à fournir des expériences STIM utiles aux élèves du primaire au secondaire, WISEST est ravie de partager les ressources suivantes avec vous et les jeunes esprits curieux de votre vie. Cette édition sur le thème de la climat est une sortie spéciale dans le cadre de notre participation à la Semaine de la culture scientifique (Science Literacy Week) (20-26 septembre 2021).

Organizations in Canada to Engage With

Canadian Parks and Wilderness Society (CPAWS)

cpaws.org



Canada's only charity dedicated to the protection of public land, freshwater and ocean. They have local chapters across the country. Here in Alberta, we have two chapters. CPAWS Northern Alberta and CPAWS Southern Alberta. Each chapter has local resources and opportunities for concerned citizens, young and old!

Canadian Wildlife Federation





Their mission is to conserve and inspire the conservation of Canada's wildlife and habitats for the use and enjoyment of all. They achieve it through a cooperative approach - working with people, corporations, non-government organizations, and governments to inspire collaboration in achieving wildlife conservation.

Sierra Club Canada Foundation

www.sierraclub.ca



The Sierra Club Canada Foundation is a national registered charity with four chapters: Atlantic, Quebec, Ontario, and Prairie, plus the Sierra Youth Coalition, a group whose mandate is to empower young people to become community leaders.

Canadian Youth Climate Coalition



climateactionnetwork.ca

A youth-led coalition acting locally, provincially, federally, and internationally to organize actions, influence government and implement concrete solutions.





Youth Activities

University of Alberta Massive Open Online Courses - Introduction to the Arctic: Climate



www.ualberta.ca/admissions-programs/ | Grades 8-12+

Learn things like why the Arctic is cold and covered in ice and how that affects the global climate and ecosystems, and examine present day climate change and its evidence in the Arctic in this four-week course. Enroll in the Arctic MOOC and dive into a unique learning experience focused on the environment and climate of the circumpolar North.

Canadian Parks and Wilderness Society - Southern Alberta



cpaws-southernalberta.org/education/ | Grades 3-12

CPAWS SAB offers a wide range of environmental education programs both in the classroom and outside in nature. For free opportunities related to climate, check out the "Climate Scavenger Hunt" (Grade 7-12) or "Climate Action with Cups" (Grade 7-12) activity under the "Bring Nature Home" section! For other environmental education related activities, explore their "Education" page!

Nature Alberta - Nature Kids



naturealberta.ca/nature-kids/ | Grades K-7

Nature Kids is a program that aims to teach children (ages 4-12) and their families about nature. They provide educational materials and organize field experiences that promote being outdoors, observing nature, scientific investigation, environmental stewardship and healthy living.

WILDOutside



cwf-fcf.org/en/explore/wild-outside/#applynow | Grades 9-12

This program is created for students 15-18 who are interested in helping the planet. The program inspires participants to develop a passion for conservation, awareness of their natural environment and a deeper appreciation for wildlife.





Taking IT Global - Climate Change Guide to Action

Climate_Guide_to_Action_en.pdf | Grades 7-12+



This comprehensive guide helps youth make actionable change when it comes to their future and climate change. From talking about the basics of climate change to tips on how to build a team and how to create an action plan, this guide helps you get your movement off the ground!

NASA Climate Kids

climatekids.nasa.gov/ | Grades 3-6



NASA Climate Kids put together some great resources including games, activities, profiles of climate scientists, videos and more in a kid-friendly website.

ClimatePursuit - Game





The game can be played for 'fun' - to experience for yourself what the impact of climate change could be. In addition, it can be used in an educational setting.

Our Climate Our Future

ourclimateourfuture.org/ | Grades 6-12



This is a great website for youth to learn about the basics of climate change, but also on how to take action! Each topic is discussed in video format.





Teacher Resources

Ingenium/Canadian Geographic and Government of Canada - Canada in a Changing Climate

www.canadiangeographic.com | Grades 7-8





This is a great resource for teachers that provides activity suggestions and lists out which learning outcomes and competency outcomes they fulfill by Canadian National Standards for Geography and Science.

Ducks Unlimited - Climate Change Resource Pack



www.ducks.ca | Grades 7+

Ducks Unlimited has put together some powerpoint presentations for specified age groups talking about topics related to climate change. Each presentation includes games, activities, questions and engaging visuals paired with a script to help you deliver the content to your students.

