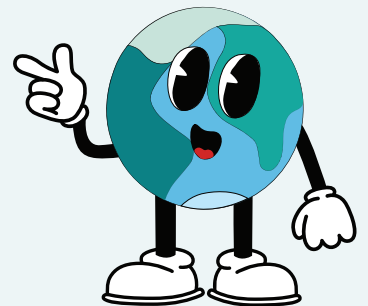# A TOOLKIT FOR CLIMATE STORYTELLING

You can help children and youth understand:
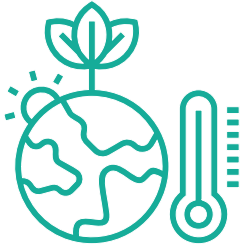
OUR WORLD IS CHANGING, BUT, TOGETHER, WE CAN MAKE THE CHANGES WE NEED FOR A BRIGHTER FUTURE.

Suggested Citation:

Planet Media. (2024). "A Toolkit for Climate Storytelling," The Aspen Institute: Washington, D.C. https://www.thisisplaneted.org/resources/climate-storytelling-toolkit.

The 2.4 billion children and youth globally, including <u>74 million</u> in the United States, increasingly experience the realities of our changing climate: schools closed for "heat days," more time indoors due to wildfire smoke, food insecurity because of drought, worsening asthma and allergies, evacuations from homes, and loved ones harmed or lost due to extreme weather.[1]

Despite climate change impacting their lives and shaping their future, children and youth have little opportunity to understand why this is happening and what they can do.

RIGHT NOW:

Teens are worried:

84% <u>of children and young people</u> surveyed indicated a moderate to extreme level of worry about climate change.

Teens have misconceptions:

<u>Recent surveys</u> highlight misconceptions among teens about climate change—including that nearly half of teens believe the hole in the ozone layer is a major cause of climate change.

Children and youth have insufficient opportunity to learn about it in school:

Only 32 states and DC include human-caused climate change in science standards, and only 9 states include it in social studies standards.[2]

CALL TO ACTION →

Kids media can help children, youth, and families understand our changing climate using hope, humor, and solutions. This can minimize misconceptions and worry and build knowledge and agency essential for future understanding, well-being, citizenship, and economic success.

WHY?

- **Kids media has done it before.** From addressing mental health to social justice, children's media has helped spark curiosity, build empathy, and empower young audiences to see themselves as active participants in shaping a better world.

- **There is demand.** <u>65%</u> of teens have said they want to know how climate change will affect the future. And <u>74% of parents</u> have indicated they want children's media to include narratives about climate solutions.

- **Young people look to media.** <u>56% of teens</u> have suggested they learn "some" or "a lot" about climate change through media.
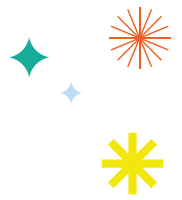
Creatives can...

INSPIRE • ENGAGE • EMPOWER • INFORM • MOTIVATE

WHETHER YOU WANT TO DEVELOP
A WHOLE SHOW, A STORY LINE, OR
EMBED CLIMATE SOLUTIONS IN YOUR
CHARACTER'S WORLD, THIS GUIDE
OFFERS IDEAS, STRATEGIES,
AND TIPS TO HELP.

TABLE OF CONTENTS

THE FOUR ESSENTIAL CLIMATE PRINCIPLES

We get it, climate change can be a confusing topic, even for adults! It's certainly not something most adults today were formally taught. That's why we partnered with The Nature Conservancy and their Chief Scientist to clarify core climate concepts for everyone, including how to explain them to kids.
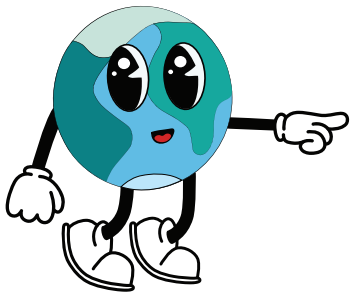
Our world is changing, but, together, we can make the changes we need for a brighter future.

1 EARTH IS OUR HOME.

The Science: Our Earth has an invisible blanket of heat-trapping gases that naturally traps just the right amount of heat to create the perfect temperature for us to live—it's not too hot or too cold. These gases include carbon dioxide, methane, and water vapor. Other planets have different blankets—Mercury's blanket is too thin, so it gets too hot in the sun and too cold in the shade; Venus' is far too thick so it stays way too hot all the time; Earth is just right for life.

Why? This helps children and youth understand the base: Our atmosphere has created the just right climate for life and that humans are a part of and depend upon our environment to thrive.

2 EARTH IS GETTING HOTTER BECAUSE OF US.

The Science: Humans are making our planet's natural blanket thicker by adding more heat-trapping gases to the atmosphere. This extra carbon pollution comes from electricity (how we make power), transportation (how we get around), manufacturing (how we make things), food (how we grow things to eat), buildings (how we live), and land-use (how we change the land and take care of nature). As all the carbon pollution is building up in the atmosphere, it's making the planet warmer.

Why? This helps children and youth understand:

THE CHANGE: Our carbon pollution emissions are making the Earth's blanket thicker, trapping more heat and making our planet hotter.

THE CAUSES: Our carbon pollution comes from electricity, transportation, manufacturing, buildings, agriculture, and land use.

ThisIsPlanetEd.org   Content Creators Toolkit
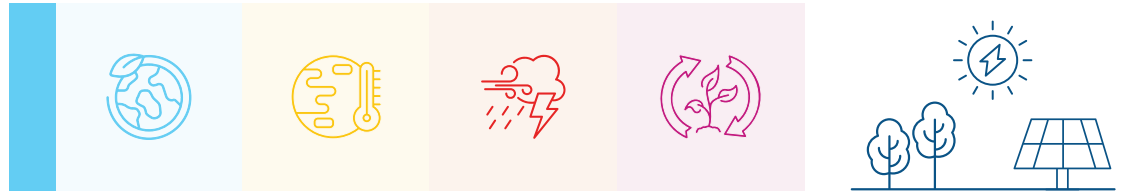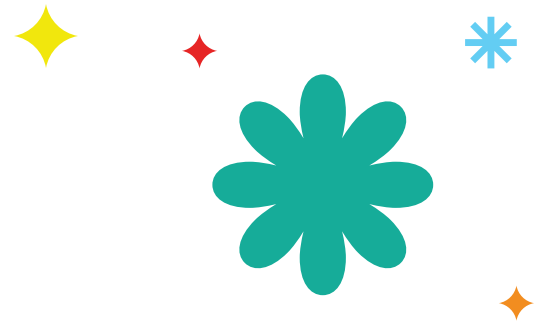
3 OUR CLIMATE IS CHANGING NOW, AND THAT HARMS US.

The Science: As the planet warms, our weather and climate changes. Wet is wetter, dry is dryer, and hot is hotter. Storms, floods, and wildfires are more dangerous. This is affecting what we do, the way we work, and how we live. It's impacting us all, but it is hurting some people more than others: people who have less are being harmed more.

