



## **"Bee" a Climate Conscious Citizen - Taking Care of our Climate, Classroom and Community**

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This curriculum unit is recommended for Kindergarten through Second Grade focusing and using an interdisciplinary approach to address standards within the science, social studies subject areas while incorporating literacy and writing content areas as well.

**Keywords:** environment, climate, community, recycling, environmental stewardship, bees, ecosystems, climate change, weather, eco-grief, climate anxiety

**Teaching Standards:** See [Appendix 1](#) for teaching standards addressed in this unit.

**Synopsis:** In this unit, early elementary students begin to have academic conversations with the guidance of their teachers regarding elements of climate change. Through read-aloud books, conversations, activities and a culminating task where students will create their own climate promise to be put on a bumblebee and incorporated within a handprint earth created by the class. This unit aligns with the North Carolina Science and Social Studies standards on structures and functions living organisms along with geographical and environmental literacy. This unit is a three part unit focusing on climate change coping strategies about feelings, taking action and meaning focus – or what we can do to be part of a solution regarding climate change. Student will learn about climate change, the importance of bees and create their own climate solution or promise. As a culminating projects students using a parachute from the Mother Earth Project, students will create the earth out of their handprints and place their “bees” with their climate promises around the parachute.

*I plan to teach this unit to approximately 20 students in my kindergarten class in the spring.*

*I give permission for Charlotte Teachers Institute to publish my curriculum unit in print and online. I understand that I will be credited as the author of my work.*

## **"Bee" a Climate Conscious Citizen - Taking Care of our Climate, Classroom and Community**

### **Introduction**

“Teaching children about the natural world should be seen as one of the most important events in their lives.” –Thomas Berry

Children are naturally curious, inquisitive and love being outside. As a kindergarten teacher one of my favorite times during the day is recess. Being outside with them and seeing their excitement and eagerness to share about the natural world around them is amazing. Whether they find a small snail or worm, show you a lizard climbing on the wall or bring you the classic bouquet of daisies and dandelions – their love for the outside, environment and natural world is something to be admired. The simple joy they find in seeing animals and plants in their natural world happens on a daily basis. Using their excitement and curiosity about their environment makes teaching them about difficult topics easier. The instant connection and love they have for animals, plants and their home/school is something that does not have to be taught. Another aspect of recess time I love is the opportunity it provides to have conversations and share stories with our students. It is my love for stories and others that led me to join the 2021 Charlotte Teacher’s Institute’s seminar on Climate Refugee Stories.

Stories are so very important to getting to know someone. Throughout my travels to Central America and Haiti I have seen and heard stories of how people have been displaced because of natural disasters, climate or violence and the devastation it has caused in their lives. Refugees and their stories have always been something near and dear to my heart. I have wanted to hear more and find ways of understanding and empowering them to share their stories to help others and shed light on refugee stories from all over the world. In this seminar, Climate Refugee Stories, we focused on the effect of climate on refugees and Indigenous people as well as addressing anxiety and fear surrounding climate change, especially among young people. Teaching about climate change and the effects of our mistreatment of our environment is more important than any other time in history.

Kindergarten is a great time to explore our environment and outdoors. Throughout this curriculum unit I am hoping to use the outdoors and students’ love for our natural world to drive our learning, exploring and thinking about the central question of my unit. What can we do to help protect our community and earth from climate change from a place of love and care?

### *Rationale*

In kindergarten we learn about climate and weather. We also talk about culture and communities.

To teach this unit I wanted to use the displacement or migration of people because of climate change to begin to expose kindergarteners to climate and migration and the issues we are facing as a global society, because of the migration of people due to climate change. Talking about maps and weather and the effect of weather on animals first will provide a hook and segway to

having conversations about how climate can affect people also. Through the introduction of bees and the importance of bees to our food chains, I will make connections to how climate can affect the bees and in turn effect our food chains.

With talking about climate change, comes climate anxiety. One of the struggles I have had in creating this unit is how to teach children about climate change and the effects of climate change without making the children fearful or worried about what is happening around them. My goal is to teach this unit from a three-point focused mindset – emotions, problems and meaning. Staying true to the feelings that arise while teaching this unit, while still not “watering down” some of the issues of climate change and the importance of taking care of our earth. All three of these mindsets will be incorporated throughout the unit to make sure we are feeling focused, problem focused and meaning focused as we answer our central question - What can we do to help protect our community and earth from climate change?

Kindergarteners love stories. Throughout my unit we will use stories to help teach, inform and guide discussions to answer the following questions. What is climate and climate change? What is migration? What are the push and pull factors of migration? What beings migrate? Why are bees important? How do bees help us get our food? How can we help? What is an activist? How can we help the bees? What promise can I make to be a climate conscience citizen? We will share stories and information on how to be a more climate conscious citizen and what they can do to help take care of our earth, environment and community to help protect the climate. We will also talk about the effects of the climate on animals and humans and the impact it has on our lives and the potential displacement of both humans and animals alike. Our primary focus will be on bees and the importance of bees to our food chain and how bees impact food and the abundance of food available. We will also have the opportunity to have a family who raises bees in which the father is a master beekeeper come and talk to my class. Our goal is to share all we have learned by sharing our culminating project on May 20<sup>th</sup>, World Bee Day. On World Bee Day we will celebrate and help promote awareness and share activities for the school to use to understand the importance of bees on our food, lives and the climate.

### *School/Student Demographics*

Selwyn is an elementary school located in an affluent, suburban area of South Charlotte. The population of the school is made up of approximately 76% White, 13% Black, 7% Hispanic, and 3% Asian students. About 22% of the students at Selwyn are receiving free and reduced lunch services. I teach kindergarten and there are approximately 18 to 21 students in our class each year. We are blessed to have a large amount of support from families within our school community. Most of the students come to Selwyn having attended private preschools. Although predominantly white and with previous school experiences, we aim to have as much diversity and heterogeneous cognitive and academic abilities within each of our classrooms. Therefore many of our students enter kindergarten with most of the skills we introduce and teach for the first half of the year, according to the North Carolina Kindergarten Standard Course of Study.

Selwyn is a part of the South Park Campus, which includes Selwyn, Alexander Graham middle school, and Myers Park high school. The property of the campus encompasses 120 acres of wooded, hilly terrain. Our campus is intersected by two creeks and nature trails which are available for exploration of our natural habitat as well as providing natural landscape for science lessons within the schools. At Selwyn our student demographic is extremely bright. About 50% of the students in our school are considered Gifted and Talented, receiving additional Talent and Development services as a certified TD student or considered TD Catalyst (gifted but did not achieve certification). Although kindergarteners are not part of the TD program or testing I have found with the previous school and family experiences most children have had, our demographic of kindergarteners are very bright. I always have a handful of students who are out of the box thinkers and thrive on problem-based learning activities and hands-on learning. Since many of them already mastered kindergarten, content exposure to problem-based content challenges students whom already know their ABCs and 123s. I believe all of my kindergarteners experience and are engaged in learning on a different levels. The best way for children to learn is through exposing them to content geared towards something they can relate to or something they can physically touch and become immersed in.

### *Unit Goals*

In kindergarten we do a lot of our learning through exploration, reading of literature, and writing our shared ideas. Kindergarteners after completion of this unit will have a better understanding of weather versus climate, human and animal migration. Students will create climate promises from the knowledge gained in the unit and display them through drawings and written promise outside the classroom and on a Parachute for the Planet – an outreach and awareness project from the Mother Earth Project about the climate emergency we are currently living amongst. - This curriculum unit will provide the opportunity to address many standards as shared in Appendix 1.

