

NAAEE
Empowering Climate Action: Guidelines for Excellence
Draft Review Framework [Version #1]
February 2023

DRAFT INTRODUCTION (OUTLINE)

The introduction will include short, introductory sections that address the following:

What are these guidelines? A set of recommendations for developing and implementing community-driven, climate change education that centers on climate justice and climate science and empowers climate action. This set of guidelines is designed to provide guidance on how educators and others can facilitate climate change learning and action *with* communities. It gives suggestions on how to address the complexities of climate change at the local level while also considering large scale systems and processes that impact local communities. To succeed, this work must be collaborative, address community concerns, and be community driven.

Why develop a set of guidelines focused on climate change education:

- Climate change is an existential emergency. Human-induced climate change is an on-going process. See National Climate Assessment, IPCC Report(s).
- Human communities and natural ecosystems around the world are being impacted unequally.
- Education helps learners develop the knowledge, skills, and dispositions necessary for climate decision-making and action. Education is a critical agent in addressing climate change and its impacts, including climate justice.
- Educators want to improve their practice and are seeking guidance, especially on how to involve learners in identifying root causes and alternatives to address climate change and corresponding environmental, social, and climate justice issues.
- Youth and adults are concerned about climate change and its impacts, and they want to act. Education can help build their skills (see OECD report).

Why focus on climate justice:

- Climate change and other environmental impacts are uneven across the country and the world — even within a single community, climate change impacts can differ between neighborhoods or individuals.
- Long-standing socioeconomic inequities can make minoritized, historically neglected, and historically marginalized groups vulnerable to climate change and other environmental impacts.
- Minoritized, historically neglected, and historically marginalized groups often have the highest exposure to climate and other environmental impacts (e.g., flooding, air pollution, noise pollution, industrial farming, nuclear radiation) and have the fewest resources to respond.
- Youth and adults are keen to make their actions meaningful.

Why focus the guidelines on justice, equity, diversity, accessibility, and inclusion:

- A focus on justice, equity, diversity, accessibility, and inclusion are essential if educators are to successfully develop partnerships, engage stakeholders, develop instructional strategies, and work *with* communities to ensure fair and just treatment of the most vulnerable.
- A full understanding of climate change and the environment can only be developed when diversity is placed at the center.
- Promotes success of all participants, reducing language barriers, accessibility barriers, systemic discrimination, and lack of representation.
- Improves teaching and learning for all.
- Helps educators, participants, and other community members understand different perspectives and worldviews, appreciate others' strengths, and builds empathy.
- Involves self-reflection of one's own identity and experiences and how they impact attitudes and actions (dynamic and on-going work, progress, not perfection), personal growth and wellness.

It is our intention to highlight practices that support justice, equity, diversity, accessibility, and inclusion throughout these guidelines, including but not limited to differences of race, gender, class, age, ability, and more.

Potential Informational Boxes (Case Studies, Explanations, Resources, and Definitions)

- Definitions – Climate change, climate change education, collective climate action, climate Justice, environmental justice, equity, inclusion, diversity, accessibility, etc. [for example, see NAAEE resources: <https://eeepro.naaee.org/resources/jedia>].
- Links to resources such as: National Climate Assessment, IPCC, Stockholm Declaration, Rio declaration, Universal Declaration of Human Rights, UN Sustainable Development Goals, Tbilisi Declaration, Agency in the Anthropocene, NAAEE's Climate Change Education resources (<https://naaee.org/programs/climate-change-education>).
- Articles, such as: Dr. Rudine Sims Bishop "mirrors, windows, and sliding glass doors" - <https://cynthialeitichsmith.com/2018/04/video-rudine-sims-bishop-on-mirrors/>
- Resources and reports such as NAAEE Climate Change Education (<https://naaee.org/programs/climate-change-education>).
- Case Study of climate education in action

Who should use this set of guidelines? Where should they be used?

This set of guidelines is being written to serve a broad range of individuals and organizations interested in using education, in its different forms and in its varying settings, as a tool for working *with* communities to find climate solutions. Educational activities may take place in schools, museums, aquariums, nature centers, religious organizations, and community centers. Participants in these educational activities might be traditional K-16 students, members of youth groups, policymakers, stakeholders, partners, or other community members. Because of this diversity of adult and youth participants, throughout the Guidelines we will refer to these individuals and groups as learners, rather than students. We will refer to organizers of these learning opportunities as educators.