Why? This helps children and youth understand the consequences: Our changing climate impacts people, animals, and nature all across the world and in many ways.

4 BUT TOGETHER WE CAN BUILD A BRIGHTER FUTURE.

The Science: We can make a difference.

MITIGATE: We can get rid of carbon pollution in how we make power, get around, make things, live, and grow food to eat. This includes shifting to clean energy, sustainable food systems, and nature-positive actions.

ADAPT: We can prepare for the ways climate change might impact us and make decisions to help keep our homes and communities safe.

COMMUNICATE: We can use our voice! We can tell people why this matters, what we are doing, and what they can do to help.

LEARN: We can learn more about climate change, including new jobs and other things we can do to make a difference, and we can create new ideas to help our communities and the world.

COLLABORATE: We can care for each other and our planet. We can make a difference —in our homes, our schools, and our communities—when we work together. We can create a pathway to a brighter future.

Why? This helps children and youth understand solutions: Our future is in our hands. We have solutions to reduce our impact on the climate and adapt to a changing climate. We can learn more about what we can do and talk about it to help others understand what they can do. This work requires both individual and collective change to have impact at scale.

CONNECTING THE DOTS
KEY STRATEGIES FOR CLIMATE STORYTELLING

When telling climate stories, these four content strategies offer flexible approaches that work across different platforms and age groups and can help ensure children and youth understand essential climate principles in a way that avoids current misconceptions and empowers understanding.

Drawing on insights from child development, media studies, and climate communications, these strategies can be seamlessly woven into character routines or serve as the driving force behind larger narratives. By connecting challenges with real-world solutions, balancing individual efforts with collective action, and making climate change feel relevant through familiar settings, creators can craft stories that entertain, inspire hope, and motivate action.

STRATEGY:
CONNECT PROBLEMS TO SOLUTIONS.

WHY:
This can help build understanding of the main drivers and impacts of climate change, while addressing anxiety by making it clear what can be done.

DO:

✔ **Show problems alongside related solutions.** If a story focuses on carbon pollution from electricity, it can also show how we can get electricity from clean sources like solar and wind. If a story highlights high heat, it might also talk about going to the playground at a cooler time of day or staying in the shade if outside.

✔ **Highlight problem-solving strategies.** Stories can show characters grappling with how to better understand problems, brainstorming ideas, and determining effective solutions.

AVOID:

✗ **Problems without solutions.** Avoid stories that emphasize the problems of climate change without solutions and/or hope. Problems without solutions can leave children and youth with concern and worry.[1]

✗ **Putting the burden on children and youth to be the only ones to solve climate change.** Avoid stories where children and youth, in isolation, have to solve the problems of adults. Highlight stories that show children and adults working together.

✗ **Problems solved by "magic."** Avoid stories where characters can solve their problem instantly. While magic can have a powerful role in storytelling, balancing creativity with achievable solutions can help model practical thinking while creating space for innovation.

Content Creators Toolkit
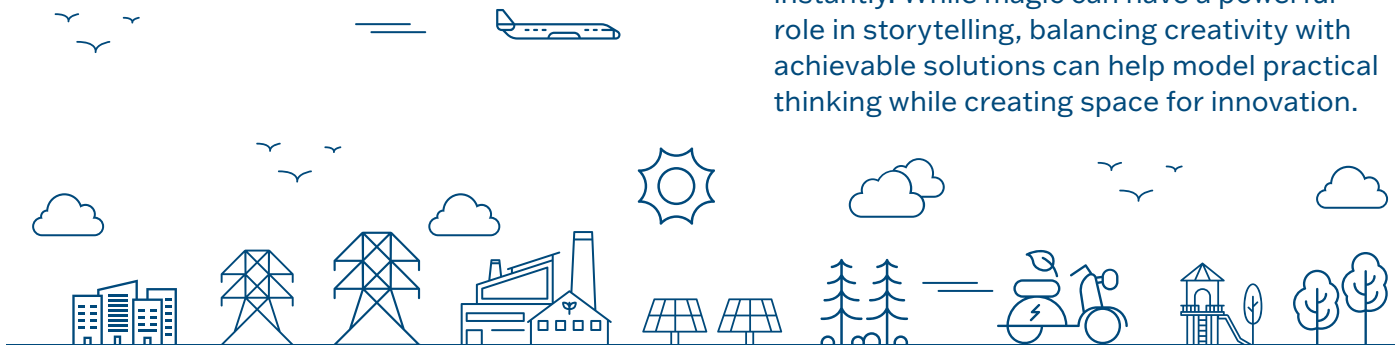
YOUR ACTIONS MATTER, AND WORKING TOGETHER MATTERS EVEN MORE.

WHY:

Action on climate change will require both individuals and systems to change. Highlighting small actions that young people can build confidence in their ability to contribute to change.[2] However, stories must also demonstrate that real change happens when action is taken at scale and at a systems level.[3]

DO:

✔ **Incorporate community collaboration and collective action.** Show kids working together with their friends, school, or community to solve local climate challenges, like creating a community food waste program, running for office, writing climate legislation, or advocating for changes in their school's food or energy choices.

✔ **Highlight the power of talking about solutions.** Talking about solutions, what people are doing, and what people can do inspires others to act and builds broader momentum for action.

AVOID

✘ **Over-emphasizing individual action.** Narratives that only highlight individual actions as sufficient (like turning off a light) can lead young people to have feelings of betrayal when they better understand the size and scope of the problem.

✘ **The quick fixes.** Avoid stories where characters solve problems in one easy action, like planting one tree or cleaning one park. Instead, show how meaningful change happens through ongoing efforts.

✘ **Suggesting climate action means always being front and center.** Avoid only showing extroverts as leaders. Include characters contributing in diverse ways—organizing, supporting, raising awareness—so kids see their own strengths reflected.
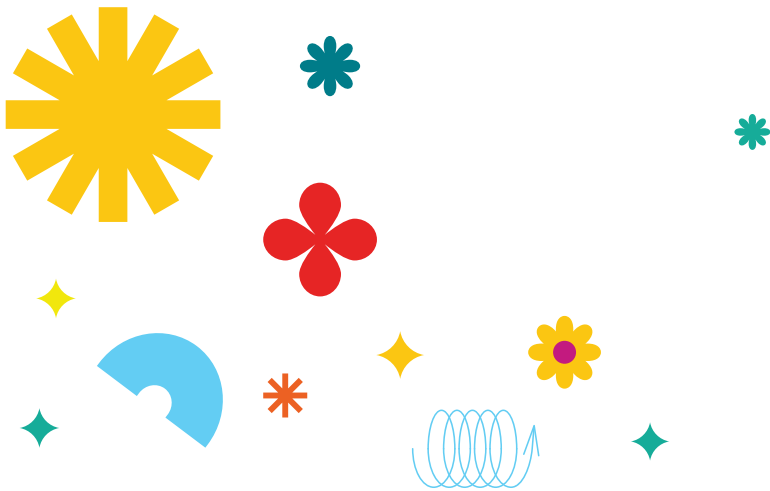
STRATEGY:

WE ARE PART OF, NOT SEPARATE FROM, NATURE.