Reading Standards for Literature and Foundational Skills – through books, videos and collaborative discussions students will actively engage in group reading activities to learn about climate, the importance of bees, and potential solutions on how to help bees and be a climate conscious citizen. Students will also participate in group writing activities through the use of anchor charts to research and share what they have learned through collaboration, communication, presentation of ideas and knowledge.

This unit will also highlight science and social studies standards in both kindergarten and first grade. We will talk about the structures and functions of living organisms as well as ecosystems through our learning of bees, pollination and the importance of bees. Finally we will focus on Geography and Environmental Literacy when we discuss climate, people and animals and the effects of weather as well as the interactions between animals, humans and their environments and the effect climate and weather has on each one and each other.

### **Content Research**

## *Climate Change*

The sirens are sounding. Our planet is talking to us and telling us something. And so are people everywhere. Climate action tops the list of people's concerns, across countries, age and gender. We must listen — and we must act — and we must choose wisely. On behalf of this and future generations, I urge you: Choose ambition. Choose solidarity. Choose to safeguard our future and save humanity. – UN Secretary General COP26 11/1/2021<sup>1</sup>

Since 1992, people, political parties and countries have been talking about climate change and trying to do something about it or talk down the impact climate change is having in today's society and world. In 1992, the "Conference of Parties (COP)" formed of 197 countries made a new environmental pact the United Nations Framework Convention on Climate Change to address the emergency we as a planet had at hand. We have seen the rallies, signs, the activist and debates on climate change and its importance and relevance. As an educator the importance and relevance is now – in all subject areas across all grade levels – we must address climate change and help students learn how to be a proactive participant in providing hope and care for our earth, humanity and all living things that inhabit this gorgeous earth we live.

In the classroom it is important to show children what is happening within the walls of their classroom, school, city, state, country and most importantly our world. We all have seen and experienced climate change and the potential climate disaster we are moving toward if we do not begin to do our part to provide change. As a kindergarten teacher this is a complex topic to teach, but we can start from a very simple stance – we should be taking care of our environment and earth. Taking care of our earth and teaching love and respect of others and living things is the foundation of where learning and talking to younger students about climate change and migration can take place. Whether one believes in climate change or not – you can see the effects of it everywhere. Lower sea-levels, melting glaciers, rising and warmer temperatures across various climates, plant and animal adaptation and migration as well as more intense, violent, and frequent storms and natural disasters. According to an AP report:

Climate change could push more than 200 million people to leave their homes in the next three decades and create migration hot spots unless urgent action is taken to reduce global emissions and bridge the development gap, a World Bank report has found. The second part of the report examined how the impacts of slow-onset climate change such as water scarcity, decreasing crop productivity and rising sea levels could lead to millions of what it describes as "climate migrants" by 2050 under three different scenarios with varying degrees of climate action and development.<sup>2</sup>

With this type of knowledge, educators and humanity need to commit themselves to learn what can be done to help minimize the amount of people being pushed out from their homes,

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<sup>1</sup> Guiterres UN Secretary General - Antonio. 2021. *COP26 Must Keep 1.5 Degrees Celsius Alive*. Glasgow , November 1.

<sup>2</sup> Brito, Renata. 2021. "Report - Climate Change could see 200 million move by 2050." *AP News*. September 13. Accessed November 5, 2021.

cities and countries due to climate migration. When talking about migration not only is humanity being affected but the effects on animal and plant species is also very prevalent. Elizabeth Kolbert in her book “The Sixth Extinction” writes about migration due to climate change and how some migration patterns eventually lead to extinction - “Humanity's "most enduring legacy" will be our effect on the rest of life on Earth.”<sup>3</sup> In her research, Kolbert writes about the significant impact humans have made on migration being caused by humans. The tragedy she writes is what is at the core of human nature. “The qualities that made us human to begin with: our restlessness, our creativity, our ability to cooperate to solve problems and complete complicated tasks are leading us to change the world so rapidly and profoundly that other species can't keep up.”<sup>4</sup> So in our natural tendencies and intelligent nature we have in fact created some aspects of climate change through industrialization, urban development and other forward thinking inventions. So even in our best efforts at times to try to prevent or lessen the effects of climate change on living things we have actually made it more necessary for them to migrate and at the same time make it more difficult for them to move to be able to migrate to other areas of the world. “It's about people's amazing resourcefulness and concern, about people making more and more heroic efforts to try to save pieces of the natural world—and meanwhile it continues to be under greater and greater assault. We're putting other species in a double bind: forcing them to move by changing the climate, and at the same time making it harder for them to move.”<sup>5</sup> Understanding climate change and the effects humans are having on climate and climate migration is necessary to provide context on the importance of teaching climate in various content areas in all levels of education. We are at a point where together we need to do our part in understanding, educating and advocating solutions to help ourselves as well as every living species that inhabits our beautiful world.

### *Talking to Children about Climate*

One cannot turn on the television, walk in the park, go outside or look at a newspaper without seeing an article, program or sights in our natural world connected to climate change. Climate change is affecting all ages, all species, all cultures and all of humanity. Climate change does not value, education status, socioeconomic status, political views, race, gender or where you live. Everyone at some time and somewhere will be effected by humanities cause and effect of climate change. The mountains, the beach, your favorite vacation destination, or a family’s favorite park to visit all have the potential to be effected if something is not done to slow the rate of our changing planet and climate. With all of the recent rise in awareness of climate change and climate advocacy some see it as a problem that is too dire, too big, or too overwhelming to do anything or think they could make a difference. Climate Anxiety is a new term that is frequently used in articles, books and information surrounding climate. Sarah Jaquette Ray in her book, *A Field Guide to Climate Anxiety: How to Keep your Cool on a Warming Planet* explains what climate anxiety is and the effects of it on our outlook and mental health when addressing climate

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<sup>3</sup> Kunzing, Robert. 2014. "The Sixth Extinction - A Conversation with Elizabeth Kolbert." *National Geographic*. February 14. Accessed November 15, 2021.

<sup>4</sup> Kunzing, Robert. 2014. "The Sixth Extinction - A Conversation with Elizabeth Kolbert." *National Geographic*. February 14. Accessed November 15, 2021.

<sup>5</sup> Kunzing, Robert. 2014. "The Sixth Extinction - A Conversation with Elizabeth Kolbert." *National Geographic*. February 14. Accessed November 15, 2021.

change. Ray defines climate anxiety also referred to as eco-grief, eco-anxiety, climate distress and climate change anxiety, describes anxiety” related to the global climate crisis and the threat of environmental disaster”.<sup>6</sup> Ray early in her teaching had students perform an exercise for them to reimagine a future where all of our efforts in combating climate change came to fruition “to live in a climate-changed future in which all the positive results of their collective efforts had come to pass”<sup>7</sup> After this exercise Ray was absolutely surprised by her students’ reaction and completion of the activity. The gross realization of this exercise was students were so overridden by anxiety and fear for the future they could not even visualize or imagine a climate changed future. Ray continues to state in her writing:

The generation growing up in this age of global warming is not lazy or feigning powerlessness. Instead they are asking *why* they should work hard, and to what end. The bigger problem comes back to their being so frozen by their fears that they are unable to desire - or yes, even imagine – the future.<sup>8</sup>

With this mindset it is imperative we begin to address the toll climate change has on our emotions. If you do a quick search about climate change, eco-grief or climate anxiety, most of the articles and information you find has a “doom and gloom” feel to their title. A feeling of hopelessness, the end is coming, despair and just an overall feeling of this is our reality and well it is just depressing. This may be the case, but for most families and children being outside and enjoying the beauty of our earth is where we can begin to establish a connection of love, concern and hope for our earth. Even when things look grim and lack hope for someone or something you love, most of us don’t shrug our shoulders and say – “what can I do”? “It’s out of my control” or “I can’t make a difference”. No. We would fight and do whatever it took to hang on and provide longevity of relationship with that person, species or object we love. So why are we so quick to look at our ability to make a difference in the impact of climate change? I think we have lost our connection and love for the natural world. In a NPR podcast about talking to your child about climate change, Dawn Danby and her daughter do something very simple together – they get outdoors and notice the natural world surrounding them. Danby shares of her experience while exploring the outdoors with her daughter:

Look at the bugs and think about what the bugs are doing ... everything has a role to play here." She's raising her daughter to understand the web of relationships in nature rather than dwelling on ecological damage, because, she says, "I have a rationale around this that it's very hard to defend what you don't love."<sup>9</sup>

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<sup>6</sup> Ray, Sarah Jaquette. 2020. *A Field Guide to Climate Anxiety: How to Keep Your Cool on a Warming Planet*. Oakland: University of California Press.