Community, Learners, and Educators

Wherever and whenever climate education takes place, it is centered within at least one community and with learners. It also involves the organizers of the educational experiences. For this set of guidelines:

- **Communities** can be thought of as geographically-based – neighborhoods, towns, and cities, for instance. Communities can be united by interest, identity, culture, and belief as well as by a common craft or profession and a commitment to learning together. A middle school can be considered a community as well as the local mosque or an afterschool youth club. How the community is defined by those involved and will differ depending on the scope of the climate education activities. Some might focus activities narrowly on a particular setting (e.g., the middle school, the mosque), while others may involve whole neighborhoods or towns. Regardless, the task will be to work *with* the community to find climate solutions.
- **Learners** are those individuals and groups – youth, adults, families – engaged in climate education activities as participants.
- **Educators** are those individuals involved with facilitating learning opportunities. It is important to note that a variety of different types of people - classroom teachers, museum educators, community educators, career and technical education teachers, volunteers and docents, youth leaders, weather broadcasters, members of civic clubs, university faculty, and such may take on the role of educator within a particular community. As educators, they help learners gain the knowledge, skills, and dispositions needed for effective climate action. Educational activities are often co-designed with community partners.

How were these guidelines developed?

- Background research was conducted, thought leaders in climate education, environmental justice, and climate justice were interviewed.
- A writing team was formed. The writing team includes expertise in environmental education, climate education, environmental justice, climate justice, and equity and inclusion.
- Going forward, drafts of the guidelines will be widely circulated. Comments will be incorporated into successive revisions of the document.

Informational Box: List of the thought leaders interviewed, writing team members, and expert reviewers (names, titles, affiliation).

How are the guidelines organized?

These guidelines will be organized around key characteristics that provide a high-level framework for excellent, meaningful climate education that is community-driven and focused on empowering climate action. Under each key characteristic, we will include guidelines that focus on how that key characteristic could be implemented. Each guideline will be accompanied by several indicators that illustrate what you might look for to help gauge whether the guideline is reflected in practice.

In addition, there will be case studies, informational boxes (e.g., definitions, explanations), and supporting resources.

It is important to note that these guidelines should be taken together as a whole. They are not linear. Throughout the process of empowering climate action, Key Characteristics will be visited and visited again. It is also important to note that not all indicators will be relevant in all contexts, but some in each guideline will be.

DRAFT KEY CHARACTERISTICS

Taken together, these DRAFT Key Characteristics provide guidance to individuals, communities, and organizations interested in using education to empower meaningful, relevant, and just climate action. Two concepts lie at the heart of good climate education, climate justice and climate systems.

Educational efforts that successfully empower climate action have these characteristics in common:

Key Characteristic #1: Climate Justice at Its Core

Effective climate action relies on an understanding of climate justice and the importance of protecting vulnerable communities, as well as a willingness to work toward just solutions to address the impacts of climate change.

1.1 Recognize that climate change impacts are unevenly distributed across communities, regions, and the world — even within a single community, the consequences of climate change can differ among neighborhoods and individuals.

- Understand that long-standing socioeconomic inequities (e.g., healthcare, racism, housing, food insecurity) can make minoritized, historically neglected, and historically marginalized groups, who often have the highest exposure to hazards and the fewest resources to respond, more vulnerable to climate change.
- Investigate why groups like the NAACP and the United Nations argue that environmental justice and climate justice are civil and human rights.
- Recognize that not everyone contributes to climate change equally or in the same way.
- Consider the interconnected nature of climate justice and social justice, economic justice, gender justice, intergenerational justice, and environmental justice.
- Learn about, and continually hone your understanding of the history of oppression, unequal treatment, and marginalization and their relationship to climate justice, with particular attention to the local community.

1.2 Assess individual and organizational readiness for work that is centered in climate justice.

- Test the ideas, beliefs, and perceptions you and your organization (e.g., school, museum, nature center, public agency, youth organization) hold regarding climate justice.