WHY:

Understanding that we are not separate from nature but deeply connected to and a part of it fosters empathy and responsibility toward people and the environment.[4] This reinforces nature-cultural connections and lays the foundation for building empathy and responsibility for ourselves and nature.[5]

DO:

✔ **Focus on co-existence, not control.** Illustrate how characters work with nature to restore balance, showing patience and ongoing efforts instead of conquering, controlling, or manipulating ecosystems.

✔ **Show that what happens to nature impacts us.** Show climate impacts in your storylines, like extreme heat canceling school or polluted air keeping kids indoors, to demonstrate how people and nature are connected.

✔ **Highlight mutual care.** Present characters relying on natural systems for resources like water or food, while actively sustaining these systems. Introduce ideas from communities, including Indigenous communities, that have lived in balance with nature for generations.

AVOID:

✘ **The "savior" trope.** Don't feature characters "saving" nature in a one-off, heroic act. Emphasize that humans are part of nature's system, benefiting from and sustaining it.
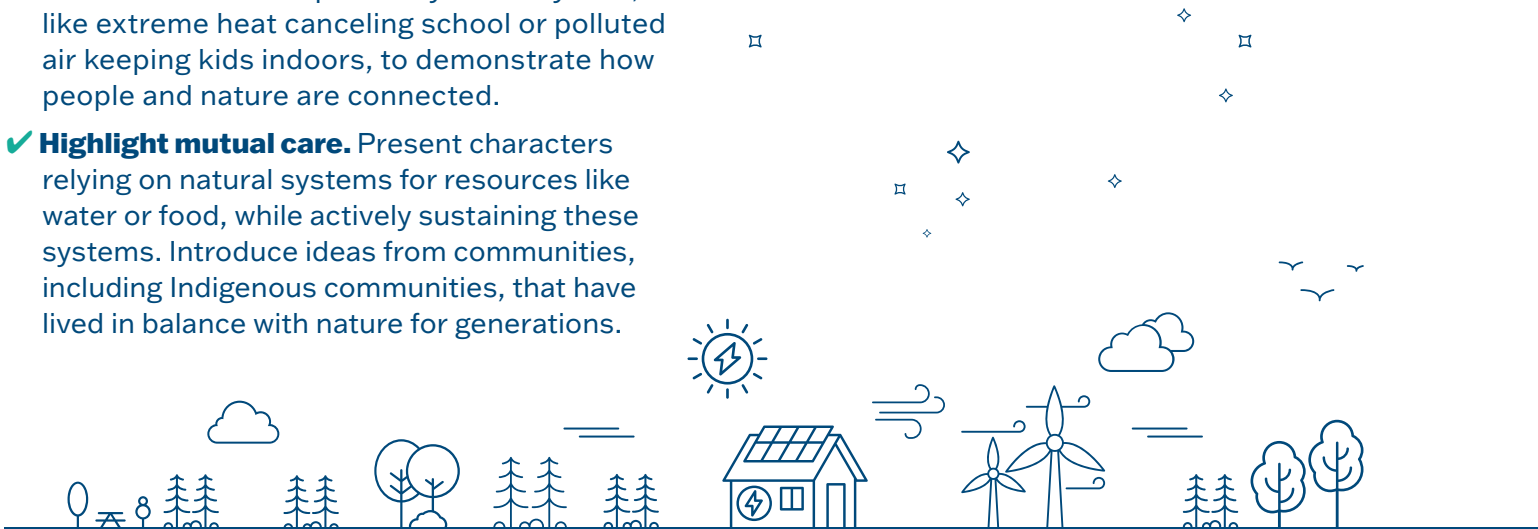
STRATEGY:

LOCALIZE

WHY:

Kids connect more deeply with stories that show climate change affecting their everyday lives. Research shows that when climate issues are presented in familiar places, like schools or neighborhoods, children are more likely to engage and act on those issues.[6]

DO:

✔ **Show climate impacts in familiar, relatable places.** Set stories in places kids know like their local park, school, or neighborhood. For example, show how rising temperatures close down their favorite playground or how flooding makes it hard for them to get to school. Link these local impacts to larger climate trends to show that their community is part of the bigger picture.

✔ **Show characters making a difference in their own communities.** Focus characters on community-driven actions like advocating for changes at their schools, installing solar, building shade structures, reducing food waste, or running for office, as part of an ongoing effort to address local climate problems.

AVOID

✗ **Making climate change feel distant or abstract.** Avoid stories where climate change only impacts faraway places or distant species (e.g., melting ice caps affecting polar bears, or deforestation in remote rainforests). Connecting those stories to something closer to home can help children see the relationship to their lives as well.

COMMUNICATING TO DIFFERENT AGES

AGES 3–5: EYES OF WONDER

Preschoolers see themselves as part of a larger community, where caring for the world around them means caring for each other too. By tapping into their way of seeing wonder everywhere, we help build lasting bonds with the natural world. These connections, formed through play and joy, inspire children to engage with the environment throughout their lives, inspire hope, and motivate action.

3–5 YEAR OLDS

- Assign feelings and personalities to everything around them.[1]
- Copy what they see, especially from favorite characters.[2]
- Learn through concrete, observable cause-and-effect relationships.[3]
- Find comfort in predictable patterns.[4]
- Love being helpers who make immediate, visible differences.[5]
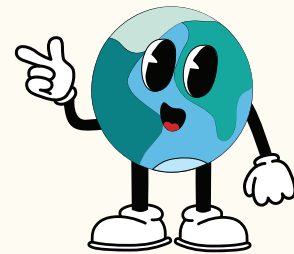
Strategies That Land

Connect problems to solutions: Preschoolers learn through immediate results.

Showing characters creating quick, visible changes, like arranging fallen branches to make cool tunnels on hot days, can reinforce to children their actions matter.

Your actions matter, and working together matters even more: Preschoolers are developing their understanding of being in community.

While collective action may be challenging to understand, scaffolding understanding with questions, direct conversation, and visuals can help. For example, show one character planting a native plant, then a friend joining, then others from the neighborhood, all creating a garden together.

We are part of, not separate from, nature: Preschoolers learn by playing different roles.

Showing characters imagining themselves in roles like "nature detectives" or "park rangers," invites children to develop curiosity and can build understanding for our part in nature and empathy and respect for the natural world.

Localize: Preschoolers love small, predictable rituals, especially when they feel fun and purposeful.

Showing characters regularly engaging with the natural world, composting their food waste, or turning off lights can help children apply these routines in their own lives.
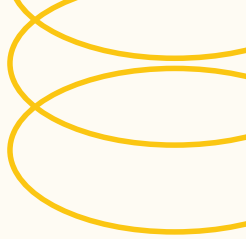
BRIGHT SPOTS

Connect problems to solutions

Octonauts Above and Beyond: "The Quest for Cocoa"

The Vegimals discover cocoa trees withering due to intense heat and prolonged sun exposure, prompting them to find solutions. The episode introduces preschoolers to rising temperatures and extreme weather in a way they can easily understand: the problem is simple and visible (withered cocoa trees), and the solution (finding shade) feels achievable.

