



# Green Teacher

## Post-webinar information

*The Art and Science of Teaching Climate Change*

by Shannon Subers – Wednesday, April 1<sup>st</sup>, 2020

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Feedback survey link: <https://www.surveymonkey.com/r/PQC697G>

## Resources

### Activists (also detailed in some of the articles below)

- Autumn Peltier
- Elsa Mengistu
- Isra Hirsi
- Jamie Margolin
- Jasilyn Charger
- Kehkashan Basu
- Kevin J. Patel
- Mari Copeny
- Nadia Nazar
- Xiuhtezcatl Martinez
- Xiye Bastida
- Zamagee Artis
- Zeena Abdulkarim

### Articles:

- Burton, N. (2019, October 11). The young activists of color who are leading the charge against climate disaster. *Vox*.  
<https://www.vox.com/identities/2019/10/11/20904791/young-climate-activists-of-color>
- Janfaza, R. (2020, January 3). 9 Climate Activists of Color You Should Know. *Teen Vogue*.  
<https://www.teenvogue.com/story/youth-climate-activists-of-color>
- Parker, L. (2020, March 31). Greta wasn't the first to demand climate action. Meet more young activists. *National Geographic*.  
<https://www.nationalgeographic.co.uk/environment-and-conservation/2020/03/greta-wasnt-first-demand-climate-action-meet-more-young>

### Books:

- A relevant book about the psychology of CC is George Marshall's book *Don't Even Think About It*:  
<https://www.bloomsbury.com/uk/dont-even-think-about-it-9781620401330/>
- The Habitat Conservation Trust Foundation offers books and guides:

<https://www.hctfeducation.ca/product-category/books-and-guides/>

#### Children's books:

- [Elin Kelsey's books](#)
- [The Wump World](#) by Bill Peet

#### Online Resources:

- [Zinn Education Project](#)- climate justice activities
- [National Geographic](#)- professional development, lesson plans
- [California Academy of Sciences](#)- lesson plans
- [National Network for Ocean and Climate Change Interpretation \(NNOCCI\)](#)- online courses, studies, communication tools, data
- [Climate Central](#)- interactive data visualization
- [NOAA Climate Kids](#)- articles, vocab, kid-friendly
- [Climate Interpreter](#) - Research, lessons
- [FrameWorks Institute](#) - research on communicating science
- Article: How should Climate Change be taught in schools by: Dr. Ellen Field, Pamela Schwartzberg, Dr. Paul Berger:  
[https://www.edcan.ca/articles/climate-change/?gclid=EAlaIQobChMI4oHK7bPI6AIVCaCzCh1clwXAEAAYASAAEgKOUfD\\_BwE](https://www.edcan.ca/articles/climate-change/?gclid=EAlaIQobChMI4oHK7bPI6AIVCaCzCh1clwXAEAAYASAAEgKOUfD_BwE)
- Helping the wellbeing of students when teaching climate change: *Climate Change Learning Programme – Wellbeing Guide* found here  
<https://nzcurriculum.tki.org.nz/Curriculum-resources/Education-for-sustainability/Tools-and-resources>
- Sierra Club Canada Foundation: Opens a good discussion about climate literacy with students grade 4-6. ECO-buddies: <https://wildchildedmonton.wordpress.com/programs-eco-buddies/>
- Shades of Green Guide from Detroit Zoological Society:  
<https://detroitzoo.org/wp-content/uploads/2017/09/dzs-greenprint-shades-of-green-2017.pdf>
- Talking with Kids about Climate Change: **Some food for thought about the how and when - and ways to support them and ourselves in these difficult times**  
<https://padlet.com/Enviropadlets/6darqnln6iaw>
- Eco-Buddies Booklet: <https://wildchildedmonton.wordpress.com/resources/>
- Enviropadlets: A collection of some climate change and climate justice approaches:  
<https://padlet.com/Enviropadlets/ClimateChangeJustice>
- Climate Kids NASA resources: <https://climatekids.nasa.gov/>
- NYS DEC: a list of caregiver resources while at home:  
<https://www.dec.ny.gov/education/119886.html>
- For high school students if you want to teach about ocean acidification. The Ocean of Tomorrow: <https://www.otago.ac.nz/marine-studies/resources/download/otago636544.pdf>
- From Learning for Sustainable Future the resource bank called [Resources for Rethinking](#) has an extensive archive of lesson plans.
- For Canadian educators, stats on teacher coverage of climate change education is available:  
[http://lsf-1st.ca/media/National\\_Report/Executive\\_Summary\\_Slides\\_Climate\\_Change.pdf](http://lsf-1st.ca/media/National_Report/Executive_Summary_Slides_Climate_Change.pdf)