- Examine your personal and organizational motivations to engage in climate justice work. Consider what you and your organization bring to this work and what role(s) you might play. Explore the possible benefits and risks of engaging in climate justice work.
- Consider your personal capacity and willingness to do work that is centered on climate justice and climate science. Assess your capacity and willingness to engage in difficult conversations about bias, institutional and structural racism, and power and privilege. Understand that engaging in this work takes time and is a journey.
- Explore organizational capacity and willingness to do work that is centered on climate justice and climate science. Assess the organization's capacity and willingness to engage in difficult conversations about bias, institutional and structural racism, and power and privilege. Examine organizational norms that support this work.
- Determine personal and organizational commitments to prioritize and practice cultural competence.
- Inventory the knowledge and skills needed to do work that is centered on climate justice. As appropriate, participate in learning opportunities related to climate justice and cultural competency. Recognize that the process of developing cultural competence is a journey.
- Assess presumptions and perceptions regarding how climate justice and climate education intersect.
- As appropriate, develop a set of climate justice principles to guide personal and organizational work, including a statement describing the relationship between climate education, climate justice, and climate action.

1.3 Prepare to work towards just solutions by committing to the effective participation and inclusion of the most vulnerable in climate change decision-making and action-taking.

- Identify current and historic figures, groups, events, strategies, and philosophies relevant to social justice, climate justice, and climate change, with particular attention to the local community.
- Determine which individuals or populations are most disadvantaged by climate change impacts in the local community. Identify how these populations are being impacted disproportionately.
- Acknowledge the value of ensuring the participation of the most vulnerable in climate-related planning and action-taking. Commit to facilitating this participation and the development of collaborative relationships.
- Build relationships with individuals and organizations known and trusted by vulnerable populations. Commit to on-going, two-way communication.
- Recognize why vulnerable populations may be unwilling or unable to participate in climate-related initiatives. Devote resources and energy to reduce perceived and real barriers to participation.
- Understand that vulnerable populations may hold different priorities related to climate change and climate action than other populations in the local community.
- Build and sustain trust and psychological safety. Create supportive environments that are conducive to the personal growth and wellness of others (community members, educators, participants, and others).

Potential Informational Boxes (Case Studies, Explanations, Resources, and Definitions)

- Definitions of climate justice, social justice, economic justice, gender justice, intergenerational justice, and environmental justice, vulnerable communities, minoritize, structural inequities, civil right, human right, psychological safety, power, privilege, bias, institutional and structural racism
- Information about: Environmental Justice Principles, Climate Justice Principles
- Resources such as Learning for Justice: Social Justice Standards:
<https://www.learningforjustice.org/frameworks/social-justice-standards>
- Case Studies

Key Characteristic #2: Climate Systems at Its Core

Effective climate action is rooted in an understanding of Earth's interconnected climate systems, including biophysical, ecological, social, cultural, political, and economic systems, and their relationships to environmental health, community well-being, long-term sustainability, and climate resilience. Ultimately, individuals and communities empowered for collective climate action possess an essential set of knowledge, skills, and dispositions, including an appreciation of the reciprocal interrelationship between humans and the natural environment.

2.1 Starting with young learners, build an appreciation that Earth is one, living, dynamic community. Foster a basic awareness of environmental interrelationships and the interdependence of all life forms, including humans.

- Recognize the interactions between land, ocean, and atmospheric cycles and systems regarding climate.
- Develop an awareness that humans are part of, depend on, change, and are affected by natural systems, including climate systems. Appreciate that the interrelationships among humans and natural systems influence daily lives.
- Understand that a tradition of thinking of humans as apart from nature can lead to negative environmental impacts, including climate impacts.
- Appreciate that technological use and resource consumption impact natural systems, including climate systems, in ways that reduce the capacity to be self-sustaining and to ensure well-being.
- Explore how the negative impacts of environmental actions, including those related to climate change, may not be born equally by members of different communities.
- Recognize that individual human health, including psychological well-being, can motivate the development of an understanding of human dependence on a stable climate and healthy environment.
- Cultivate meaningful relationships and connections among people and with nature.

2.2 Develop an understanding of climate processes and systems, including the biophysical, ecological, social, cultural, political, and economic systems needed to make informed decisions about climate actions.

- Use science-based evidence, Traditional Ecological Knowledge, and other locally confirmed knowledge to develop an understanding of climate systems, climate change, and projected futures.

