

Participating Organizations

Alliance for a Living Ocean
American Littoral Society
Asbury Park Fishing Club
Atlantic Highlands Arts Council
Bayside Regional Watershed Council
Bayside Saltwater Flyrodders
Belford Seafood Co-op
Belmar Fishing Club
Beneath The Sea
Bergen Save the Watershed Action Network
Berkeley Shores Homeowners Give Association
Cape May Environmental Commission
Central Jersey Anglers
Citizens Conservation Council of Ocean County
Clean Air Campaign, NY
Clean Water Action
Coalition Against Toxics
Coalition for Peace & Justice/Unplug Salem
Coastal Jersey Parrot Head Club
Communication Workers of America, Local 1075
Concerned Businesses of COA
Concerned Citizens of Bensonhurst
Concerned Citizens of COA
Concerned Citizens of Montauk
Eastern Monmouth Chamber of Commerce
Environment NJ
Fishermen's Conservation Association, NJ Chapter
Fishermen's Conservation Association, NY Chapter
Fishermen's Dock Cooperative, Pt. Pleasant
Food and Water Watch, NJ
Friends of Island Beach State Park
Friends of Liberty State Park, NJ
Friends of the Boardwalk, NY
Garden Club of Allenhurst
Garden Club of Bay Head and Mantoloking/Seaweeders
Garden Club of Brielle/Bayberry
Garden Club of Englewood
Garden Club of Fair Haven
Garden Club of Long Beach Island
Garden Club of RFD Middletown
Garden Club of Morristown
Garden Club of Navasink
Garden Club of New Jersey
Garden Club of New Vernon
Garden Club of Oceanport
Garden Club of Princeton
Garden Club of Ridgewood
Garden Club of Rumson
Garden Club of Sea Girt/Holly
Garden Club of Short Hills
Garden Club of Shrewsbury
Garden Club of Spring Lake
Garden Club of Terra Nova
Garden Club of Washington Valley
Great Egg Harbor Watershed Association
Green Party of Monmouth County
Green Party of New Jersey
Highlands Business Partnership
Hudson River Fishermen's Association
Jersey Shore Captains Association
Jersey Shore Parrot Head Club
Jersey Shore Partnership
Junior League of Monmouth County
Keypoint Environmental Commission
Kiwanis Club of Shadow Lake Village
Leonardo Party & Pleasure Boat Association
Mantoloking Environmental Commission
Marine Trades Association of NJ
Monmouth Conservation Foundation
Monmouth County Association of Realtors
Monmouth County Audubon Society
National Coalition for Marine Conservation
Natural Resources Protective Association, NY
NJ Beach Buggy Association
NJ Environmental Lobby
NJ Friends of Clearwater
NJ Marine Education Association
Nottingham Hunting & Fishing Club, NJ
NYC Sea Gypsies
NY Marine Education Association
NY/NJ Baykeeper
Ocean Wreck Divers, NJ
PaddleOut.org
Piscataway Saltwater Sportsmen Club
Raritan Riverkeeper
Religious on Water
Rotary Club of Point Pleasant
Rotary District #7540—Interact
Saltwater Anglers of Bergen County
Sandy Hook Bay Anglers
Save Barnegat Bay
Save the Bay, NJ
SEAS Monmouth
Shark Research Institute
Shark River Cleanup Coalition
Shark River Surf Anglers
Sierra Club, NJ Shore Chapter
Sisters of Charity, Maris Stella
South Monmouth Board of Realtors
Staten Island Tuna Club
Strathmere Fishing & Environmental Club
Sunrise Rod & Gun Club
Surfers' Environmental Alliance
Surfrider Foundation, Jersey Shore Chapter
Surfrider Foundation, South Jersey Chapter
UNITARIAN UNIVERSALIST CHURCH I, MA
Unitarian Universalist Congregation/Moenn. Cnty.
United Boatmen of NY/NJ
Viking Village
WATERSPIRIT
Women's Club of Brick Township
Women's Club of Keypoint
Women's Club of Long Branch
Women's Club of Merchantville
Women's Club of Spring Lake
Zen Society, NJ



Ocean Advocacy
Since 1984

Clean Ocean Action

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Submitted Electronically to NJSLSreview@doe.nj.gov

Lamont Repollet, Ed.D.
Commissioner
Department of Education
PO Box 500
Trenton, NJ 08625

RE: Comments on Draft 2020 New Jersey Student Learning Standards *Attachment (1): Submissions to COA's Virtual Student Rally for Climate Change Education*

Dear Mr. Repollet,

Clean Ocean Action ("COA") submits the following comments on the **Draft 2020 New Jersey Student Learning Standards** proposed by the New Jersey Department of Education. COA is a broad-based coalition of over 115 conservation, education, environmental, fishing, boating, diving, religious, student, surfing, women's, business, civic and community organizations dedicated to the improvement of water-quality and defending the marine ecosystem in the New York Bight from Montauk, NY to Cape May, NJ. For over 36 years, COA has conducted environmental education programs for students K-12. Annually, thousands of students participate in our STEAM-based programs focused on the fragility of the environment and the human impacts, either positive or negative, motivating youth to become better stewards of the planet.