#### Social Media:

- Instagram users: [Lucy Biggers](#) is a wonderful solution based activist to follow. You don't need an Instagram account to see the content.
- FB group: [Climate Change Education Canada](#) group of 200 plus educators focused on climate change.

**Videos:**

- Kid video series: [Global Weirding with Katharine Hayhoe](#) is a great kid video series
- [The Biggest Little Farm](#) - great movie about getting away from monocultures.

**Podcast:**

- Cornell University's podcast: [Climate Conversations](#) speaks about finding common values when people disagree about climate change.

**Other resources:**

- Yellowstone has been doing zooms with classes from their homes during this school closure and they often discuss climate change in the national parks or any other topics teachers would like. Feel free to contact us them if any teachers are interested: [yell\\_virtual\\_ranger@nps.gov](mailto:yell_virtual_ranger@nps.gov)
- [Blue Hill Observatory](#) will be starting webinars next week. Mondays are history/about the Observatory, Wednesday Weather and Climate lessons and Friday historical weather. The information will be available this Friday April 3rd at [bluehill.org](http://bluehill.org).

### Chatbox text

19:36:10 From Evelyn : Evelyn from Fairfield, CT, USA. I'm a park ranger at a nature center who wants to learn how to approach teaching climate change to a variety of ages

19:36:52 From khanley : Kaitlyn from Deer Flat NWR, AmeriCorps member and Environmental Educator, Hi everyone :)

19:37:22 From LMarsh : Hello from Grand Bend, Canada

19:37:34 From Tiffany : Hello from Columbus, Ga

19:37:55 From Pam Miller : Pam from Toronto, working with educators K-12

19:38:01 From julie lloyd-evans : Hi Julie joining you from a little village in England

19:38:03 From PAULINA : Hi Edmonton, Canada!

19:38:07 From Elise : Hello from Fayetteville, North Carolina!

19:38:32 From MAC : Mary from Park City UT

19:38:47 From karenclarke : Hello from Ohio, USA — and a Miami University Global Field Program alum ;)

19:38:48 From Lisa Lee Sang : Hello from Owings, MD!

19:38:56 From Kirsten Springer : Kirsten from Boulder, co

19:39:31 From stefanie Anderson : Hi from Michigan!

19:39:57 From mhall : Hello from the Adirondack Mt.s in New York

19:39:59 From Jessica : Jessica from Port Hope, ON - I teach High School Science, Outdoor Ed, Travel Ed and scuba diving. +1 to wanting to have discussions with students without scaring them!

19:40:03 From Ian Shanahan : If you have any questions, feel free to enter these into the chatbox at any time!

19:40:38 From Galaxy J3 Prime : Sybille - grade 5/6 on Toronto Island

19:43:11 From Ellen Field : For Canadian educators, stats on teacher coverage of climate change education is available:  
[http://lsflst.ca/media/National\\_Report/Executive\\_Summary\\_Slides\\_Climate\\_Change.pdf](http://lsflst.ca/media/National_Report/Executive_Summary_Slides_Climate_Change.pdf)

19:43:51 From Ian Shanahan : Thanks for that reference, Ellen — a very useful resource for Canada-based educators.

19:44:16 From Ellen Field : Thanks it's my postdoc. :)

19:44:39 From Ian Shanahan : Great!

19:45:10 From Ian Shanahan : A relevant book about the psychology of CC is George Marshall's book *Don't Even Think About It*:  
<https://www.bloomsbury.com/uk/dont-even-think-about-it-9781620401330/>

19:45:48 From Pam Miller : Thanks Ellen, I also like the Facts on Education on pager from Education Canada called How should Climate Change be taught in schools that you also authored.