- Identify and access current information from a variety of sources (e.g., Western science, Traditional Ecological Knowledge) related to climate science and projected futures, including relevant information about biophysical, ecological, social, cultural, political, and economic systems.
- Explain how changes in one climate system (e.g., hydrosphere, atmosphere, geosphere, and biosphere) result in changes to another.
- Consult learning frameworks, such as those developed by NOAA, the National Research Council, and PISA, to identify essential climate science concepts and skills. Use these frameworks to identify gaps in knowledge and plan future learning.
- Develop civic understandings related to the structure and processes of political systems, especially local governments, and how climate change policies are made and implemented.
- Explore systemic barriers to climate actions and how they can be addressed (i.e., policies in school, local and national government, and international organizations).
- Examine historical, ethical, cultural, geographic, economic, and sociopolitical relationships to further understanding of climate systems.

2.3 Apply systems thinking to understand how human activities cause and help mitigate climate change, and how climate change affects long-term sustainability at varying, interconnected levels (e.g., local, tribal, national, and global).

- Explore the effects of human choices on climate systems at varying, interconnected levels (e.g., local, tribal, national, and global).
- Map the overlapping domains of social equity, economic prosperity, environmental sustainability, and cultural vitality and consider how they are impacted by climate change.
- Investigate the relationship between a community's infrastructure (e.g., housing, transport, power, water) and climate resilience.
- Connect climate impacts to human health at the individual, family, and community levels.
- Trace how changes in one system may impact another. Analyze the interrelationships among the causes, impacts, and possible solutions of climate change and climate injustices.

Potential Boxes (Case Studies, Explanations, Resources, and Definitions)

- Definitions of systems and systems thinking, community well-being, sustainability, climate resilience, cultural vitality, psychological well-being, community well-being, and Traditional Ecological Knowledge
- Links to climate systems learning frameworks and resources, including CLEAN, NGSS, National Research Council, PISA.
- Case Study

Key Characteristic #3: Locally Focused and Community Driven

Effective climate action centers on community interests, priorities, challenges, and capacities. Building partnerships that incorporate the communities' diverse experiences and knowledge are key to creating community driven and responsive climate action.

3.1 Get to know and understand the community.

- Focus on community assets and aspirations by conducting a community assessment or community asset mapping exercise to identify community characteristics, assets, and challenges, including climate change impacts and climate resilience practices.
- Describe the make-up and history of the community, including geographic boundaries, landforms, waterways, infrastructure, and demographic characteristics.
- Determine community-level indicators of climate change (e.g., storms, flooding, heatwaves, wildfires, and social and economic indicators). Map how climate change has impacted the community in the past, how it currently impacts the local community, and climate change projections for the future. Describe the frequency of impacts, where they occur, and who is impacted most.
- Understand current and past efforts to address climate justice, enhance community well-being, improve climate resilience, and create climate solutions.
- Investigate current and past efforts to develop community sustainability plans, climate change plans, resilience plans, and such.
- Identify gaps in knowledge related to climate impacts and solutions and consider ways of filling those gaps.
- Access public records, newspaper articles and broadcast media, community newsletters, social media, and other sources to document how climate change has impacted the community, what efforts have been made to address those impacts, and how people talk about climate change.
- Describe the community's readiness for change, including factors such as current and past community efforts to address climate change and build climate resilience, community knowledge of the efforts, and the community's attitudes regarding climate-related issues, community understanding of climate systems, and community resources.

3.2 Identify key individuals, organizations, and communities of interest.

- Recognize natural allies and supporters of climate change efforts as well as potential opponents.
- Visit places where community members gather and listen to their perspectives and experiences, including how they talk about their community, its past, its present, and its future.
- Determine which institutions, organizations, and agencies provide services in the community, such as social services (e.g., assistance for those who are food insecure, elderly, unhoused, unemployed or underemployed), economic development, mental health, child welfare, educational and vocational services, and such. Analyze their strengths, funding, resources, and standing in the community.
- Connect with community leaders (formal and informal) known and trusted by those who are most vulnerable to climate impacts (see Guideline 1.3).