Connect problems to solutions

Sesame Street: "Don't take your car today"

Through song and dance, Sesame characters highlight sustainable transportation such as walking, biking, and taking the bus and convince their fellow commuters to get out of their single-occupancy vehicles.

Working together matters more

Daniel Tiger's Neighborhood: "Neighborhood Clean Up"

When a windstorm leaves trash and scattered materials all over the neighborhood playground, King Friday declares it "Cleanup Day," rallying everyone to help. The episode makes the concept of collective action concrete, showing how tasks that seem too big for one person become manageable when a community works together.

We are part of nature

Spirit Rangers – "Blizzards and a Blankets"

A climate-displaced polar bear brings unexpected snow to the local park of three Chumash and Cowlitz siblings. Trapped by an avalanche, the show's three young heroes freeze in fear. After acknowledging it's okay to be scared, Mom shares a calming Samala song she uses when she is scared. Once grounded, they help their new friend find her way back home.

Credit: Netflix

AGES 5–8: MINDS IN MOTION

Climate change isn't a future concept for today's 5–8 year olds; it's part of their everyday lives, and they want to understand why. Their drive to make sense of change, combined with their blossoming social awareness, makes them ready for stories that show communities adapting and evolving together.

5–8 YEAR OLDS

- Understand and predict changes in their routines and environment.[6]
- Connect cause and effect in their daily world.[7]
- Piece together what different people know about the same situation.[8]
- Engage best when discovery feels like an adventure or uses "insider knowledge".[9]
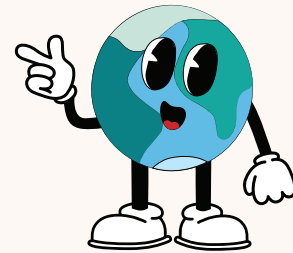
Strategies That Land

Connect problems to solutions: Kids this age crave activities with visible results, and they want to know what they can do.

Showing characters identify problems, develop solutions, and put their ideas into action can help foster kids desire to be problem-solvers and act.

Your actions matter, and working together matters even more: Kids this age are starting to understand that people may have different perspectives than their own.

Highlighting characters with different ideas, learning from each other, and navigating how to make decisions in community can help further build understanding of collaborative action.

We are part of, not separate from, nature: Kids this age are eager to ask questions and solve mysteries.

Climate change gives them many new questions to explore. Showing everyday questions, like "why are mosquitos out in November?" can help tap into kids' innate curiosity.

Localize: Kids this age are observant of the world around them and notice and apply patterns.

Implicitly embedding solutions in familiar places, like solar panels on school buildings, can help kids see these solutions as normal, expected, and routine.
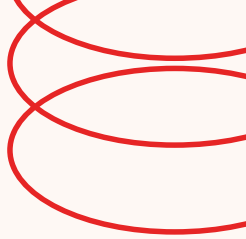
BRIGHT SPOTS

Connecting problems to solutions

Molly of Denali: "Not-So-Permafrost"

Characters discover their clubhouse is half sunken into the ground. Through conversions with Elders, they learn about permafrost and why the permafrost is melting. They work with community members to solve the problem by putting the clubhouse up on pilings that are driven deep into the frozen layer below.

Working together matters more

Arthur: "Muffy's Car Campaign"

The characters see tailpipe emissions of vehicles by their school and draw connections between transportation and carbon emissions in the atmosphere. They campaign for cleaner transportation at their school and grapple with concerns that Muffy's father, a car salesman, might have his job impacted. He learns about the benefits of electric vehicles and helps the school acquire electric school buses.

We are part of nature

Future Chicken!: Chickin 'In-Forgetful

Future Chicken and planet protector Bello, an eco-conscious mushroom, talk about the regenerative power of mushrooms. As they grow, thousands of mycelial threads are sprouted, harmoniously connecting forests, enabling collective action and communication while exemplifying our interconnectedness with nature.

Localize

Jane: "Ursus maritimus"

Jane, her monkey Greybeard, and her best friend, David, enter an imaginary world to track a polar bear to figure out why they spend so much time alone. With the help of their lonely neighbor, Mr. Jin, they discover the value of apologies, and they learn about reducing energy consumption to help address climate change. They speak with Jill Heinerth, a real-life explorer, to learn about how melting sea ice hurts arctic animals and what everyone can do to help.

Embedding solutions

The Magic School Bus Rides Again

At the beginning of each episode, viewers see the students' school equipped with solar panels and wind turbines.


Credit: Netflix

AGES 9–12: SYSTEMS THINKERS IN TRAINING

At 9–12, kids are starting to piece together how their world interconnects—from local to global, personal to planetary. When smoke from distant wildfires cancels their soccer game, they want to understand why, and they want to do something about it. They crave real stories about real change. Show them both the challenges and possibilities of climate action, respect their ability to handle complexity, and connect them to concrete ways to make a difference.

9–12 YEAR OLD

- Learn how small actions create bigger outcomes, both now and in the future.[10]
- Experiment with roles in their friend groups and discover what fits.[11]
- Explore ways the world could change and experiment with how they can shape it[12]
- Connect to authentic characters and real-world challenges with visible stakes.[13]
- Can handle complexity (and are frustrated when adults oversimplify).[14]
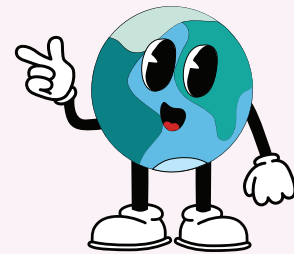
Strategies That Land

Connect problems to solutions: Kids this age are ready to explore different ways of solving big problems.

Showing kids that there's no single "right" way to tackle climate issues can help them understand how unique interests—whether creative, scientific, or collaborative—and different ideas can contribute meaningfully to solutions.

Your actions matter, and working together matters even more: Kids at this age will experience the real-life push and pull of teamwork.

Showing characters navigating social challenges with teamwork can empower tweens to see how persistence and collaboration—not perfection—matter when it comes to collective climate action.

We are part of, not separate from, nature: With increasing demands from school, social concerns, and out-of-school responsibilities, kids at this age increasingly lose their natural connection to the outdoors and nature.

Highlighting characters connecting with nature, rather than solely with other people or technology, can reinforce the importance of continued connections to the natural world.

Localize: 9–12 year olds aren't drawn to preachy or overly idealistic stories because they know the world—especially their own—is rarely that simple.

Highlighting characters grappling with uncertainties, especially on a topic as big as climate change, can help tweens see that it's normal to be in an in-between stage and figuring out their values.
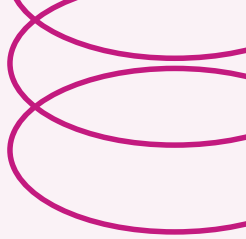
BRIGHT SPOTS

Connect problems to solutions

Nick Jr. News: Season 1, Episode 1

In this 45-minute special, kids learn about the impacts and solutions to climate change. The episode worked to define many relevant terms and solutions including: greenhouse gases, The Paris Climate Agreement, net-zero emissions, carbon footprint, the Environmental Protection Agency, and environmental racism.