National Geographic

www.nationalgeographic.org | Grades 3-12+



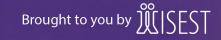
National Geographic provides a plethora of resources for students, teachers and curious minds in general around all things climate! From enclyclopedic entries, to educator guides, to maps, videos, activities and articles, there's something for everyone!

Unicef World's Largest Lesson - Climate Changemakers

climatechangemakers.worldslargestlesson.globalgoals.org/ | Grades 1-12 Unicef

The World's Largest Lesson promotes use of the Sustainable Development Goals in learning so that children can contribute to a better future for all. From citizenship and justice to climate change and the environment, inspire children to make a difference!





The Concord Consortium - High-Adventure Science

has.concord.org | Grades 6-12



The Concord Consortium provides free interactive STEM activities for your classroom. In their climate related curriculum packages, they have a variety of modules that each include an interactive computer-based systems model and real-world data on unanswered questions scientists are facing today. The packages are well thought out and are easy to access and help facilitate.

Meet 15 Women Leading the Fight Against Climate Change

time.com/5669038/women-climate-change-leaders/



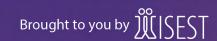
This list introduces you to 15 inspirational women who are on the front lines of the climate change battle. This is a great resource to start introducing female leaders in science to your class!

How to talk honestly to kids about climate change - and still give them hope

ideas.ted.com/tips-on-how-to-talk-to-kids-about-climate-change/

This article, written by Dr. Katherine Hayhoe, a prominent climate scientist, activist and science communicator, gives tips on how to talk to kids about climate change and links to relevant resources!





Books

A Mighty Girl - Top Children's Books on the Environment

www.amightygirl.com | All ages

A Mighty Girl curated a list of children's books focused on the environment! Check it out for recommendations for your next library trip!

Yale Climate Connections - Children's Books about Climate Change

yaleclimateconnections.org | All ages

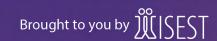
Yale Climate Connections put together a list of books that helps empower kids to act on the climate crisis.

Social Justice Books - Environment/Climate Justice Books for Youth

socialjusticebooks.org | All ages

Social Justice Books lists books broken down by age group (elementary, middle school, high school) relating to climate change.





Podcasts

Tai Asks Why - CBC Podcast

www.cbc.ca/radio/taiaskswhy | Grades K-3

Tai Poole is a frustrated 7th-grader who is always searching for answers. He has represented Canada twice in the World Mathematics Olympiad. He is an accomplished pianist and a dedicated swimmer. Born in Vietnam, Tai moved to Canada when he was three and has remained a world traveler with an insatiable curiosity. He asks questions like what happens after we die? What is love? How can we fix climate change?

Wow in the World - Operation Earth: How to be cool to a planet that's hot - NPR Podcast

www.npr.org | Grades K-3

In this episode, join NPR's Mindy Thomas and Guy Raz as they tackle the science behind climate change in a fast-paced, zany exploration and explanation!

Good Night Stories for Rebel Girls "Greta Thunberg read by Jameela Jamil"

app.kidslisten.org | Grades 3-7

Jameela Jamil narrates Greta's story, a Swedish youth activist that sparked a massive global movement to address the climate crisis. It follows Greta from when she first learned about the climate crisis in school to her public address at the United Nations Climate Action Summit in New York City, which propelled her to international recognition.

The Big Melt - Earth Rangers

www.earthrangers.com/bigmelt/ | Grades 3-7

The Big Melt takes an immersive look into climate change over a series of episodes. Youthful host Sarah interviews climate scientists, activists, and others to learn how they engage with climate change in their own lives. Start with the first episode to hear why Sarah began this podcast: to address her own fears and anxieties about how to save our dying planet.





The Flossy Podcast

www.wnyc.org | Grades 9+

High schoolers from Carnarsie, a neighborhood in Brooklyn, New York, discuss environmental racism in depth. They take their mic to a Manhattan climate march and interview youth activists, and afterward, talk openly about the small turnout from Black activists. The students talk about how this issue disproportionally impacts Black lives and how many of the students have felt the effects of climate change directly from natural disasters, especially from hurricanes. Ultimately, they call new activists to come to the forefront to create change.

Movies/Documentaries

Common Sense Media

www.commonsensemedia.org | All ages

Check out this list of 27 kid-friendly movies and documentaries that help start the conversation around climate change.