- Gather information about key individuals with complementary concerns and goals (e.g., government officials, policymakers, school principals and superintendents, members of the media, community leaders, business leaders, advocates and activists, clergy, medical professionals, educators, school board members), analyze their interests, and consider how their interests and climate change-related interests might intersect.
- Map how power and influence are distributed in the community. Consider which individuals or organizations influence (positively and negatively) climate-related action and policy making.
- Identify the local elected officials and government agencies involved in the development of policies and procedures related to climate change and climate justice.

3.3 Build partnerships and collaborative relationships. Recognize that authentic, effective partnerships and collaborative relationships take time to develop and require a willingness to learn continually from each other’s experiences and perspectives regarding climate impacts, climate justice, and climate resilience.

- Identify and engage community leaders, government officials, and elected officials, especially those already working on climate change impacts and climate justice. Explore priorities, capacities, and collaborative opportunities. For example, convene community weaving sessions as a way of coming together to examine common interests.
- Reach beyond existing networks and develop new partners and collaborators, including those who may have been left out of previous efforts. Take time to identify the co-benefits – shared interests and objectives – of working together toward climate action.
- Build relationships, partnerships, and community across different backgrounds, including language, culture, religion, race, ethnicity, and such. Continually hone cultural awareness and competency.
- View differences in skills, abilities, and perspectives as resources and opportunities to build stronger relationships that support collective climate action.
- Work across generations and build intergenerational power through relationships with community partners and other collaborators that represent diverse voices and cultures.
- Clarify roles and responsibilities, and pay attention to power, equity, and privilege.
- Consider how language is used to discuss climate change, climate justice, and climate resilience, especially differences rooted in various cultures, native languages, and communities.
- Address uncertainty, including any uncertainty about individual and group goals and objectives for joining an effort focused on climate action.

Potential Boxes (Case Studies, Explanations, Resources, and Definitions)

- Definitions of Ways of Knowing, co-benefits, Community weaving
- Resources on Community Assessment, Community Asset mapping, and trust building
- Community Engagement: Guidelines for Excellence
- Case study

Key Characteristic #4: Facilitate Civic Engagement for Climate Action

Climate change and climate justice impacts are unique to each community. Successful engagement strategies provide opportunities for learners and community members to participate in conversations about concerns and potential solutions, including inclusive and just approaches to addressing climate change, ways to increase the community's ability to adapt to climate changes, and the development of collective, climate-oriented action strategies.

4.1 Develop strategies for involving community members in climate action learning and decision-making.

- Understand the spectrum of possible civic engagement strategies (e.g., local to national, information dissemination to collaboration to empowerment) and how they can be used to involve others in the climate action planning process.
- Determine the desired civic engagement goals and match engagement tools and techniques to the type(s) of community-level climate engagement chosen.
- Use strategies such as deliberative discussion, participatory budgeting, constructive dialogue, and community science, to provide active and meaningful ways for community members to engage in climate change learning and decision-making activities.
- Build trust intentionally, by providing inclusive and welcoming opportunities for on-going community learning, sharing, and involvement throughout the process.
- Develop civic engagement strategies that involve a broad array of peoples, such as people of different races, ethnic groups, cultures, sexual orientations and gender identities, abilities, ages, social groups, classes, language groups, and religious traditions, with respect and equity.
- Keep records of engagement activities, compiling comments and feedback, and communicating the results widely.

4.2 Foster the development of community-level, collective climate literacy. Provide opportunities for members of the community to engage in conversations about and investigations of climate solutions.

- Support community members as they share knowledge, personal experiences, and resources and contribute to a collective understanding of climate change, climate justice and climate action-strategies.
- Respect the diverse perspectives and competing priorities held by those involved.
- Honor multiple ways of knowing, including Traditional Ecological Knowledge, by building a shared understanding of the causes, impacts, and possible solutions of climate change. Practice two-eyed seeing, offering opportunities to view the world and climate change through both Indigenous and Western lenses.
- Support intergenerational learning and sharing of climate stories, experiences, and resilience practices.
- Provide opportunities for community members to learn about climate resilience practices and engage with others to make informed decisions.
- Consider how storytelling, art, dance, drama, and music can be used to engage community members in learning about climate change and climate justice.