Working together matters more

Project Mc²

A group of friends join an organization of female government operatives who are trying to protect the world. The girls leverage STEM skills to solve environmental challenges, including drought. The group designs innovative projects, such as water-powered cars, solar backpacks, and energy generators that use waste, highlighting collaboration and teamwork.

Localize

I Am Greta

This movie follows Greta Thunberg, a teen climate activist. The movie highlights how every young person can make a difference on issues they are passionate about through courage and perseverance. Greta serves as a role model for young people with Asperger's or Autism Spectrum Disorder, referencing her diagnoses as superpowers that can help to tackle complex issues like climate change.

Credit: Nickelodeon

THE WRITE STUFF
EXAMPLES TO INSPIRE STORYLINES

Many of the best stories are inspired by real life experiences. There are five main things we can do to address climate change: communicate, learn, collaborate, adapt, and mitigate. Creators can incorporate these solutions into children's media explicitly in their climate stories or implicitly in their characters' worlds to help normalize solutions in everyday life.

SOLUTIONS FOR EVERYONE: COMMUNICATE, LEARN, COLLABORATE!

Whether you are a student in the classroom, a parent at home, or a neighbor in the community, there are countless ways to contribute to positive change.

Communicate

Climate emotions are real, but two thirds of people never talk about climate change. It is important to voice opinions, concerns, and priorities so that we can understand and work together. We can talk to friends and family members to share why climate change matters, what we are seeing and feeling, and to talk about solutions we've seen, heard of, or are involved in ourselves.

Storytellers can show...

- Characters, news stories, etc. talking about climate change, even when unrelated to the storyline.

Learn

We can learn about new opportunities, solutions, and actions to take and come up with new ideas to help our families, our communities, and the world. Climate change affects every aspect of our lives and climate solutions need all our knowledge and ingenuity.

Storytellers can show...

- Characters learning about climate change through school, informal learning, and media, even when unrelated to the storyline.

Collaborate

To advance solutions at scale, we need to take action in our communities. We can work with neighbors or other community members to advocate for policy change. Volunteer, vote, advocate and take action!

Storytellers can show...

- Characters actively participating in their communities, hosting podcasts, voting in school and local elections, writing letters to or meeting with political leaders, writing legislation, serving on advisory boards, circulating petitions, or running for office.

Real-World Examples

- **Idaho:** Shiva Rajbhandari, a senior at Boise High School, won a seat on the Boise School District Board of Trustees, promising to advocate for comprehensive climate change education in public schools and to push for the district to reduce carbon pollution.

- **Maine:** Amara Ifeji, a youth activist and Director of Policy at Maine Environmental Education Association, established a program to increase opportunities for young women of color to access environmental education.

- **Indiana:** Ethan Bledsoe organized a strike to raise awareness about climate impacts in West Lafayette, Indiana and to advocate for increased learning about climate change in schools.

- **Minnesota:** Students in Saint Paul, called on lawmakers to support a bill to increase climate education in schools.

- **Montana:** Youth plaintiffs won a landmark climate lawsuit, saying the state violated their right to a "clean and healthful environment" by promoting the burning of fossil fuels in state policies.

Photo by Allison Shelley for American Education: Images of Teachers and Students in Action.

CLIMATE IMPACTS AND ADAPTATION SOLUTIONS:
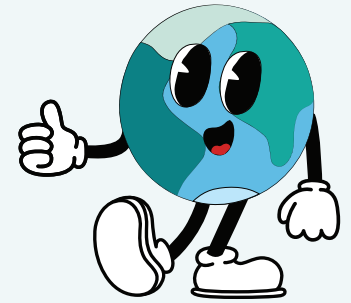
Our changing climate impacts the lives of young people today, we can make better decisions to keep our communities safe.

Climate Impacts

Extreme weather, from flooding to heat waves, is impacting young people, and affecting the physical and mental health of young people.

Storytellers can show...

- *Disruptions:* Characters facing home evacuations or having homes damaged by wildfires, hurricanes, or floods; schools and playgrounds closed for "heat days"; recess, outdoor activities, and team sports canceled or rescheduled due to high heat, smoke, and flooding; news stories about climate events.

- *Health Impacts:* Characters experiencing worse allergies and asthma; food and water insecurity; exposure to diseases from mosquitoes, ticks, and other insects; and concern over climate impacts.

Adaptation

We can prepare for and adapt to the ways climate change might impact us.

Storytellers can show...

- *System and school solutions:* Characters understanding and planning for the ways climate change might impact them, helping others during extreme weather, cooling centers, and resilient infrastructure to prevent climate impacts like flooding and increase shade.

- *Home solutions:* Characters learning and talking about how climate change impacts their community, creating an emergency plan, finding new times to go to the playground if it's too hot, staying inside if there is wildfire smoke, and checking on friends and neighbors to make sure they are okay.

Real-World Examples

- **New Mexico:** After wildfires and floods displaced students, Mora Independent School District provided increased resources for families, including behavioral support, food, and shelter, and engaged students in recovery processes, such as seed planting and water testing.

- **Illinois:** Space to Grow partnered with students from Chicago Public Schools, as well as municipal water agencies and non-profit organizations, to design, construct, and maintain 25 green schoolyards and cool playgrounds that included solar-powered shade structures, misters, rain gardens, and more.

- **California:** In the wake of devastating mudslides and wildfires, the Santa Barbara Unified School District prepared schools to serve as community hubs in the event of power outages and extreme weather by installing solar-powered microgrids.

- **New York:** When a heat wave hit New York City in 2022, the community came together to knock on doors and make phone calls asking people, especially elders, if they needed assistance or to be taken to a cooling center.

"TO CARE ABOUT CLIMATE CHANGE, YOU ONLY HAVE TO BE ONE THING, A HUMAN LIVING ON PLANET EARTH."

— Katharine Hayhoe

CARBON POLLUTION AND MITIGATION SOLUTIONS:

Carbon pollution from electricity, transportation, manufacturing, food, buildings, and our decisions about land and nature add more heat-trapping gases to our atmosphere, making our planet warmer. But there are solutions we can implement today.

Electricity

Carbon pollution comes from burning fossil fuels—like coal, oil, and natural gas—to make electricity. Electricity allows us to turn on the lights, do laundry, charge electronics, watch screens, and more.

Storytellers can show...

- *System solutions:* Electricity from clean and renewable sources like solar farms, wind, geothermal, and nuclear power.

- *School and home solutions:* Schools or homes with solar panels, characters engaging in energy-efficient behaviors, schools or homes with outlets that eliminate "vampire power," LED lights, and efficient appliances.