TED Talks



Great Thunberg - The Disarming Case to Act Right Now on Climate Change

https://www.ted.com/talks/greta_thunberg_school_strike_for_climate_save_the_world_ by_changing_the_rules/transcript?language=en

Henry Lizotte - Kids can help with Climate Change

https://www.youtube.com/watch?v=bK1kyM7Pevc





Juliette Devost - Why We Should Teach Climate Change to Children

www.youtube.com/watch?v=fLp4-E33scs

Katharine Wilkinson - How Empowering Women and Girls Can Help Stop Global Warming

www.youtube.com/watch?v=vXIJEcrinwg

People you should be following!

Science Moms



sciencemoms.com/

A nonpartisan group of climate scientists, who are also mothers, working to demystify climate change, talk honestly about its effects on our families, and give moms the info they need to help preserve the world for their kids.

Green Girl Leah

www.instagram.com/greengirlleah

Leah Thomas is an eco-communicator, aka an environmentalist with a love for writing and creativity, based in Ventura, CA. She's passionate about advocating for and exploring the relationship between social justice and environmentalism.





Sophie Li

www.instagram.com/sophfei

Sophie Li is a Chinese American multimedia journalist, film director, and climate optimist. Her mission is to humanize issues such as the climate crisis and social justice into digestible and accessible news - redefining how information is communicated in the 21st century while cutting through the content pollution.

Isaias Hernandez

www.instagram.com/queerbrownvegan

Isaias Hernandez is an environmental educator and creator of QueerBrownVegan where he creates introductory forms of environmentalism through colourful graphics, illustrations, and videos. He seeks to provide a safe space for like-minded environmentalists to advance the discourse around the climate crisis.

Mikaela Loach

www.instagram.com/mikaelaloach

Mikaela Loach is a climate and anti-racism activist based in Edinburgh in Scotland who was nominated for the Global Citizen Prize: UK's Hero Award. She is a medical student who uses her platform to highlight the climate crisis and human rights issues.





French Resources

Lesson plans/classroom activities

Voyages en français - La maison écologique



www.voyagesenfrancais.fr | Élémentaire

Les élèves vont apprendre le vocabulaire du développement durable et de l'écologie. Tu vas aussi apprendre à identifier les gestes écologiques.

Class Zero Emission cahier d'exercices



www.educapoles.org | Grades: 4e-9e

Ce cahier d'exercices contient une série d'exercices « prêts à l'emploi » destinés aux élèves de 10 à 14 ans. Vous y trouverez des exercices variés tels que : un texte lacunaire, des expériences, des jeux ou encore une analyse de texte

Guide d'activités pédagogiques comprendre pour agir les changements climatiques



www.in-terre-actif.com | Grades: 3e-7e

Le présent guide d'activités pédagogiques est une ressource éducative destinée aux enseignants et liée à l'album thématique « Comprendre pour agir : Les changements climatiques » élaboré en 2018 par le Réseau In-Terre-Actif, secteur jeunesse du Comité de Solidarité/Trois-Rivières.

Kits EduClimat



educlimat.fr | Élémentaire, lycée, collège

Un ensemble d'ateliers ludo-pédagogiques sur les enjeux énergie/climat sont conçus pour être animés en autonomie avec vos classes





Quizzes, games, and interactive websites

Mission 1.5°

mission1point5.org/ca | Grades: 4e-7e



Grâce à la technologie des jeux mobiles, Mission 1.5 sensibilise les gens aux solutions climatiques et leur demande de voter pour les actions qu'ils souhaitent voir se produire.

L'histoire du carbone

www.globalcarbonatlas.org/fr/outreach | Grades: 10e-12e



Le Global Carbon Project est un programme scientifique international qui aide à comprendre le cycle global du carbone, responsable de la teneur en CO2 de l'atmosphère. Découvrez l'histoire du carbone à travers les ages.

Cicodes - Outil de sensibilisation au changement climatique

www.cicodes.org | Grades: 8e-9e



Un jeu de cartes avec l'objectif de ne pas augmenter la température terrestre plus de + 2°.





Presentations

Le climat se modifie

www.mtaterre.fr | Grades: 7e-12e



Présentation sur les impacts du changement climatique, comment réduire nos impacts sur le climat, et des idées pour s'adapter.

Parlons climat avec énergie

view.genial.ly | Grades: 7e-12e



Présentation sur l'énergie, les activités humaines et le climat qui contient des vidéos, des activités interactives et des questions

Climate challenges

sorsdetabulle.com/defis/ | Grades: 7e-12e



Ces défis proposent différents comportements à adopter pour réduire son empreinte carbone. Lutter contre les changements climatiques, c'est plus simple qu'il n'y paraît.



