



## 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).

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En tant qu'organisation engagée à fournir des expériences STEM 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](http://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

[www.cwf-fcf.org/en](http://www.cwf-fcf.org/en)



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](http://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](http://climateactionnetwork.ca)



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



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## Youth Activities

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

[www.ualberta.ca/admissions-programs/](http://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/](http://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/](http://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](http://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.



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## 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/](http://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

[nioo.knaw.nl/en/climatepursuit](http://nioo.knaw.nl/en/climatepursuit) | Grades 6-12



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/](http://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.



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## Teacher Resources

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

[www.canadiangeographic.com](http://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.

Canada



### Ducks Unlimited - Climate Change Resource Pack

[www.ducks.ca](http://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](http://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 encyclopedic 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/](http://climatechangemakers.worldslargestlesson.globalgoals.org/) | Grades 1-12 

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!



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## The Concord Consortium - High-Adventure Science

[has.concord.org](https://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/](https://time.com/5669038/women-climate-change-leaders/)

TIME


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/](https://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!



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## Books

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

[www.amightygirl.com](http://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](http://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](http://socialjusticebooks.org) | All ages

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



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## Podcasts

### Tai Asks Why - CBC Podcast

[www.cbc.ca/radio/taiaskwhy](http://www.cbc.ca/radio/taiaskwhy) | 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](http://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](http://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/](http://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.



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## The Flossy Podcast

[www.wnyc.org](http://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 disproportionately 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.common Sense Media.org](http://www.common Sense Media.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](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>



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## Juliette Devost - Why We Should Teach Climate Change to Children

[www.youtube.com/watch?v=fLp4-E33scs](http://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](http://www.youtube.com/watch?v=vXIJEcrinwg)

### People you should be following!

#### Science Moms

[sciencemoms.com/](http://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](http://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.



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## Sophie Li

[www.instagram.com/sophfei](https://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](https://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](https://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.



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# French Resources

## Lesson plans/classroom activities

### Voyages en français - La maison écologique

[www.voyagesenfrancais.fr](http://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.

INSTITUT  
FRANÇAIS

### Class Zero Emission cahier d'exercices

[www.educapoles.org](http://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](http://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](http://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



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## Quizzes, games, and interactive websites

### Mission 1.5°

[mission1point5.org/ca](http://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](http://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 CO<sub>2</sub> de l'atmosphère. Découvrez l'histoire du carbone à travers les âges.



### Cicodes - Outil de sensibilisation au changement climatique

[www.cicodes.org](http://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](http://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](http://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/](http://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.



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