19:47:41 From Ellen Field : Thanks Pam. Article here:  
[https://www.edcan.ca/articles/climatechange/?gclid=EAAlaQobChMI4oHK7bPI6AIVCaCzCh1clwXAEAAAYASAAEgKOUfD\\_BwE](https://www.edcan.ca/articles/climatechange/?gclid=EAAlaQobChMI4oHK7bPI6AIVCaCzCh1clwXAEAAAYASAAEgKOUfD_BwE)

19:48:29 From Ian Shanahan : Thank you, all, for sharing all of these resources! We will send a follow-up email tomorrow with all of these resources noted.

19:49:06 From Pam Miller : When helping the wellbeing of students when teaching climate change, I just discovered New Zealand's resource called Climate Change Learning Programme – Wellbeing Guide found here  
<https://nzcurriculum.tki.org.nz/Curriculum-resources/Education-for-sustainability/Tools-and-resources>

19:49:57 From Ian Shanahan : In our Earth Day issue of Green Teacher, there will be an article about climate anxiety among youth.

19:50:21 From Jessica : Does anyone have a link to the article she's talking about with MPAs?

19:51:49 From Ian Shanahan : Shannon's aforementioned article is in the Fall 2019 issue of Green Teacher, accessible with a subscription: <https://greenteacher.com/subscribe/>

19:52:54 From Sofia (Green Teacher) : Shannon's article can be read here too: <https://greenteacher.com/expanding-the-toolkit/>

19:54:10 From veronica : Hi there! I am Veronica living in the San Francisco Bay Area I experienced this smoke first hand for many days!

20:00:26 From Kirsten Springer : That is what I worry about the anxiety

20:05:58 From Dave Bauer : In order to get people/students to ACT on climate change, the students need to register it as a threat. Our DNA knows to react to threats, like a falling tree, or explosion or tiger! So, how do we get to THAT place with the students?

20:06:48 From Ian Shanahan : A very important question, Dave. We will certainly address it.

20:07:33 From Parents's iPhone : are you able to share a list of youth activists?

20:07:38 From Pam Miller : Have you considered doing a community walk and identifying those aspects of their neighbourhood which are vulnerable or resilient to climate change? This was done in a grade 10 class as a photo essay project.

20:08:48 From Katy : Pam that sounds amazing!

20:09:09 From nicole pocchiare : the anxiety is good, they should be worried!

- 20:09:22 From karenclarke : Fantastic work you are doing, and the presentation was both useful and inspiring.
- 20:09:29 From Ellen Field : Great suggestion - Pam. I have also found that if educators ask students what they are worried about in terms of climate change they have a lot of responses. Those are all entry points that connect to local climate impacts. If students are not concerned at all....I haven't found fear/shaking them up to be an effective motivator.
- 20:10:16 From Marie Tremblay : With your focus on action and advocacy, how do you deal with pushback from administrators and parents re. left-wing political indoctrination?
- 20:10:34 From Deer Flat Team : do you have suggestions about how to respond to teacher or administrator or parent push-back on politics of climate change?
- 20:11:12 From Pam Miller : I agree Ellen, in my experience, they already are anxious, but don't have the safe venue to share their feelings.
- 20:12:14 From veronica : The way to work with fear is to make kids empowered. They are part of the solution! This work with my students k to 4
- 20:12:56 From Jessica : Can you share a list of realistic solutions/actions? There are always trends of, for example, "BYO reusable bag" followed by a backlash of compassion fatigue and criticism that it maybe it gives the false sense that this is enough to address the issue? Then others say it's really coming down to the policy level that needs change and making people think that our individual actions really make a difference is flawed. I get confused myself about what the valuable actions are.
- 20:13:31 From Parents's iPhone : for elementary- awesome book on climate optimism by Elin Kelsey 'NOT your Typical Book About The Environment'
- 20:13:32 From Ellen Field : Latest version of project drawdown: <https://drawdown.org/>
- 20:13:37 From Kirsten Springer : That is the approach we take even with PreK, we follow Emilio Reggio philosophy and the Jewish Tikum Olam - which means we are here to help the environment, it is our duty to do mitzvahs. Once the kids were aware of an issue they like to research more.
- 20:13:38 From stefanie Anderson : I found that simple math problems can be helpful to show them that little things can make a huge change. For example, I always use a shopping basket instead of plastic sacks, so when one of my students said who cares if I stop using plastic bags, I am just one person, we calculated how many bags were not used by me since I have this basket (which is 25 years). 1 basket saves 3 bags, once a week, for 25 years: about 3900 bags....and I am one person (and shop way more often :-)
- 20:13:57 From MAC : We need to be very aware of mental health, consistency on the rise in our world. Anxiety, depression, suicide... Make sure the students leave with some hope. Yes, they must know the severity - but somehow feel empowered
- 20:14:02 From Ellen Field : Drawdown provides policy solutions based on cost vs. Co2 emission reduction.
- 20:14:04 From Jessica : What a great resource Ellen! Thanks
- 20:14:44 From PAULINA : I work for Sierra Club Canada Foundation and we launched a program called ECO-buddies and it opens a good discussion about climate literacy with students grade 4-6 <https://wildchildmonton.wordpress.com/programs-eco-buddies/>
- 20:14:52 From Michelle Ducat : Supporting children to feel empowered by taking action on other