Real-World Examples

- **Utah:** Andie Madsen and Mahider Tadesse were among student leaders who pushed their school board to develop a sustainability resolution for Salt Lake City School District, with the goal of achieving 100 percent clean, renewable energy by 2030.

- **Florida:** Hannah Herbst, an 8th grade student, became "America's Top Young Scientist" by creating small turbines that draw energy from the ocean.

- **Malawi:** William Kamkwamba, "The Boy Who Harnessed The Wind," designed a windmill to provide electricity to his family and village in the face of famine and drought.
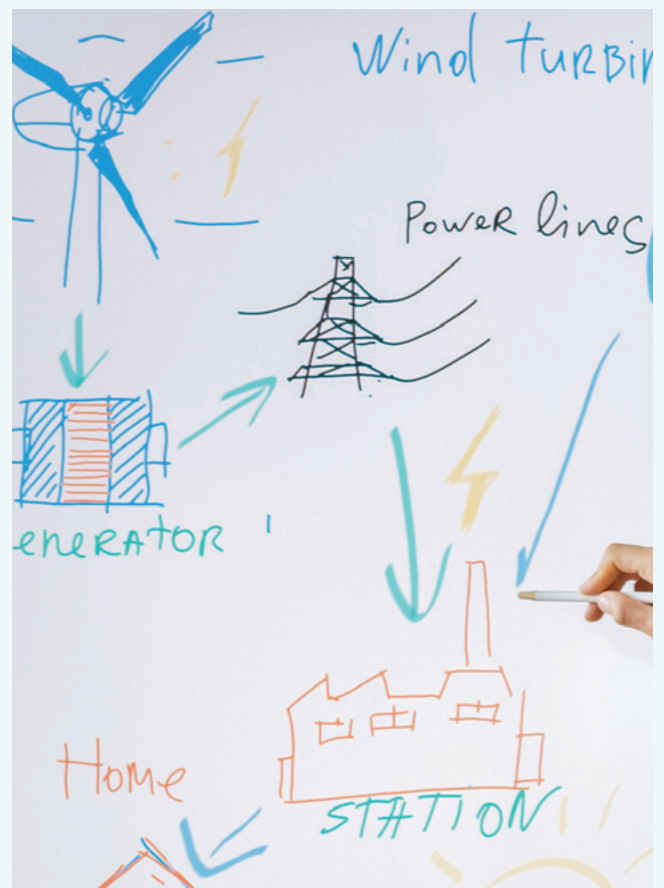
Transportation

Carbon pollution comes from burning fossil fuels to power cars, trucks, airplanes, boats, and trains.

Storytellers can show...

- *System solutions:* Vehicles that run on clean energy like electric cars, accessible public transportation, electric vehicle chargers in communities, and walkable or bikeable communities.

- *School and home solutions:* Characters using electric school buses or "bike buses" where students bike together; carpooling or using public transportation; walking, scooting, or biking.

Real-World Examples

- **Oregon:** Kids at Alameda Elementary School in Portland, reduced their carbon pollution by pedaling to school together in a formation called a "bike bus."

- **Maryland:** Montgomery County Public Schools announced a plan to transition its entire bus fleet to electric through a partnership with Highland Electric Transportation.

- **California:** Gilbert Rosas formerly of Stockton Unified School District raised millions of dollars to bring electric buses to his district.
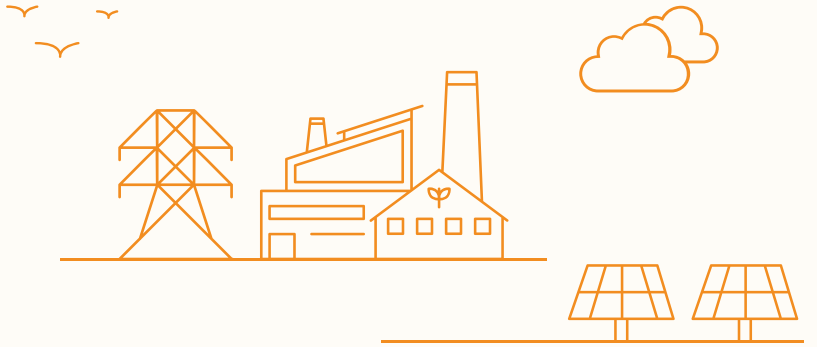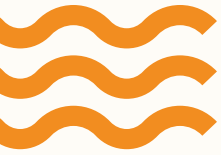
Manufacturing

Carbon pollution comes from the energy and chemical processes needed to make products from the cement in sidewalks to plastic for toys to the clothing we wear.

Storytellers can show...

- *System solutions:* Reusing old materials to make new items and creating new ways to make things that use less energy and reduce emissions.

- *School and home solutions:* Characters reusing, repairing, or repurposing products; shopping second-hand and buying from companies that have efforts to reduce their carbon pollution; mending clothing and repairing broken items; shopping at garage sales or online consignment stores; and organizing a clothing swap or a free clothing/gear exchange.

Real-World Examples

- **United Kingdom:** Students across the country have partnered with Swop It Up to host clothing exchanges in schools.

- **Germany:** The Munich Rudolf Steiner School is home to a student repair shop where community customers bring in items for students to repair, building their technical skills and saving broken items from the landfill.

- **Wisconsin:** The Sevastopol School held a prom dress drive that allowed community members to donate old dresses for students to repurpose.
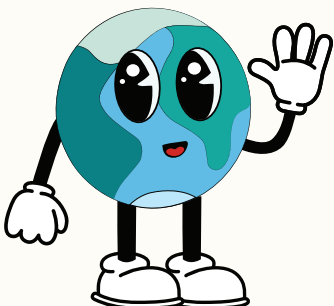
Food

The agriculture sector includes how we grow crops, take care of the soil, raise animals, transport food, and dispose of our food waste and contributes significantly to carbon pollution.

Storytellers can show...

- *System solutions:* Locally-produced food, large-scale food donations, large scale composting programs, and plant-based and local food alternatives at stores and restaurants.

- *School and home examples:* Characters eating more vegetables and plant-based proteins; characters reducing food by using and repurposing imperfect foods; food from local farms or farmers' markets; characters learning about where food comes from; family, community, and school gardens; and plant-based options in school menus.

Real-World Examples

- **Florida:** In 2021, Analysse Humaran and Gianna Hutton González started a Meatless Mondays program to promote planet-friendly, vegetarian food options in Miami-Dade County Public Schools.

- **California:** The San Diego Unified School District's Love Food Not Waste program takes food that has been prepared but not taken by students and makes it available for local hunger relief organizations.