<sup>7</sup> Ray, Sarah Jaquette. 2020. *A Field Guide to Climate Anxiety: How to Keep Your Cool on a Warming Planet*. Oakland: University of California Press.

<sup>8</sup> Ray, Sarah Jaquette. 2020. *A Field Guide to Climate Anxiety: How to Keep Your Cool on a Warming Planet*. Oakland: University of California Press.

<sup>9</sup> Kamenetz, Anya. 2019. "How to talk to kids about climate change." *NPR*. October 24. Accessed October 3, 2021.

Being outside with my kindergartners is one of my favorite things about kindergarten. There natural curiosity of the world around them is endearing and exciting to see. The amount of love and excitement of finding a worm, or a nut, or flower or other species crawling on the wall or ground is overwhelming for them at times, that their excitement cannot be contained. With this being the foundation of how children are naturally inquisitive of their environment and love to be outside is where as educators we can reconnect their love for the natural world. From this mindset we can begin to talk about what as five and six year olds we can do to love, care for and respect our earth together to make the world a better and safer place for all of use to live – animals and humans. It is easy to get kids excited to talk about animals, habitats, plants, trees and people and being outside, but what about climate – how do we begin to talk about the climate and the impact it is having on us as well as animals. Here are six ideas to use to start the conversation about climate change in your classroom or at home taken from NPR podcast about talking to kids about climate change. First we need to “break the silence”<sup>10</sup> – climate change is happening. We hear about and see the effects of climate change daily in our lives, so why would we try to keep something so relevant and prevalent in today’s world from our children – it is all about emotions. Climate anxiety and emotional grief is real, but not talking about it does not provide children the information and conversations needed for them to grapple with and sort out their feelings about climate. As educators and parents, we need to provide a safe place for children to talk about their feelings, concerns and worry and take those and think outside the box of what can we do to try to do our part. As crazy as some of their ideas might seem establishing the love and respect for the earth will provide a good start on what they can do to help. Second, “give your kids the basic facts” – take out personal feelings, political spins and other perspectives and simply state the facts. Susie Burke – a climate psychologist shares the following script to use when giving the basic facts to children:

Humans are burning lots and lots of fossil fuels for energy, in planes, in cars, to light our houses, and that's putting greenhouse gases into the air. Those gases wrap around the planet like a blanket and make everything hotter. A hotter planet means bigger storms, it melts ice at the poles so oceans will rise, and it makes it harder for animals to find places to live. And it's a really, really big problem, and there are a lot of smart people working hard on it, and there's also lots that we can do as a family to help.<sup>11</sup>

Third, use what kids love to do – get outside! You don’t have to live near the mountains or the beach. We our surrounded by our natural world and children will find species anytime they are asked or challenged to go find a bug, a flower, a stick. Ask a child to bring you something interesting they find outside. Go on a scavenger hunt – you will be inundated with plants, nuts, acorns, and places where they have found bugs, squirrels and lizards to only name a few. Everyday outside on the playground I have a kindergartener bring me something from the earth and their excitement and desire to share the joy is contagious. This desire to be outside is one of the ways to start talking about climate change.

With the impact of emotions and eco-grief – addressing the social and emotional impact on learning throughout this curriculum unit is very important. From the same podcast I used the

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<sup>10</sup> Kamenetz, Anya. 2019. "How to talk to kids about climate change." *NPR*. October 24. Accessed October 3, 2021.

<sup>11</sup> Kamenetz, Anya. 2019. "How to talk to kids about climate change." *NPR*. October 24. Accessed October 3, 2021.



final three concepts as the foundation and focus of this curriculum unit to address eco-grief and climate emotions. Allowing conversations to happen and using our emotions, addressing the problem and focusing on meaning or what we can do is what my unit and activities use as a basis to start talking about climate change with my kindergartners. In my three-part focused curriculum our basis from every conversations is feeling focused, problem focused and meaning focus.

### *Feeling, Problem and Meaning Focused Coping*

Throughout my unit we will address feelings about climate, problems we face regarding climate and what does it all mean as we learn how to be a climate conscious citizen. Susie Burke is an environmental psychologist in the emerging field of climate psychology. She writes about the three big positive responses we can have as educators, parents and advocates of children in response to the stress and impact of climate change – “emotion-focused coping, problem focused coping and meaning focused coping.”<sup>12</sup>

What are you feeling? How does that make you feel? These are questions that I say countless times throughout my day in my classroom. We have class meetings, and conversations about all sorts of topics and we just sit on the carpet and talk. When talking about climate change and students questions – we have to listen to their feelings and talk about those feelings. Acknowledge their feelings, but also provide a framework of brainstorming of what could we do to feel differently. Ask for suggestions or ideas to talk about what we can do to change why we might be sad about climate change or worried. It's our job to be open to "hearing how children might be feeling and thinking about the climate crisis and be able to help the children to manage those feelings."<sup>13</sup> Once you talked about these feelings you can begin to talk about what you can do to take action. This is where I really believe change can occur and children can begin to see the hope in their actions and begin to change their potential feelings of despair, fear and sadness into a place of care, love, respect and pride.

So now what – what's next? Take action – what will we do to be part of the solution. In my classroom I also try to establish a mindset of you cannot complain about something unless you have an idea of what you can do differently, or to make the situation better. This is where we can have conversations about being activist. Yes – students can become activist as young as five or six and in their classroom and community, especially when their love and care is the driver for the passion they have to promote change. In Mary DeMocker's book, *The Parents 'Guide to Climate Revolution: 100 ways to Build a Fossil-Free Future, Raise Empowered Kids and Still Get a Good Night's Sleep*, she provides an easy and quick read of what you can do to embark and empower your child and family to become part of a climate revolution. It focuses on community, the idea of each of doing our part is a good notion, but will not keep the climate from changing, however becoming more connected with each other and our earth can start a climate revolution - “from embracing simplicity parenting, to freeing yourself from dead-end science debates, to teaching kids about the power of creative protest, to changing your lifestyle

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<sup>12</sup> Kamenetz, Anya. 2019. "How to talk to kids about climate change." *NPR*. October 24. Accessed October 3, 2021.

<sup>13</sup> Kamenetz, Anya. 2019. "How to talk to kids about climate change." *NPR*. October 24. Accessed October 3, 2021.

in ways that deepen family bonds, improve moods and reduce your impact on the Earth.”<sup>14</sup> This book provides so many different ideas for families (and I believe classroom and schools) at all levels of time, budget, and introversion or extroversion, from actions of "stewardship" for the environment like composting and picking up trash, to civic engagement, like writing a letter or showing up to a local meeting or protest.<sup>15</sup> What better way to take action than as a class, together, for the common good of society where our love and respect for each other and the earth is a reason to come together and do something to make a difference. Finally, once we include our feelings, our action in addressing the impact of climate change we focus on meaning – finding hope within in our actions and becoming part of the solution.