issues they care about e.g. caring for a local area help develop resilience

20:15:00 From Kirsten Springer : There is a great resource out of Nova Scotia - Project Happiness or something like that - has great activities to pair with this kind of teaching to give them hope

20:15:01 From MAC : Drawdown is awesome and I also recommend getting trained through Climate Reality as you'll get access to many current global slides

20:15:20 From PAULINA : Take a look at the booklet we created:  
<https://wildchilddumonton.wordpress.com/resources/>

20:15:26 From VLee : important for young kids to learn about the earth with wonder and awe and learn how to ask good questions ... Richard Kool's research suggests not too much doom and gloom messaging before grade 5 ... not that you ignore good questions, but getting them to love nature first

20:16:18 From Pam Miller : For actions, I like Take it Global tread lightly challenges and another recent discovery is the Compassion Challenges- Earth Week Games

20:16:44 From MAC : Any good K-5 children's books to recommend? I used to read Wump World but feel it's too gloomy

20:17:27 From Pam Miller : Elin Kelsey's books for sure

20:18:04 From Ellen Field : Elin Kelsey's book "We are Stardust" is also wonderful.

20:20:49 From Pam Miller : Global Weirding with Katharine Hayhoe is a great kid video series

20:21:12 From VLee : yes, love that book - talks about how we're all interconnected which is important for understanding our decisions and their consequences. it's a beautiful message with great artwork!

20:21:43 From VLee : sorry that was referring to the we are stardust book ... and author is a scientist

20:22:21 From Cathy Dyer :  
<https://detroitzoo.org/wp-content/uploads/2017/09/dzs-greenprint-shades-of-green-2017.pdf>

20:22:39 From nicole pocchiare : yes we like to teach conservation through appreciation, especially for the little guys

20:22:39 From Michelle Ducat : Some readings we have found about how to talk with kids  
<https://padlet.com/Enviropadlets/6darqnl6iaw>

20:23:31 From Anna Crowe : We have a really good new resource here in New Zealand for teaching and learning about climate change, plus a well-being guide that sits alongside. You can download it here:  
<https://nzcurriculum.tki.org.nz/Curriculum-resources/Education-for-sustainability/Tools-and-resources>

20:24:16 From Ian Shanahan : <https://greenteacher.com/teaching-teens-about-climate-change/>

20:24:19 From karenclarke : Anna - I just found your curriculum tonight, via the NAAEE newsletter. I was excited about it and look forward to learning more.

20:24:31 From Ian Shanahan :  
<https://greenteacher.com/teaching-young-people-about-climate-change/>

20:24:31 From Ellen Field : Thanks Michelle and Anna!

20:24:32 From MAC : I'm so looking forward to learning of all these resources tomorrow, Ian, thank you!

20:24:36 From nicole pocchiare : making the kids feel like they are part of something bigger than themselves is empowering

20:25:06 From Michelle Ducat : A collection of some climate justice approaches - a bit raddom!  
<https://padlet.com/Enviropadlets/ClimateChangeJustice>

20:26:24 From Sofia (Green Teacher) : Thank you everyone for all the resources mentioned. We are gathering them and will include them in the follow-up email we will share with all of you tomorrow.