- **Texas:** The Carbon Keepers a group of 6th graders from Lubbock with scientists from Texas Tech University, conducted research and led an educational campaign to increase carbon sequestration in agricultural practices.
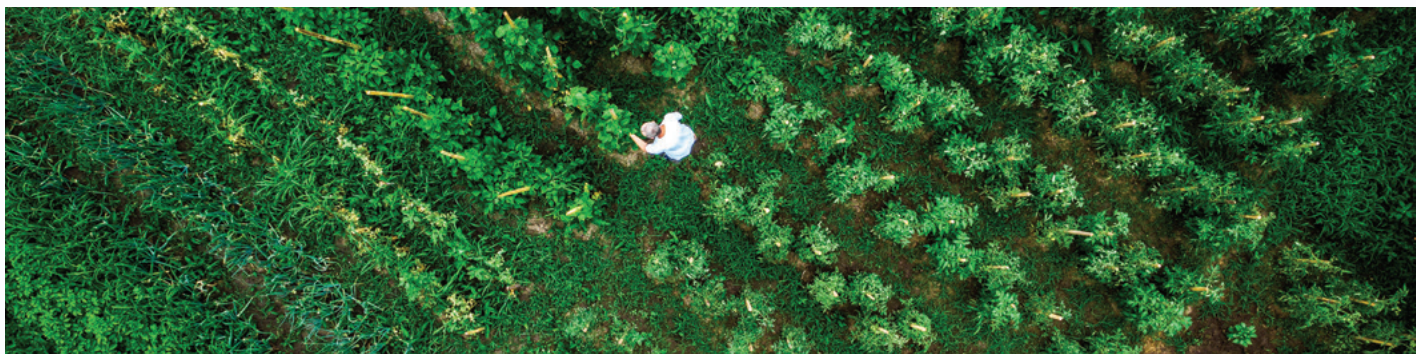
Buildings

Carbon pollution comes from burning fossil fuels to heat and cool homes and buildings, cooking on stove tops, and decisions related to waste.

Storytellers can show...

- *School and home solutions:* Heating and cooling systems that run on clean electricity, like geothermal, cooking systems with induction stoves, schools and homes with insulation and LED lights.

Real-World Examples

- **Scotland:** Students and educators in Falkirk competed to see which school could reduce their energy consumption the most.

- **Florida:** Our Savior's Elementary School in Cocoa Beach uses a white roof to reflect more sunlight and keep the building cooler.

- **West Virginia:** Berkeley County Schools installed geothermal heating and cooling systems in seven schools and made additional energy efficiency upgrades, resulting in a 75% decrease in energy use in those schools.
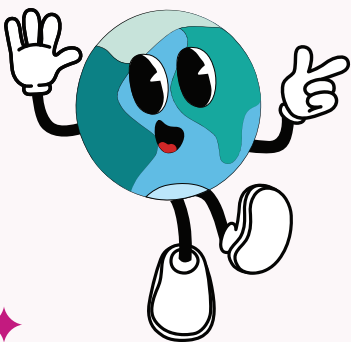
Land-Use

Trees, wetlands, rainforests, grasslands, mangroves, and the ocean help us absorb carbon from the atmosphere. When we cut down ecosystems and damage natural habitats, we reduce the land's ability to capture carbon, and some of the land's carbon is released into the atmosphere as carbon pollution.

Storytellers can show...

- *Systems, school, and home solutions:* Characters protecting and preserving natural habitats; native plants and pollinator-friendly gardens; characters planting trees, tiny forests, and greening urban spaces; green infrastructure; characters using community science apps; and characters visiting local, state, and national parks.

Real World Examples

- **The Philippines:** Louise Mabulo established The Cacao Project, which works with local farmers to restore deforested areas, create economic forests and nurseries, and promote fair trade and pay.

- **California:** Elementary school students from Berkeley Unified School District collaborated to plant dense "pocket" forests on school grounds.

- **United States:** The Girl Scout Tree Promise initiative challenges Girl Scout troops to plant five million trees across the country in five years in order to preserve forests and reduce climate change.

OUR CHANGING CLIMATE SHAPES THE FUTURE FOR TODAY'S CHILDREN AND YOUTH.
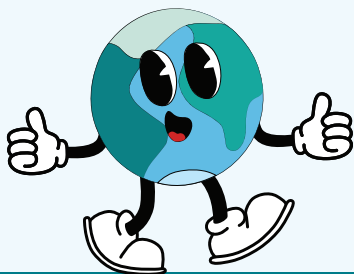
Media provides an untapped opportunity to help them understand our changing world and empower them to make a difference.

COMMUNICATION TIPS USING UNIVERSAL DESIGN FOR LEARNING (UDL)

When telling climate stories, it's important to leverage effective strategies to build understanding. Universal Design for Learning (UDL), a scientifically-based framework grounded in how people best learn, offers some key insights for media makers wanting to build climate understanding for children and youth. Drawing on the UDL guidelines, these strategies can help creators better reach diverse audiences.

To create engaging climate content, media makers should consider opportunities to:

CONNECT.

Connect to people. Highlighting diverse characters, leveraging trusted messengers, and connecting narratives to daily experiences of young people can help make content more meaningful for young people.

FUN.

Make it fun. Storylines that use joy, hope, and humor can capture the attention of young people, create space for learning, and inspire action.
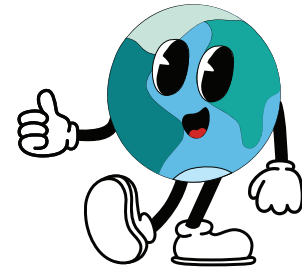
To ensure young people understand climate content, media makers should consider opportunities to provide:

CREATIVITY.

Use images, text, and audio. Where appropriate for the content or story, showing visuals, text, and/or audio can reach more young people and reinforce understanding.

SIMPLICITY.

Keep it simple. Focus on conveying messages in a clear and direct way to help dispel the notion that they are too complicated for people to understand.

EDUCATE.

Define terms. Words like atmosphere and heat-trapping gases may be new for children. Being sure that the visual imagery and script help to define the terms can support understanding.

CLIMATE STORYTELLING AT WORK

In 2023, This Is Planet Ed hosted a Call for Pitches for short-form content to support children ages 8–12 in understanding the essential climate principles. We received hundreds of pitches from across the country. Selected finalists pitched their ideas to a panel of reviewers, including Bill Nye and Nile Rogers. The cohort of creative teams, listed below, is in the process of developing final products.

EARTH IS HOME

Three tweens clap back at climate change in Clap Song (Earth is Home). Based on the viral Cups (When I'm Gone), this climate-action anthem follows three friends that turn overheated frustration into eco-friendly action —reducing energy, sharing and buying second hand, switching to renewable energy, planting trees, and spreading the word. It's a catchy beat to carry as you make everyday decisions that make a difference.

Created and directed by Livia Beasley, Pixel & Pebble
Music video by Spark Pixel
Music by Otto Gross
Original Song by A.P. Carter / Luisa Gerstein / Heloise Maud Tunstall-Behrens

ECO MÚSICA

In a desolate landscape, a young boy spots a peculiar salamander before it escapes into a shimmering puddle. Spurred by curiosity, the boy chases after it, only to be met by a mighty River Spirit who takes the boy on a magical journey— through a time past when the river and the land flourished. He witnesses how people thrived by living harmoniously with each other and their environment and is entrusted with a sacred gift that can help revitalize his barren homeland.