Promises, another central mindset of kindergarteners. A promise will get students motivated to do lots of things in the classroom. They love to make promises, pinky promises, and talk about what they promise to do. Promises is another way I am going to change the fear of climate anxiety or eco-grief when talking to kindergarteners about climate change to one of hope, care, love and promise. Meaning focused thinking is about thinking: “how to frame the problem so that we can continue to hope and not collapse into cynicism, apathy or despair.”<sup>16</sup> How can we together do something to help, what is our promise. Allowing children to know there are many people in the world working on climate change will help them realize they are not alone. As we allow students to take the initiative and lead as we need to surround them with our help and conversations, but provide them space to come up with their own ideas and thoughts. Another strategy is to “focus on the many benefits of a sustainable future, like more social justice, stronger communities, better health”<sup>17</sup> which can be part of our climate promises as we work together to build stronger families, communities as we make a difference together creating and respecting this beautiful gift we have be giving called Mother Earth.

## **Instructional Implementation**

Teaching Strategies – turn and talk, partner share, anchor charts, read-aloud, guided discussion

### *Academic Conversations*

In order to provide meaningful and purposeful conversations teachers can use the turn and talk as well as think, pair and share strategies

### *Videos*

Throughout the unit videos maybe used to provide further information through a different media to engage learning and discussion. Some videos will be included in the unit, others recommended for potential use and some as background knowledge for students as well as teachers before teaching the unit.

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<sup>14</sup> DeMocker, Mary. 2018. *The Parents' Guide To Climate Revolution - 100 Ways to Build an Fossil Free Future, Raise Empowered Kids, and Still Get a Good Night's Sleep*. Novato: New World Library.

<sup>15</sup> Kamenetz, Anya. 2019. "How to talk to kids about climate change." *NPR*. October 24. Accessed October 3, 2021.

<sup>16</sup> Kamenetz, Anya. 2019. "How to talk to kids about climate change." *NPR*. October 24. Accessed October 3, 2021.

<sup>17</sup> Kamenetz, Anya. 2019. "How to talk to kids about climate change." *NPR*. October 24. Accessed October 3, 2021.

### *Anchor Charts*

Anchor Charts – Create throughout the unit. K-W-L charts, Venn diagrams, and charts/tables throughout various lessons to help children be able to see and use the anchor charts within the unit. Anchor Charts will be used and teacher created (with picture support if needed) throughout the unit to help facilitate discussion, collect ideas, as well as provide a tool for students to refer to throughout the unit.

### *Mentor Texts/Read-Aloud*

Using specific read-aloud about climate and others will provide the opportunity for specific teacher guided conversations to help scaffold discussions about the given topics. Specific annotated examples of mentor texts and the most important texts for this unit and are in Appendix 3.

### **Lessons/Activities**

This curriculum unit is to span about four to five weeks being taught preferably in the spring. Depending on your calendar year starting around Earth Day – April 22nd and finishing the unit around World Bee Day May 20th is a preferable timeframe and time of year to teach the unit.

### *Unit Overview*

## **"Bee" a Climate Conscious Citizen - Taking Care of our Climate, Classroom and Community** **A 3 Part Focused Curriculum - Emotion, Problem and Meaning**

Pacing - Unit Length – 3-4 weeks

### **Week 1 - Introduction to Climate - Part 1** 2-3 days

Objective – students will learn about weather and climate. Students will talk about the similarities and differences of climate and weather.

### **Week 1 – Part 2 - What is Climate Change?** 3-5 days

Objective – students will learn about climate changes, different factors of climate change and begin to make an anchor chart focused on feelings, problems, and action to help create climate promises for the end of the unit.

*Feelings* - Feeling Focused - emotion focused coping - How we feel about our earth and the earth's climate.

*Taking Action* - Problem Focused - problem focused coping - What can we do? What are others doing already?

*Climate Promises* - Meaning Focused - meaning focused coping - Finding Hope - Being a part of the solution (3 Part Anchor Chart - How we Feel. What is the Problem? What can we do? Our Promises and Hope for the Future)

Read Mentor Texts

The Magic School Bus and the Climate Challenge – Joanna Cole and Bruce Degen  
Fever on the Land – Stephen Aitken  
Earth's Fever – Stephen Aitken  
Fever at the Poles – Stephen Aitken  
Fever in the Oceans – Stephen Aitken

### **Week 2 Food Insecurities - Why are Bees Important? 3-5 days**

Objective – students will learn why bees are important. What is pollination? What impact do bees have on pollination and the effect on our food?

Read Mentor Text

The Honey Makers – Gail Gibbons  
What if There Were No Bees. – Suzanne Buckingham Slade

### **Week 3 – Part 1 Becoming a Part of the Solution 3-5 days**

Objective – students will learn what is an activist? Students will be able to answer the following questions - What can we do to help save the bees? What can we do to help save the forests? What we can do to help protect our earth and help against climate change? What promise can we make to help protect the earth from climate change?

### **Week 3 – Part 2 Culminating Project - 3 days**

Objective - students will create and make a display to show their learning throughout the unit about climate change. Using a Mother Earth Project - Parachute - Class will create and paint the earth out of their handprints onto the parachute. Class will create a bee and put their promise to help be a climate conscience citizen on the bee. Students will place the bees on the Earth on the parachute made from our handprints.

**Extension Activity** – From our promises and solutions – Could create a bee friendly classroom/school garden with local flowers and vegetation.

### *Classroom Lessons and Implementation*

#### **Week 1 - Introduction to Climate – Part 1 (2-3 Days)**

Objective – Students will learn about weather and climate. Students will talk about the similarities and differences of climate and weather. Before starting the unit read *The Magic School Bus and the Climate Challenge*. Determine whether you will use all, some or use it for background knowledge to teach the unit.

#### *Day 1-2 – Show - [What is the difference between Climate and Weather?](#)*

- Assess Prior Knowledge
  - Make a K-W-L Chart about Climate Change. Have students tell what they know and what they want to know about climate and climate change.

#### *Appendix 3*

- Make a T-Chart with the words Weather and Climate *Appendix 3*

- After watching the video discuss what they learned and know about weather and climate
- Make sure to include the following in your T- Chart
  - Weather Definition – the conditions outside at a specific place and time. Make sure to include types of weather on your chart.
  - Climate Definition – the pattern of weather and weather conditions over a long period of time. Make sure to include different types of climate zones – Artic, Tropical and Temperate. Put the following habitats into the climate zones - desert, forest, grasslands, oceans, rivers, artic etc.
- Show Climate for Kids – [Learn about Different Weather and Climate Zones](#)
  - Make new anchor chart about the 3 Climate Zones – Artic, Tropical and Temperate (warm and cool). Talk about what lives and the type of weather in the various climate zones.
  - Revisit T-chart and add any new information learned from video

*Day 2- 3 –Talk about Different Types of Climate/Habitats*

- Make an anchor chart with the different climate zones. On the chart be sure to include the type of weather in the climate as well as some of the animals that live within each climate region. Split chart into four parts to discuss four different climate regions where animals live. After reading about or learning about artic, desert, forest and ocean habitats – add them to the different Climate Zones with the animals you might find there. Make sure to focus on Temperate Climates – being this is where most of human life inhabits. *Appendix 3*
- Use the following questions to begin exploring and brainstorming the effects of climate on animals and humans.
  - What do you think will happen if it gets too hot/cold for an animal to live in a certain area? Why do you think animals might have to move somewhere else to live? Why do you think people might have to move somewhere else to live?
- Use Brain Pop Junior videos if needed for instructional purposes about climate/habitats.
  - [Brain Pop Junior - Artic Habitats](#)
  - [Brain Pop Junior - Desert Habitats](#)
  - [Brain Pop Junior - Forest Habitats](#)
  - [Brain Pop Jr - Ocean Habitats](#)
- Make Habitat Book - After talking about each habitat – have students draw a picture of an animal that lives in the given habitat and what they eat from their habitat. Put all of the students’ pictures together into their Animal Habitats Book. If students are not able to write or label drawings have students dictate their ideas behind their drawings and what they mean. Teacher will write for the student if necessary.