4.3 Encourage hope and celebrate success.

- Respect that past experiences with climate impacts (such as severe weather events, wildfires, flooding, and other upheavals) may prompt emotional responses.
- Acknowledge and address climate anxiety. Recognize that feelings of climate anxiety are real and can lead to feelings of helplessness. Provide opportunities to use climate science and evidence-based climate solutions such as those presented by Project Drawdown to visualize a positive future.
- Co-create with the community a shared vision of climate resilience and hope.
- Identify indicators of progress toward climate solutions in the community and elsewhere.
- Introduce champions and leaders in climate change action and climate justice and their successes. Use inspirational stories to encourage a commitment to individual and collective climate action.
- Use culturally responsive, equitable evaluation to learn from the experience and make appropriate adjustments.
- Plan for the long-term sustainability of any climate change collective actions.
- Share and celebrate success.

Potential Boxes (Case Studies, Explanations, Resources, and Definitions)

- Resources on civic engagement strategies, Project Drawdown, climate resilience practices, collective environmental literacy
- Case Studies

Key Characteristic #5: Education for Climate Action - Instructional Strategies

Education for climate action relies on evidenced-based instructional strategies that create effective, culturally responsive, and welcoming learning environments that are inclusive of the whole community. Instruction maximizes active learning about climate systems, investigation and analysis of climate issues, an understanding of local and global histories, exploration of possible climate solutions and actions, and opportunities for climate action taking of the learners' choosing. Instruction is purposefully co-designed in collaboration with stakeholders and other community partners.

5.1 Collaboratively foster an instructional environment, including participant interactions, that is safe, engaging, culturally relevant and responsive, accessible, supportive of relationship-building, collaborative, intellectually stimulating, and motivating.

- Adjust climate change instructional practices to meet the needs of different ages, audiences, and communities. Explore local climate change systems and impacts to ensure that instruction is personally relevant and meaningful to learners.
- Consider implications for climate justice in investigations of community history, conditions, issues, decisions, and impacts.
- Display enthusiasm, respect, care, fairness, and warmth, and support the social, emotional, and physical needs of the learners as they investigate climate systems, climate change, and climate justice.
- Demonstrate concern and offer alternatives for the learners' physical and emotional safety, especially during climate education experiences that are hands-on, take place

outside or in unfamiliar places, or relate to controversial issues and strongly held beliefs.

- Demonstrate flexibility and modify instructional plans and approaches to take advantage of unexpected opportunities, including learner questions. Respond to learners' interests and ways of knowing, adjust to meet their needs, and address misunderstandings.
- Introduce and/or reaffirm classroom ways of being in grounding learners in their introduction to climate change causes, impacts, and possible solutions.
- Offer sources of information that are relevant, accessible, timely, and represent participants' identities and cultural backgrounds.
- Provide multiple points of access to engagement and learning, reaching participants where they are. For example, incorporate family and community knowledge by inviting guest speakers or employ activities using family interviews, storytelling, and community research.

5.2 Engage learners in open inquiry that is learner-centered and learner-directed.

Instruction responds to learners' interests and ways of knowing, providing opportunities for learners and community members to investigate the causes, impacts, and possible solutions of climate change issues of their own choosing.

- Provide opportunities for real-life, hands-on exploration of climate science, climate concerns, and possible climate solutions. For example, provide opportunities for learners to collect and analyze their own data and draw their own conclusions.
- Facilitate sense-making, with a particular focus on making personal and community climate connections.
- Support and encourage participant voice, including youth voices, by offering ways for learners to share power and make choices about the educational process, express themselves, provide leadership, collaborate, share their knowledge, make decisions, take responsibility for their own learning, and reflect.
- Engage in culturally relevant and responsive open inquiry and investigation, especially when considering climate concerns that are controversial and require learners to reflect on their own and others' perspectives.
- Ensure opportunities for leadership to develop and for leaders step forward and grow.
- As appropriate, provide learning opportunities focused on identifying and addressing power imbalances, especially among decision makers.

5.3 Engage learners in an exploration of their worldviews and perspectives as well as the worldviews and perspectives of other learners and other community members.

- Explore worldviews that elicit responsible and just climate resilience practices that lead to sustainable futures.
- Use personal narratives, stories, or first-person experiences to explore perspectives, experiences, knowledge systems, and resilience practices of marginalized, underrepresented, under-included, and purposefully excluded groups, as they relate to climate change impacts and solutions.
- Investigate climate change concerns, considering evidence from different ways of knowing and viewpoints. For example, provide opportunities for a range of people knowledgeable about applicable fields and representing differing points of view to

share their experiences and wisdom through materials or direct contact. Use multiple pathways for communicating and disseminating ideas.