Producer Ad Astra Media
Creators Dr. Jose Morey, Jeff Fine, CJ Zepeda, Marc Sanchez, Ken Nishimoto, and Nick Danzi

LILA GOES VIRAL

A Texas tween's viral YouTube video catapults her into the realm of climate activism after a trip to the Great Barrier Reef inspires her to write a hit song. Lila is determined to use her sudden fame for good through her unique voice—and music!

Creator: Erica Rabner & Robby LeDoux, Fluffy Cloud

PLANET WOW

From the creators of the #1 kids & family podcast *Wow in the World* comes a new epic Geocaching Adventure that will send kids ages 6–12 and their families out on a trailblazing, audio-filled, action-packed adventure in the real world. Families will search for secret stashes of geocaches and ultimately use them to spread the WOW of caring for our world throughout our world!

Creator: Meredith Halpern-Ranzer & Mindy Thomas, Tinkercast

SOLAR PUNKS

In this animated short, heroes from a solarpunk, utopian future travel back in time to help kids find solutions to today's ecological problems. Employing a whimsical, storybook feel, the characters take you on a journey introducing concepts of climate change and environmental stewardship.

Creator: Lindsey Owen

THIS IS COOLER: MIAMI

"This Is Cooler" is a live-action comedy series inspiring tweens & teens to understand climate change in a way that's fun and, well, cool. The pilot episode, now live on YouTube, features the city of Miami Beach, stars Gloria Estefan, and features a remake of her iconic "Conga" song as a "Climate Songa." The episode has garnished over 5M views in less than 1 year.

Creator: Susie Jaramillo, Encantos

LET'S BE THE CHANGE WE NEED

Creator: Anthony Frasier, ABF Creative

WHAT HAPPENED TO THE FIREFLIES?

In this true crime mystery podcast, two siblings go on a detective adventure through their city to uncover the mysterious disappearance of fireflies. With an exciting cast of characters and music, this podcast highlights the power of curiosity and discussion and how close climate change is to home.

Creator: Anthony Frasier, ABF Creative

YO, ZENO!

Zeno, a runaway space prince, finds yet another fun-filled day on Earth disrupted by his clueless Uncle Esko, whose penchant for pollution wreaks havoc on Jeju Island's flora, fauna, and inhabitants. Amid challenges like habitat destruction and climate change, Zeno—reliably flanked by his two best friends, Lou and Bobby—channels his love for Earth into action. Together, the trio combines its collective strengths to courageously thwart one ecological disaster after another.

Creator: Nak Yong Choi and Young Park, Park Star Media
Writer: Yunah Chung

QUICK CHECK

DO

Connect problems to solutions

Does your story...?

- ☐ Show problems alongside related solutions
- ☐ Highlight problem-solving strategies

Your actions matter, and working together matters even more

Does your story...?

- ☐ Incorporate community collaboration and collective action
- ☐ Highlight the power of talking about solutions

We are part of, not separate from, nature

Does your story...?

- ☐ Focus on co-existence, not control
- ☐ Show that what happens to nature impacts us
- ☐ Highlight mutual care

Localize

Does your story...?

- ☐ Show climate impacts in familiar, relatable places
- ☐ Show characters making a difference in their own communities

AVOID

- Provide problems without solutions
- Put the burden on children and youth to be the only ones to solve climate change
- Solve problems with "magic"
- Over-emphasize individual action
- Use quick fixes
- Suggest climate action means always being front and center
- Employ the "savior" trope
- Make climate change feel distant or abstract
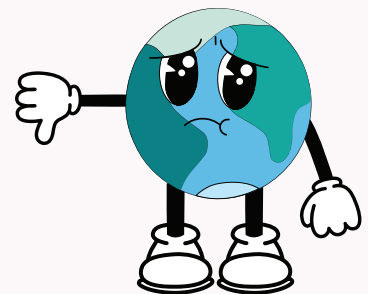
GLOSSARY OF KEY TERMS

TERM	DEFINITION
Climate Adaptation	The process of adjusting to an actual or expected environmental change and its effects in a way that seeks to moderate harm or exploit beneficial opportunities.
Climate Change	Long-term changes in average weather and climate, regionally and globally. Since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels like coal, oil and gas.
Climate Mitigation	Measures to reduce the amount and rate of future climate change by reducing emissions of heat-trapping gases (primarily carbon dioxide) or removing greenhouse gases from the atmosphere.
Composting	The practice of returning natural food remains back into the earth for the purpose of enriching soil.
Decarbonization	The process of phasing out reliance on carbon emissions across all parts of the economy.
Eco-Anxiety	Persistent worries about the future and the prospects for future generations due to climate change.
Greenhouse Gases	Gases in the atmosphere that contribute to global warming by trapping heat, including carbon dioxide and methane.
HVAC Systems	Heating, Ventilation, and Air Conditioning commonly used to cool and heat residential and commercial buildings. Legacy HVAC systems burn fossil fuels. Modern HVAC systems run on electricity.
Indigenous Knowledge Systems	Holistic, observational, and systematic ways of understanding the environment and its connection to culture and society. IKS has been taught in Indigenous communities since time immemorial, long before the American educational system was established.
Renewable Energy	Energy produced from resources that are easily replenished and do not have detrimental effects on the health of humans or the environment. Examples include solar, wind, and geothermal energy. Also referred to as clean energy.
School Gardens	Gardens on school grounds that provide an interactive opportunity for students to learn the science of sustainable food growing practices outside the classroom.
Solar Energy	Energy derived from sunlight that is converted into thermal or electrical energy.
Solar Microgrids	System of renewable energy that is separate from the main power grid in a given area.
Sustainability	Meeting present needs without risking the health and environmental wellbeing of future generations.

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THIS IS PLANET ED · THIS IS PLANET ED ·

STORYTELLERS CAN FOSTER UNDERSTANDING AND HELP BUILD A BRIGHTER FUTURE.

2025 CONTENT CREATORS GUIDE

This Is Planet Ed, an initiative of the Aspen Institute's Energy & Environment program, aims to unlock the power of education as a force for climate action and solutions. We believe young people will drive the necessary and sustained action we need to address climate change, and we must partner with them to advance a more sustainable, resilient, and equitable society. www.ThisIsPlanetEd.org

Planet Media is an initiative of the Aspen Institute to harness the reach and influence of media to support children and their families in building scientifically grounded awareness and understanding of climate science and solutions to empower them to take action. Planet Media is co-chaired by Gary Knell, former President and CEO of National Geographic and Sesame Workshop, and Katharine Hayhoe, Chief Scientist at The Nature Conservancy.

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The Aspen Institute's Energy & Environment Program (EEP) is a 53-year-old initiative that collaborates with individuals, organizations, and governments to address climate change. It provides a platform for innovative dialogues, encouraging leaders to rethink achievable solutions by integrating policy, economics, technology, and relationships for a sustainable future. Additionally, EEP promotes equity and justice by amplifying diverse voices, urging responsible entities to take action, and fostering community engagement in climate solutions while connecting collaborators to enhance collective climate action. **www.aspeninstitute.org/ee**