- Closing – Have students share their pictures of the animals and the habitat. After students have shared if no one included humans decide in what climate habitats humans may also live. Talk about why humans can live in some of the habitats and not in other areas.

### Week 1 – What is Climate Change? – Part 2 (3-5 Days)

Throughout this part of the unit create Unit Anchor Chart - Feeling, Problem and Meaning (Solution) Chart. As you go throughout the unit fill in the anchor chart about students' feelings about Climate Change. What are some of the problems of climate change? What can we do or what are some ways to help climate change?

*Feelings* - Feeling Focused - emotion focused coping - How we feel about our earth and the earth's climate.

*Taking Action* - Problem Focused - problem focused coping - What can we do? What are others doing already?

*Climate Promises* - Meaning Focused - meaning focused coping - Finding Hope - Being a part of the solution (3 Part Anchor Chart - How we Feel. What is the Problem? What can we do? Our Promises and Hope for the Future) *Appendix 3*

Read Stephen Aitkens Book Series about Climate Change or The Magic School Bus and the Climate Challenge. In my classroom I will be using the Book Series on Climate Change

### *Day 1-4*

- Each Day read one of the following books each of the four days –
  - Earth's Fever
  - Fever on the Land
  - Fever in the Oceans
  - Fever at the Poles
- For Each Book create an anchor chart to summarize what students learned about climate change in each area. Include “hot facts” from the book as well “cool ideas” to talk about the fever in each area as well as what solutions people have done or we can do. *Appendix 3*
- Use the guiding questions from the unit. After reading the book – How we feel? What is the problem? What are some of the solutions? What can we do? *Appendix 3*
- At the end of each day have students draw a picture of what they learned from each book. Have them draw something they learned and what they can do from each book. Make sure to keep each drawing from each day to use again or send home at end of unit. If students are not able to write or label drawings have students dictate their ideas behind their drawings and what they mean. Teacher will write for the student if necessary.
- After each book make collaboration posters. Divide the class into 4 groups. Have students use their pictures from earlier in the week to decide which poster they would like to work on. Have students draw a picture of one of the hot facts from each book as well as a cool idea from each book. Add each students drawing onto a larger piece of paper with the Title of the Book with students drawings displayed on the class collaboration poster.

- o One poster for Earth's Fever with hot facts learned and cool ideas
- o One poster for Fever on the Land with hot facts learned and cool ideas
- o One poster for Fever in the Oceans with hot facts learned and cool ideas
- o One poster for Fever at the Poles with hot facts learned and cool ideas

#### Day 5

- Show [Climate Change Video](#)
  - o Revisit anchor chart about weather and climate Add any new information to anchor charts. *Appendix 3*
- Key Ideas/Components from Video to be included in discussion and Anchor Chart
  - o 3 Factors of Global Warming – Fossil Fuels, Farming, Forests
    - Fossil Fuels – Gas
    - Farming – Food
    - Forests – provide wood for things we need
- Complete K-W-L Chart adding to the last column what students have learned about climate change. *Appendix 3*

#### Week 2 Why are Bees Important? (3-5 days)

Objective – students will learn why bees are important. What is pollination? What impact do bees have on pollination and the effect on our food?

If possible try to find a local beekeeper to come and talk to the class about bees.

#### Day 1-2

- Choose one of the Books about Bees
  - o Read The Honey Makers by Gail Gibbons
  - o Read What if There Were No Bees - Suzanne Buckingham Slade
- After reading the book use the guiding questions from the unit to discuss – How we feel? What is the problem? What are some of the solutions? What can we do?
- Make a Chart about the Importance of Bees with the following components
  - o What Bees Need. What Bees Do? What can hurt Bees? Why are bees important to me? *Appendix 3*
  - o After reading both books fill in Importance of Bee Chart from knowledge learned about bees.

#### Day 3

- Watch video on Pollination - [Sesame Streets Word of the Day - Pollinate](#)
  - o Discuss what pollination is and why it is important.
- Watch video on Pollinators - [Flower and Pollinators](#)
- Watch video [Like Fruit - Thank a Bee!](#)
  - o After watching the videos – talk about pollination and why it is important. Add information to Importance of Bees Anchor Chart *Appendix 3*
  - o Explain to students without bees we would not have lots of our favorite foods so it is very important we try to help the bees and take care of our environment and the things bees need to live and pollinate flowers.
- Closing - Read or watch video - [Save the Bees](#)

#### Day 4

- Go on a bee walk. Keep track of how many bees you see. Where are they? What are they doing? When you return to the classroom have students share what they saw and draw a picture to share with the class.
- Do the [Bee and Flower Activity](#)<sup>18</sup> or [Busy Bees Activity](#) I adapted for kindergarteners.

#### Day 5

- Visit from local beekeeper – before the visit make a class thank you card to give to the bee keeper after their visit or mail it to them.
- Make a thank you card from the class to give to the beekeeper.
- Make an anchor chart about using the following question stems - How we feel about bees. What is the climate doing to hurt the bees? What can we do to help protect the bees? *Appendix 3*
- Read about Eunita from Kenya who is the founder of a community garden that promotes the natural process of pollination. Found in the book – Old Enough to Save the Planet – Loll Kirby. If you do not have the book you can do a search on Eunita Atitwa to learn more about her preservation of bees and the education of people about pollinators.
- After talking about the importance of bees and pollination have a local beekeeper come in a visit your classroom if possible.
- If you cannot arrange a visit from a local beekeeper use video from Elmo’s World to close out learning about bees. [Sesame Street Elmo's World - Bees](#)

### Week 3 – Part 1 Becoming a Part of the Solution (3-5 days)

#### Day 1- 2

- Using the anchor chart with the guiding question about the unit ask students how they feel about climate change now. Using a different color revisit the chart used throughout the unit. Talk about our feelings now, have we learned about any new problems, do we have any new ideas of what we can do.
- Begin to discuss with students the ideas of a promise. Ask them what is a promise? Have you made a promise before? Who do you make a promise with?
- Tell students they are going to learn about children and people that are making a difference and have “promised” to help our earth, take care of the earth and help fight climate change. We call people that do things to make a change or difference an activist. Introduce Greta Thunberg to students explaining she is one of the best know climate activists and she is a teenager
- Read the Book – *Greta and the Giants*
  - Ask students the following questions.
    - Who is Greta Thunberg?
    - Where does the story take place? Who/What are the giants in the story?
    - What was the problem in the story?
    - What did the giants learn in the story?
    - How can we stand up against “giants” today who are not taking care of the earth and seeing how beautiful and special the forests are?

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<sup>18</sup> Salzman, Nina. 2021. "Growing a Wild NYC Urban Pollinator Curriculum." *National Wildlife Foundation*. April 12. Accessed October 15, 2021.



- Talk about the quote – “No one is too small to make a difference.”<sup>19</sup> What does it mean? Can you make a difference? What can you do? Show the video of her speech she gave on December 15, 2018. [Greta Thunberg - COP24 - You are never too small to make a difference](#)
- Have students draw a picture of what they can do to make a difference – how can we be like Greta Thunberg.