The reality of climate change as an existential threat creates the urgency for educating and empowering youth of all grade levels with tools and skills to meet the many challenges and to drive solutions. This cannot be emphasized enough. Our physical, emotional, and mental wellbeing are driven by the wellbeing of the environment in which we live. Amidst growing challenges and changing times, children and teens are facing mounting pressure and anxiety that is exacerbated by a fear of their wellbeing now and in the future. Indeed, their future is in peril due to climate change impacts and requires immediate action.

Public education from K-12 in New Jersey is one of the finest in the whole country. Clean Ocean Action salutes First Lady Tammy Murphy and the State of New Jersey's true leadership, for embracing this opportunity to draft these standards which will make New Jersey the first state in the nation to comprehensively include climate change as a part of the K-12 curriculum.

COA staff has reviewed the seven sets of draft NJSLs currently proposed: Comprehensive Health and Physical Education (CHPE), Visual and Performing Arts (VPA), Science, Social Studies, World Languages, Technology and 21st Century Life and Careers.

In support of climate change proposed in NJ's Student Learning Standards, COA organized a four-day Virtual Student Rally for Climate Change Education from March 27-30, 2020. In addition to COA's formal comments (below), COA submits the attached document, which includes photos, posters, songs, sonnets, poems, and other creative expressions submitted to the Virtual Rally from students throughout New Jersey. Please accept these student submissions as part of the public record on the proposed Draft New Jersey Student Learning Standards.

COMPREHENSIVE HEALTH AND PHYSICAL EDUCATION

Science and Technology alone are not enough to find solutions to the myriad problems from climate change and requires a true cultural shift and mindfulness to our environment. That can be effective only if climate change is part of the curriculum in one's school years. It is heartening to note that the state of NJ has clearly understood this need and has included climate change not just in Physical and Social Sciences, but as a component of Comprehensive Physical and Health Education (CPHE). Physical Education in schools fosters a culture of collaboration and teamwork in students, which is critical in rallying the community to create healthier solutions for tackling climate change.

SCIENCE

Clean Ocean Action strongly believes that environmental issues can have meaningful solutions only by a multi-pronged strategy that includes grassroots and community advocacy and strong policies. The core of these is sound scientific evidence and inculcating this from the school years is very critical and timely for climate change. The vision statement needs to clearly state this.

Key issues that need to be considered:

- Climate change impacts are projected to be adverse in coastal states like New Jersey. Curriculum should be planned to include both basic and applied research.
- Recommended projects suggest warming temperature could be the main focus. While it is important, it is equally important to understand the consequences of these warming temperatures – e.g. saltwater intrusion, loss of habitat studies etc.
- Climate change is closely tied with resiliency building efforts; curriculum should promote stormwater runoff mitigation measures.
- Ecological impacts to wildlife should assess impacts of flooding, drought, and sea level rise to ecosystems.

SOCIAL STUDIES

It is more important than ever to understand not only the history of relationships between humans and with the natural world, but the current state as well as the future. Students must learn their roles in their communities and understand their individual impacts as well as opportunities. These draft standards use inquiry-based learning, and clearly requires students to collaborate with peers on researching climate change. Collaboration is key in discussing climate change and is an integral part in developing and implementing solutions.

Key issues that need to be considered:

- Social, economic, and environmental justice issues resulting from climate change should be included and highlighted and addressed at all grade levels.
- Equity and diversity as they relate to climate change should be mentioned in the Standards for Action, and incorporated in all grade levels.
- The social-economic role of coastal and marine resources should be included as it relates to the state's history, current and future, as well as the future impact of climate change.

VISUAL AND PERFORMING ARTS

Recognizing that the arts often connect and reflect social issues, it is essential that climate change be incorporated in Visual and Performing Arts (VPA) standards. Students can use VPA to express themselves about issues and challenges they face. Climate change is perhaps the most pressing issue of the students of this generation and beyond. These draft standards give students the opportunity to learn, express, and prepare to act on climate change issues as students, and later, as adults.