- Provide opportunities to practice self-awareness and cultural competence, working effectively and sensitively across different cultural contexts.
- Recognize unfairness that exists on the individual level (e.g., biased speech) and injustice at the institutional or systemic level (e.g., structural inequities) and how they contribute to climate justice.

5.4 Provide opportunities for learners to explore climate change controversies, address misconceptions, exercise media literacy, and practice climate communication strategies.

- Employ research-based tools to build media literacy.
- Evaluate the accuracy, perspective, credibility, and relevance of information from a variety of sources, related to climate science, climate justice, and climate change causes, impacts and potential solutions.
- Explore common misconceptions about climate change and understand why some people might hold these misconceptions.
- Construct arguments and communication strategies that address misconceptions about climate change, its impacts, and solutions.
- Distinguish between climate misinformation and disinformation. Explore how climate misinformation and disinformation have been used over time to undermine social change and climate action. Identify key authors and distribution networks for climate disinformation.
- Use evidence-based modes to investigate the scientific consensus regarding climate change and to consider counter arguments (e.g., climate denialism).

5.5 Support learners as they recognize and validate personal and emotional connections to climate change and its impacts. Support individuals and their connections to the community to generate sustained purpose, self-efficacy, agency, and hope.

- Build hope by recognizing climate concerns and anxiety and moving toward action.
- Provide learners with opportunities to reflect on the effects of their climate actions, consider unintended consequences, and reflect on what, if anything, they would do differently.
- Identify and describe the relationships between exercising individual and collective actions and addressing the climate crisis.
- Provide opportunities for learners to reflect on how laws, policies, and institutional decisions impact their lives, the lives of others, environmental health, climate resilience, and community well-being. Give opportunities to consider how individuals and communities influence laws and policies, and how laws are made and enacted, including implications for climate justice.
- Investigate how individual and collective actions can have cumulative effects, both in creating and addressing climate impacts and solutions. Explore self-efficacy and agency, understanding that what one does individually and in groups can contribute to climate solutions.
- Generate suggestions and resources for addressing climate anxiety, despair, and trauma.
- Provide opportunities to develop a sense of personal and civic responsibility, including a willingness and ability to take climate action based on one's own

conclusions about what should be done to ensure environmental quality, social equity, and economic prosperity.

5.6 Provide opportunities for learners to identify, evaluate, and participate in climate action of their own choosing, including collective action.

- Use an understanding of climate systems to identify local climate change concerns and analyze their implications for environmental health, long-term sustainability, climate resilience, and climate justice.
- Investigate examples of local and regional climate action successes, including climate action strategies such as supporting Green Careers and examples of community resiliency practices.
- Identify policy options, especially related to local, climate change decision-making. Analyze differing perspectives that influence how climate change and climate justice decisions are made.
- Examine the intended and unintended consequences of personal climate actions and actions taken by other individuals and groups, including policy-options.
- Consider local actions to solve local challenges and develop a network of stakeholders and decision makers to collectively tackle national and global issues.
- Recognize and encourage the participation of a range of community voices, including youth voices and the voices of those who are most vulnerable (see Guidelines 1.3), in the process of exploring and selecting climate change action projects.
- Develop criteria for determining the effectiveness for proposed climate action strategies, including collective action, with input from others. Recognize that systemic problems require systemic solutions. For example, determine if the scale of an identified local climate challenge matches its proposed solution. Use criteria to analyze proposed climate actions before launching the project.
- Develop the capacity to implement climate actions by providing opportunities to practice applicable skills, including skills for individual and collective action.

Potential Boxes (Case Studies, Explanations, Resources, and Definitions)

- Resources on culturally relevant, culturally responsive instruction; learner-centered, learner-directed instruction
- Climate anxiety, frontline communities
- Resources on Environmental Action Civics (e.g., Earth Force), Climate Action Learning Process (NOAA), Green Careers, deliberation, encouraging hope, addressing fear, anxiety, and trauma, Individual vs collective efficacy and action