### Day 3

- Read the book - *Old Enough to Save the Planet* (or find other examples of young climate activists to share with the class.)
  - Talk about all the different real-life children taking action about climate change.
  - After reading about each child and area of the world. Ask students the three main questions from the unit. How do you feel after learning about these children? What was the problem they tried to fix? What did they do to make a difference or change?
- Appendix 3*
- Have students draw a picture of their favorite activist from the book? Why did they choose that child? Allow time for children to share their pictures and thoughts.

### Day 4-5

- Revisit and talk about coping strategies when teaching and learning about climate change as well as the K-W-L chart from the beginning of the unit.
  - *Feelings* - Feeling Focused - emotion focused coping - How we feel about our earth and the earth’s climate.
  - *Taking Action* - Problem Focused - problem focused coping - What can we do? What are others doing already?
  - *Climate Promises* - Meaning Focused - meaning focused coping - Finding Hope - Being a part of the solution (3 Part Anchor Chart - How we Feel. What is the Problem? What can we do? Our Promises and Hope for the Future)
  - Add to the chart writing down students feelings about climate change, problems they see and solutions they learned about. Use the following books to help them realize what they can do to help promote change and make the “Climate Promise” Chart *Appendix 3*
- Read the following books to help students brainstorm and decide on their “climate promises”
  - *I Can Save the Earth* – Allison Inches
  - *The Earth Book* – Todd Parr
- Make a Class Climate Promises Chart
  - Make a final anchor chart of each students climate promise. Include name and their promise to be displayed alongside the “Bee” a Climate Conscious Citizen Culminating Project. *Appendix 3*
  - Have students draw a picture of their climate promise and write their promise to go alongside their picture.
  - Save pictures to display with parachute at the end of the culminating project.

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<sup>19</sup> Persico, Zoe Tucker and Zoe. 2019. *Greta and the Giants* inspired by Greta Thunberg's Stand to Save the World. Minneapolis: Frances Lincoln Children's Books.

## Week 3 – Part 2 Becoming a Part of the Solution – Culminating Project

### *Day 1*

- Visit the website Mother Earth Project
  - [Mother Earth Project - Planet Parachutes](#)
    - Show the students picture of parachutes for the planet that have been created around the world by people who want to do something about climate change and help our planet.
    - Pre-watch the videos in the website to see if it is appropriate for your students and classroom.
    - Make sure to show the video/picture of the parachutes and begin to get students excited about creating our very own Classroom Climate Promises Parachute
    - Make sure to read about or watch the video on how to make parachute
    - Look for other ideas from the website of activities to do to help promote excitement about the Parachutes for the Planet project.

### *Day 2 – 4*

- Begin to place students' handprints on the parachute to make the earth out of their handprints.
- Have students make a bee out of construction paper to place on the parachute. Once they have created their bees. Have them write their climate promise to be displayed on the parachute of the earth with their "Bee" a Climate Conscious Citizen Promise. Students can use the "Bee" a Climate Conscious Citizen Promise Anchor Chart for reference.  
*Appendix 3* For sustainability students' handprints can be used to make handprint bees and then have them write their promise next to the bee and have an adult write over top of the promise with a permanent marker.

### *Day 5*

- Have a celebration. Invite administration, fellow students, teachers, families and community leaders to your class.
- Have students share what they have learned about climate change. Have them share how they will show love, care and respect of our earth and others through their "Bee" a Climate Conscious Citizen Promises.
- If students made construction paper bees and drew pictures of students Climate Promises display the bees and drawings outside the classroom alongside the anchor chart of "Bee" a Climate Conscious Citizen Promises Anchor Chart
- Reveal the Parachute for the Planet the class created to those in attendance.
- Celebrate all you have learned and did with your students.

"No one is too small to make a difference!" Celebrate your class and students doing their part to make a difference.

### **Appendix 1: Implementing Teaching Standards**

Throughout the unit, students will engage in various learning opportunities and activities that will cover most of the following standards found in the kindergarten through second grade such as reading standards for literature, foundational skills, speaking and listening standards and writing standards as found in the NC Course of Study. For the purpose of this unit, most of the activities and conversations will provide opportunities for learning in the following standard.

#### **READING STANDARDS FOR LITERATURE**

##### **Key Ideas and Evidence**

RL.K.1 With prompting and support, ask and answer questions about key details in a text.

RL.K.2 With prompting and support, retell familiar stories, including key details.

RL.K.3 With prompting and support, identify characters, settings, and major events in a story.

##### **Craft and Structure**

RL.K.4 With prompting and support, ask and answer questions about words in a text that suggest feelings or appeal to the senses.

##### **Integration of Ideas and Analysis**

RL.K.7 With prompting and support, describe how the words and illustrations work together to tell a story.

##### **Range of Reading and Level of Complexity**

\*RL.K.10 Actively engage in group reading activities with purpose and understanding.

#### **READING STANDARDS FOR FOUNDATIONAL SKILLS**

##### **Print Concepts**

RF.K.1. Demonstrate understanding of the organization and basic features of print.

a. Follow words from left to right, top to bottom, and page by page.

b. Recognize that spoken words are represented in written language by specific sequences of letters.

c. Understand that words are separated by spaces in print.

#### **WRITING STANDARDS**

##### **Text Types, Purposes, and Publishing**

\*W.K.1 Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book.

- a. With guidance and support from adults, respond to questions and suggestions from adults and/or peers and add details to strengthen writing as needed.

### **Research**

\*W.K.5 Participate in shared investigation of grade appropriate topics and writing projects.

W.K.6 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

## **SPEAKING AND LISTENING STANDARDS**

### **Collaboration and Communication**

\*SL.K.1 Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

### **Presentation of Knowledge and Ideas**

\*SL.K.4. Speak audibly and express thoughts, feelings, and ideas clearly.

\*SL.K.5. Add drawings or other visual displays to descriptions as desired to provide additional detail.

## **LANGUAGE STANDARDS**

### **Conventions of Standard English**

L.K.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; demonstrate proficiency within the K-1 grammar continuum.

L.K.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing; demonstrate proficiency within the K-1 conventions continuum.

## **SCIENCE STANDARDS**

### **\*Structures and Functions of Living Organisms**

K.L.1 Compare characteristics of animals that make them alike and different from other animals and nonliving things.

K.L.1.1 Compare different types of the same animal (i.e. different types of dogs, different types of cats, etc.) to determine individual differences within a particular type of animal.

\*K.L.1.2 Compare characteristics of living and nonliving things in terms of their: • Structure • Growth • Changes • Movement • Basic needs

### **Ecosystems - 1st Grade**

\*1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive.

1.L.1.1 Recognize that plants and animals need air, water, light (plants only), space, food and shelter and that these may be found in their environment.

1.L.1.2 Give examples of how the needs of different plants and animals can be met by their environments in North Carolina or different places throughout the world.

1.L.1.3 Summarize ways that humans protect their environment and/or improve conditions for the growth of the plants and animals that live there. (e.g., reuse or recycle products to avoid littering.)

## **SOCIAL STUDIES**

### **Geography and Environmental Literacy**

\*K.G.2 Understand the interaction between humans and the environment.

K.G.2.1 Explain how people adapt to weather conditions.

K.G.2.2 Explain ways people use environmental resources to meet basic needs and wants (shelter, food, clothing, etc.).