20:27:34 From MAC : Another topic we haven't discussed is the non-believers, which includes kids based on what they hear from their parents. I include cows & methane in my presentation and have to be very careful. But in general, I think most responses can refer to basic conservation, which seems to work for most - outside of the 'science'

20:27:36 From Jessica : Speaking of hands-on demos: any fantastic resources of these? Especially for high school level.

20:27:42 From margo : Yellowstone has been doing zooms with classes from their homes during this school closure and we often discuss climate change in the national parks or any other topics teachers would like. Feel free to contact us if any teachers are interested:  
[yell\\_virtual\\_ranger@nps.gov](mailto:yell_virtual_ranger@nps.gov)

20:28:27 From margo : When I worked in Cuyahoga Valley in Ohio, we did citizen science and would take students to the Cuyahoga River to test water quality and tracked it and levels. They track it and as far as I know they have been doing this every week for years now to track it and keep students involved

20:28:31 From Kirsten Springer : NASA did a webinar today on their storybooks for elem and activities - witj this topic

20:30:18 From Shannon Post : NYS DEC has put together a list of caregiver resources while at home: <https://www.dec.ny.gov/education/119886.html>

20:30:24 From MAC : NASA - cool! Do they do educational webinars often?

20:31:16 From Kirsten Springer : I used high school students to design phenology trails and elem students (homeschooled) to gather the data and then a senior volunteer (retired 3rd grad teacher) to wnter it on the computer for Natures Notebook. Great coordination between age groups

20:31:21 From stefanie Anderson : Looking forward to seeing the list in an email. Thank you for the webinar and the chat-exchange.

20:32:15 From Kirsten Springer : yes NASA does, give PD hours also

20:33:25 From Anna Crowe : This is a great resource for high school students if you are near the ocean and want to look at ocean acidification  
<https://www.otago.ac.nz/marine-studies/resources/download/otago636544.pdf>

20:36:13 From patti : Migratory birds and species at risk concerns over climate change . Do you know of any activities and games you can do with Kindergarten students and grade 1 curriculum in BC?

20:36:28 From Pam Miller : Cornell University's book called Climate Conversations really spoke to finding common values when people disagree about climate change.

20:36:50 From MAC : But cattle farmers can transition to start doing other things too, right? The Biggest Little Farm - great movie about getting away from monocultures. Great for soil.

20:37:19 From Pam Miller : Those in Canada, check out Learning for Sustainable Futures resource bank called Resources for Rethinking

20:37:52 From diannesacchetti : for instagram users. Lucy Biggers is a wonderful solution based activist to follow.

20:39:03 From McCasland : Blue Hill Observatory will be starting webinars next week. Mondays are history/about the Observatory, Wednesday Weather and Climate lessons and Friday historical weather. The information will be at [www.bluehill.org](http://www.bluehill.org) starting Friday.

20:39:41 From Michelle Ducat : Thank youall! Much appreciation!!

20:40:00 From Julia : thank you kindly

20:40:13 From Evelyn : Great discussion! Thank you!!!

20:40:18 From veronica : Thanks a lot from San Francisco CA!

20:40:23 From Elise : Thanks everyone! Great discussion

20:40:25 From Sofia (Green Teacher) : Thank you everyone for your amazing contributions! Special thanks to Shannon!

20:40:30 From Deer Flat Team : Thanks so much!

20:40:32 From Ellen Field : We also run a FB group called Climate Change Education Canada - which is a group of 200 plus educators focused on climate change

20:40:32 From nicole pocchiare : THANK YOU

20:40:38 From Sunshine : How would you introduce climate change hand in hand with Endangered Species on the brink of becoming extinct because of climate change or, what is really causing this climate change are human activities, you can see that really well now how this is true when humans activities are set at a halt, and this resulting to cleaner air in our busy places of the world.

20:40:39 From Ellen Field : Thank you!

20:40:42 From Marie Tremblay : Excellent webinar -thanks to both of you!

20:41:06 From patti : This was just great and very adaptive

20:41:28 From Ian Shanahan : [ian@greenteacher.com](mailto:ian@greenteacher.com)

20:42:03 From Julia : Could I get a certicate also?

20:42:22 From Elise : How do we go about getting a certificate?

20:42:27 From patti : I would like to get a certificate too

20:42:30 From Mel : Thank you for everything!

20:42:38 From VLee : <https://www.hctfeducation.ca/product-category/books-and-guides/>