Key issues that need to be considered:

- Connections to organizations and entities working on climate changes issues should be offered as opportunities for students working in Visual and Performing Arts to provide outlets for artistic expressions.
- Climate change was not incorporated in 2.3A - 2.3A General Music, 2.3B Music Composition & Theory, 2.3C Music Ensembles, 2.3D Music Harmonizing Instruments, 2.3E Music Technology categories. Similar to dance, media arts, theater, and visual arts, climate change can be incorporated in 2.3A-E. For example, students can express themselves in original compositions on current topics of concern, including Climate Change. Some of the student submissions to COA's recent Four-Day Virtual Rally for Climate Change Education is evidence of such expression. Further, music from many cultures around the world have stories and songs related to the natural world and its changes over time. Climate change is an event and subject that is as much as a source of expression for dance, theater, media and visual arts, as it is for the musically-inclined.

WORLD LANGUAGES

The world is diverse in many ways, and the impacts of climate change are being experienced at every corner of the Earth. It is important for students learning different languages to be able to converse with peers and others around the world on current issues for collaboration and identifying solutions to the benefit of all across the globe.

Key issues that need to be considered:

- Equity and diversity as they relate to climate change should be highlighted in the standards as students learn to converse with peers around the world.

COMPUTER SCIENCE AND DESIGN THINKING

Computing Technology is projected to play a core role in our everyday lives exponentially in the future. Understanding climate change processes, designing solutions, managing solutions will be at multiple scales, and this can be done effectively only with a fundamental understanding and knowledge of the subject. As of now, even if the proposed draft recommendation is not clear in scope or direction, it is important to include this topic and continue to develop recommendations.

Key issues that need to be considered:

- The mission/vision should clearly spell out that climate change will be a part of the curriculum and provide for learning pathways to understand the concept thoroughly.
- Computer Science and Technology curriculum should be holistic and incorporate all facets, including digital learning (i.e., more than robotics or design).
- Need to ensure long term and equitable availability of appropriate technology tools and resources to all students. This is very important in a state such as NJ.

CAREER READINESS, LIFE LITERACIES, AND KEY SKILLS

As students prepare for entering the world beyond formal schooling years, adequate instruction in climate change issues is essential. As we move into the future, various careers will be impacted by climate change in some way, and many will be charged with finding mitigation strategies and creative solutions. Equipping students with the knowledge and skills related to climate change, will help them apply this knowledge in their technical careers in the future.

Recognizing this, climate change should especially be incorporated in the standard “9.3 Career and Technical Education.” Climate change will be a topic that will affect many key technical careers outlined in the standard, namely:

- Agriculture and food sourcing are already being impacted by climate change, and will face challenges due to changing weather and economic conditions.
- Plant systems and management will see huge impacts and changes from climate change, and may affect food supply as well as feed supply for animal industries.

- Similarly, environmental services are also heavily involved and dealing with climate change impacts and planning.
- Architecture and construction will see a surge in rules, regulations and requirements aimed at addressing climate change issues and impacts.
- Climate change is impacting natural resources and management thereof.
- Power systems are also subject to climate change impacts due to increased storms and severity thereof, and will need adequate planning to handle challenges to the power system to come.
- Journalism and media communications will be an important career to inform and document climate change issues, solutions, and actions.

Key issues that need to be considered:

- Climate change should be incorporated in 9.1 Personal Finance, 9.2 Career Awareness, Explorations, Preparation & Training, and 9.3 Career and Technical Education. The standards should be updated to include climate change in these areas because these technical industries will be at the forefront of climate change impact planning, mitigation, and solutions and will certainly a growing career choice for students in the coming years. Students should be able to investigate, learn, and be proficient in solution-based problem-solving for tackling climate change issues in their future careers.

ADDITIONAL STANDARDS

Further, Clean Ocean Action supports the inclusion of climate change standards in both the **English Language Arts Instructional Units** and **Mathematics Instructional Unit**. We understand that the standards for these subject areas are not currently under review. Clean Ocean Action strongly recommends that the NJ Department of Education include climate change in these two units of study in their next review period.

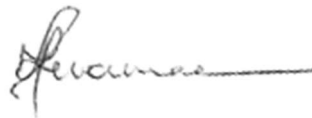
Clean Ocean Action commends the NJ Department of Education as well as the leadership of NJ First Lady Tammy Murphy whose efforts have helped bring forth these much-needed, well-timed, mandatory climate change standards in New Jersey's K-12 public classrooms. Clean Ocean Action appreciates the opportunity to submit comments on the Draft 2020 New Jersey Student Learning Standards.

COA looks forward to assisting the effort to bring Climate Change education forward in NJ and also urging other states to do the same. If there are questions, please call 732-872-0111.

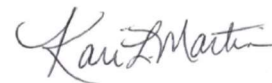
Sincerely,



Cindy Zipf
Executive Director
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Swarna Muthukrishnan, PhD
Staff Scientist
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Kari Martin
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