## **Appendix 2: Materials List**

### For Culminating Activity

- Parachute from Mother Earth Project
- Paints for the Handprint Earth and Bees
- Permanent Markers/Fabric Marker

### Materials for Bee and Flower Pollination Activity – Busy Bees Activity

- 20 pipe cleaners–10 yellow, 10 black, cut into 3–4 inch sections
- Gauze cut into 2 inch strips (optional)
- Double sided tape or velcro tape
- Small paper bags (one per student)
- About 100 assorted colored small pom-poms or felt balls with 6 different colors
- Crayons or markers for each table

### Everyday School Supplies

- Plain white paper
- Glue
- Scissors
- Various color crayons, markers and colored pencils
- Templates or copies of various activities for each section
- Construction Paper to make bumble bees
- Poster Paper
- Drawing Paper

**Appendix 3: Student Resources – examples of anchor charts and templates to use throughout the unit**

Week 1 – Day 1 - Climate Change K-W-L Chart

What do we know about Climate or Climate Change?	What do we want to learn about climate and climate change?	What have we learned about climate and climate change?
<i>Add students prior knowledge about content</i>	<i>Add students questions and what they want to learn</i>	<i>Add students' answers and responses to what they learned throughout the unit.</i>

Week 1 – Day 1-2 - Climate and Weather T-Chart

<p>Weather – the conditions outside at a specific place and time.</p> <ul style="list-style-type: none"> <li>• Types of weather</li> </ul>	<p>Climate - the pattern of weather and weather conditions over a long period of time.</p> <ul style="list-style-type: none"> <li>• Climate Zones – Artic, Tropical, Temperate</li> <li>• Types of Habitats in each Climate Zone</li> <li>• Animals Habitats found in each zone</li> </ul>
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Week 1 – Day 2/3 – Habitats and Climate Zones

<p>Artic Habitat</p> <ul style="list-style-type: none"> <li>• Animals found in habitat</li> <li>• Type of weather in habitat</li> </ul>	<p>Desert Habitat</p> <ul style="list-style-type: none"> <li>• Animals found in habitat</li> <li>• Type of weather in habitat</li> </ul>
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<ul style="list-style-type: none"> <li>• What climate zone can you find this habitat?</li> </ul>	<ul style="list-style-type: none"> <li>• What climate zone can you find this habitat?</li> </ul>
<b>Ocean Habitat</b> <ul style="list-style-type: none"> <li>• Animals found in habitat</li> <li>• Type of weather in habitat</li> <li>• What climate zone can you find this habitat?</li> </ul>	<b>Forest Habitat</b> <ul style="list-style-type: none"> <li>• Animals found in habitat</li> <li>• Type of weather in habitat</li> <li>• What climate zone can you find this habitat?</li> </ul>

Week 1 – Day 1 – What is Climate Change? 3 Guiding Questions for Unit

Use one color marker for the first time you fill in the chart. Each time you revisit the chart after reading a book or watching a video change the color of your marker to distinguish a different time of discussion.

What do we FEEL about Climate or Climate Change?	What is the PROBLEM?	What can we DO?
<i>Emotion focused coping - How we feel about our earth and the earth's climate.</i>	<i>Taking Action (Problem focused coping) - What are the problems? What are people doing to take action about the problems? (Effects of climate change? What are humans doing to cause climate change?)</i>	<i>(Meaning Focused Coping) Add students' answers and responses to what we can do in response to our climate issues or problems</i>

Week 1 – Part 2 – Days 1-4 T- Chart

Title each T-Chart accordingly to go with each text.

- o Earth's Fever
- o Fever on the Land
- o Fever in the Oceans
- o Fever at the Poles

<b>“Hot Facts”</b> List facts from each book – can change color for each book or make a new t-chart for each book	<b>“Cool Ideas”</b> List ideas from each book – can change color for each book or make a new t-chart for each book
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Week 2 – Day 1 – Bees KWL Chart

What do we know about bees?	What do we want to learn about bees?	What have we learned about bees?
<i>Add students prior knowledge about content</i>	<i>Add students questions and what they want to learn</i>	<i>Add students' answers and responses to what they learned throughout the unit.</i>

Week 2 – Days 2/3 - 3 – Guiding Curriculum Questions about Bees

Use one color marker for the first time you fill in the chart. Each time you revisit the chart after reading a book or watching a video change the color of your marker to distinguish a different time of discussion.

How do we FEEL about bees?	What are some of the PROBLEMS bees are facing today?	What can we DO to help the bees?
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Week 2 - Days 2-3 The Importance of Bees Anchor Chart

What do Bees Need?	What do Bees do?	What can hurt bees?	Why are bees important?
<i>After reading about bees and watching videos add students' responses to what bees need.</i>	<i>After reading about bees and watching videos add students' responses to what bees do.</i>	<i>After reading about bees and watching videos add students' responses to what can hurt bees.</i>	<i>After reading about bees and watching videos add students' responses to why bees are important.</i>

Week 3 Day 3 – Old Enough to Save the Planet Anchor Chart

How do you feel after learning about these children? What was the problem they tried to fix? What did they do to make a difference or change?

How do we FEEL about these child activists?	WHO are some of the child activists?	What are some of the PROBLEMS they are trying to fix?	What are they DOING to make a difference or change?
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Week 3 Days 4/5 - Class Climate Promises Chart

“Bee” a Climate Conscious Citizen – Our Climate Promises

Student Name	Climate Promise	What/How are we going keep our promise? (Taking Action)
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Week 3 – Part 2 Culminating Project

Sentence Frame to be used in conjunction with construction paper bees and climate promises.

I promise to \_\_\_\_\_ by \_\_\_\_\_.  
Love, \_\_\_\_\_ (students' name)



#### **Appendix 4: Mentor Texts, Supplemental Texts and Videos**

\*If you cannot find or have all of these books feel free to use a book in its place that will still allow for culturally diverse and culturally sensitive academic conversations about climate change to promote completion of activities in the unit.\*

#### **Week 1 – Introduction to Climate, Weather and Climate Change**

*Mentor Texts for Read-Aloud & Other Suggested Texts*

Cole and Degen, *The Magic School Bus and the Climate Challenge*

A book to provide a good over view of climate change from the famous *Magic School Bus Series*. Mrs. Frizzle and her students embark on a challenging journey and quest to learn about climate change, global warming, greenhouse effects, carbon footprints, climate solutions and ways to make a change regarding climate change.

Aitken, Stephen, *Fever on the Land, Fever at the Poles, Fever in the Oceans and Earth's Fever*  
Part of a four book series about climate change and its effects and what you can do to help preserve the planet. The books focus on temperature rise on the earth, poles, oceans and land due to climate change. In each book Aitken shares “hot facts” about various topics within each book as well as “cool ideas” what people and scientists are doing to combat and fight the effects of climate change on our Earth.

*Videos*

[Climate Change](#)

This video teaches students about climate change and some of the potential causes of climate change like – greenhouse effects, fossil fuels, farming and deforestation and the problems the cause.

### [Climate for Kids - Learn about Different Weather and Climate Zones](#)

This video teaches about the different climate zones on earth, the weather and types of living species in each zone. Students will learn about the vast places on earth and the weather and type of climate in each area.

### [What's the difference between Climate and Weather?](#)

A simple short video that addresses the difference between weather and climate.

## **Week 2 – Why Are Bees Important?**

### *Mentor Texts for Read-Aloud & Other Suggested Texts*

Gibbons, Gail, *The Honey Makers*

A non-fiction text that teaches how honey is made. Every page of the book looks at the scientific concepts of bees, how they make honey and the remarkable creatures they are.

Buckingham Slade, Suzanne, *What if There Were No Bees.*

This book examines and looks at the significance of bees to our food chains and ecosystems. Students will learn what can happen if there are no bees and the effects of having no bees on our food supply.

### *Videos*

#### [Like Fruit? Thank a Bee](#) – SciShow Kids

A fun and simple video about bees. If you like bees – you need to thank our pollinator friends – bees. A good video to help show the benefits of bees to help children understand their importance and hopefully lessen their fear of bees.

#### [Flowers and their Pollinators](#) - SciShow Kids

Squeaks and Mister Brown look at some pollinators and how they pollinate flowers. They also teach the importance of pollination.

#### [Busy Bees](#) - - SciShow Kids

This video helps distinguish the difference between the buzzing creatures outside – honeybees and bumblebees. A good video to help show the benefits of bees to help children understand their importance and hopefully lessen their fear of bees and promotes understanding of what bees are doing as they buzz around us.

#### [Save the Bees](#)

An animated video of the book – Save the Bees by Bethany Stahl. This engaging children's book comes to life in the video to teach about pollination and includes activities after the story is over. Save the Bees heartwarming lesson of environmentalism and conservation that will stay with the students for a lifetime.

#### [Pollinate](#)

A video produced by Sesame Street – this video looks at the “word on the street” – pollinate. A quick video with different explanations and depictions of pollination and the word - pollinate from adults and kids on the street at Sesame Street.

### [Elmo’s World - Bees](#)

An excerpt from Elmo’s Wonderful World. Elmo wonders and explores about bees. Teaching students about pollination of flowers, how flowers grow and making of honey.

## **Week 3 – Becoming Part of the Solution?**

### *Mentor Texts for Read-Aloud & Other Suggested Texts*

Tucker and Persico, *Greta and the Giants – inspired by Greta Thunberg’s stand to Save the World*

A wonderful picture book that retells the story of Nobel Peace Prize Nominee Greta Thunberg for Very Young Children. Great lives in a forest that is threatened by giants. The book shows what the giants do to the forest as well as what happens the giants don’t stop hurting the forests. Thankfully Greta has an idea. At the end of the book students can learn and read more about Greta as well as ideas of what they can do to help Greta and some ideas like Greta.

Kirby, Loll, *Old Enough to Save the Planet*

A beautifully written and illustrate children’s picture book about child activist from around the world. The book features 12 real life children who students meet and learn what they are doing to make a difference in climate change. It also includes a how-to-help section with simple steps to empower students at home and school.

Inches, Alison, *I Can Save the Earth*

A cute little book about Max a little monster who likes to litter and never recycles. When the power goes out Max sees how beautiful and exciting the earth is a what he can do to help protect the earth. From Little Green Books – green books for green readers – Max is a little monster who learns the importance of the Three R’s and how to reduce, reuse and recycle.

Parr, Todd, *The Earth Book*

A positive message book about taking care of the earth. It gives ways to protect the earth and take care of it. Not only will these choices protect the earth it will make students feel good, provide hope and let them know – if we take care of the earth – the earth will take care of us.

**Appendix 5: Teacher Resources**  
**Rubrics and Checklist**

*Speaking, Listening & Writing Checklist*

<b>Student Name</b>	
• Continue conversation and discussion through multiple exchanges	• retell stories with details
• ask and answer questions about a text	• ask and answer questions about words related to feelings and senses (with prompting and support)
• understand and participate in group (or class) reading activities.	• identify the similarities and differences in two texts on the same topic.
• use drawings, dictations, and writing to express opinions, write information or explanations, or narrate an event.	• add details to strengthen their composition (with guidance and support)
• participate in group investigations of grade appropriate topics, as well as writing projects.	• gather information from provided sources and recall information from personal experiences to answer a question (with guidance and support)

*Activities and Culminating Task Rubric*

<b>Beginning</b>	<p>The student has a simple sense of the culminating task.</p> <ul style="list-style-type: none"> <li>● Minimal understanding of concept</li> <li>● Minimal details and colors in pictures</li> <li>● No labeling, words or sentences to portray their thoughts</li> </ul>
<b>Developing</b>	<p>The student is developing understanding what is being asked of the culminating task.</p> <ul style="list-style-type: none"> <li>● Has developing understanding of concept, teacher provides some support to help student share ideas and thoughts <ul style="list-style-type: none"> <li>● Some details and colors in pictures</li> </ul> </li> <li>● Some labeling, words or sentences to portray their thoughts</li> </ul>
<b>Proficient</b>	<p>The student has a good sense and understanding of the culminating task.</p> <ul style="list-style-type: none"> <li>● Good understanding of concept is able to portray their thoughts and ideas through words and pictures <ul style="list-style-type: none"> <li>● Many details and colors in pictures</li> </ul> </li> <li>● Uses words and/or simple sentences to portray their thoughts</li> </ul>
<b>Advanced</b>	<p>The student has a very strong understanding and sense of the culminating task.</p> <ul style="list-style-type: none"> <li>● Strong understanding of concept</li> <li>● Very detailed picture with lots of details</li> </ul> <p>Uses inventive spelling and sentences to portray their thoughts</p>

*Unit Task Assessment*

<b>Student Name</b>	<b>B – Beginning D-Developing P – Proficient A- Advanced</b>	<b>Comments</b>
<p>Week 1 Part 1 – Climate and Weather</p> <p>The student is able to share what they learned about climate and weather through conversations and work samples.</p>		
<p>Week 1 Part 2 – Climate Change</p> <p>The student is able to share what they learned about climate change through conversations and work samples.</p>		
<p>Week 2 – Importance of Bees</p> <p>The student is able to share what they learned about bees and their important role in pollination through</p>		

conversations and work samples		
Week 3 – Becoming Part of the Solution - Activism The student is able to share ideas and concepts climate solutions by telling about a climate activists and what they are doing through conversations and work samples.		
Week 3 - Culminating Project <i>Climate Promises</i> The student is able to share their climate promise, draw a picture of their promise and create a bee to display with their promise.		
Week 3 - Culminating Project <i>Participation in Parachute Creation</i> Students adds their handprint and promise to class Parachute for the Planet		

## **Appendix 6: Other Helpful Resources**

### **Research Texts**

DeMocker, *The Parents Guide to Climate Revolution*

Ray, *A Field Guide to Climate Anxiety*

Bill Bigelow and Tim Swinehart, *A People's Curriculum for the Earth*

### **Other Suggested Texts**

Winter, Jeanette, *Our House is On Fire – Greta Thunberg's Call to Save the Planet*

French, Jess, *What a Waste – Trash, recycling, and protecting our planet*

### **Websites**

[Mother Earth Project](#)

[Climate Kids](#)

[Teach About Climate Change - NASA Climate Kids](#)

[Climate Learning Resources](#)

[We Need Bees - Planet Bee Foundation](#)

## [Climate Justice Booklist for Kids](#)

### **Additional Articles For Reading/Listening To**

[Eight Ways to Teach Climate Change in Almost Any Classroom](#)

[The Importance of Bees](#)

[Nation's Largest Teacher Union Endorses Teaching "Climate Justice"](#)

[Global Warming threatens North Carolina's Bees](#)

[Three Things You Can Do to Help Local Pollinators](#)

[How to Raise Climate-Resilient Kids](#)

[How to Talk to Kids about Climate Change \(and Have Fun, Too\)](#)

[How to Soothe Climate Anxiety with Hope and Action](#)

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- Salzman, Nina. 2021. "Growing a Wild NYC Urban Pollinator Curriculum." *National Wildlife Foundation*. April 12. Accessed October 15, 2021.  
<https://www.nwf.org/-/media/Documents/PDFs/Eco-Schools/Growing-a-Wild-NYC-Curriculum-FINAL-lo.ashx>.