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Greetings from the Alaska SeaLife Center,

This letter is to announce an exciting opportunity with the Alaska SeaLife Center. We need your help to highlight Alaska as a creative and artistic state!

The Alaska SeaLife Center, along with 20 other aquariums and science centers across the country, are participating in Coastal America's Ocean Art Contest. This contest was created to convey the importance of the ocean, coasts, and Great Lakes.

There are five age categories to compete in: Grades K-2, Grades 3-5, Grades 6-8, Grades 9-12, and university students. All entries will be displayed at the Alaska SeaLife Center. First, second, and third place winners in each category will also be chosen. Remember, this art contest can make a great class project.

Alaska has yet to be chosen as an overall winner. Therefore, we'd love to see an Alaskan artist invited to Washington D.C. for an awards ceremony.

Included in this packet you'll find a poster, which we hope you'll proudly display at your organization or school. Make as many copies as you can and be sure to draw attention to the rules on the back of the poster. We've also included a few bookmarks for you to hand out.


Please note for photography entries: we would prefer originals, but will still accept digital copies.

All entries need to be postmarked no later than December 15th, 2011. Please use the address listed above. Please carefully note all submission guidelines on the back of the poster.

If you have any questions about submission guidelines, the Seven Essential Principles of Ocean Literacy, or anything else please contact me at (907) 224-6306 or education@alaskasealife.org.

We look forward to receiving your artwork!

Sincerely,



Casey Schulke and the Education Team

Ocean Literacy: The Essential Principles of Ocean Sciences

Ocean Literacy Principle #1: The Earth has one big ocean with many features.

1. The ocean is the dominant physical feature on our planet Earth—covering approximately 70% of the planet's surface. There is one ocean with many ocean basins, such as the North Pacific, South Pacific, North Atlantic, South Atlantic, Indian and Arctic.
2. An ocean basin's size, shape and features (such as islands, trenches, mid-ocean ridges, rift valleys) vary due to the movement of Earth's lithospheric plates. Earth's highest peaks, deepest valleys and flattest vast plains are all in the ocean.
3. Throughout the ocean there is one interconnected circulation system powered by wind, tides, the force of the Earth's rotation (Coriolis effect), the Sun, and water density differences. The shape of ocean basins and adjacent land masses influence the path of circulation.
4. Sea level is the average height of the ocean relative to the land, taking into account the differences caused by tides. Sea level changes as plate tectonics cause the volume of ocean basins and the height of the land to change. It changes as ice caps on land melt or grow. It also changes as sea water expands and contracts when ocean water warms and cools.
5. Most of Earth's water (97%) is in the ocean. Seawater has unique properties: it is saline, its freezing point is slightly lower than fresh water, its density is slightly higher, its electrical conductivity is much higher, and it is slightly basic. The salt in seawater comes from eroding land, volcanic emissions, reactions at the seafloor, and atmospheric deposition.
6. The ocean is an integral part of the water cycle and is connected to all of the earth's water reservoirs via evaporation and precipitation processes.
7. The ocean is connected to major lakes, watersheds and waterways because all major watersheds on Earth drain to the ocean. Rivers and streams transport nutrients, salts, sediments and pollutants from watersheds to estuaries and to the ocean.
8. Although the ocean is large, it is finite and resources are limited.

Ocean Literacy Principle #2: The ocean and life in the ocean shape the features of the Earth.

1. Many earth materials and geochemical cycles originate in the ocean. Many of the sedimentary rocks now exposed on land were formed in the ocean. Ocean life laid down the vast volume of siliceous and carbonate rocks.
2. Sea level changes over time have expanded and contracted continental shelves, created and destroyed inland seas, and shaped the surface of land.
3. Erosion—the wearing away of rock, soil and other biotic and abiotic earth materials—occurs in coastal areas as wind, waves, and currents in rivers and the ocean move sediments.
4. Sand consists of tiny bits of animals, plants, rocks and minerals. Most beach sand is eroded from land sources and carried to the coast by rivers, but sand is also eroded from coastal sources by surf. Sand is redistributed by waves and coastal currents seasonally.
5. Tectonic activity, sea level changes, and force of waves influence the physical structure and landforms of the coast.

Ocean Literacy Principle #3: The ocean is a major influence on weather and climate.

1. The ocean controls weather and climate by dominating the Earth's energy, water and carbon systems.
2. The ocean absorbs much of the solar radiation reaching Earth. The ocean loses heat by evaporation. This heat loss drives atmospheric circulation when, after it is released into the atmosphere as water vapor, it condenses and forms rain. Condensation of water evaporated from warm seas provides the energy for hurricanes and cyclones.
3. The El Niño Southern Oscillation causes important changes in global weather patterns because it changes the way heat is released to the atmosphere in the Pacific.
4. Most rain that falls on land originally evaporated from the tropical ocean.
5. The ocean dominates the Earth's carbon cycle. Half the primary productivity on Earth takes place in the sunlit layers of the ocean and the ocean absorbs roughly half of all carbon dioxide added to the atmosphere.
6. The ocean has had, and will continue to have, a significant influence on climate change by absorbing, storing, and moving heat, carbon and water.
7. Changes in the ocean's circulation have produced large, abrupt changes in climate during the last 50,000 years.

Ocean Literacy Principle #4: The ocean makes Earth habitable.

1. Most of the oxygen in the atmosphere originally came from the activities of photosynthetic organisms in the ocean.
2. The first life is thought to have started in the ocean. The earliest evidence of life is found in the ocean.

Ocean Literacy Principle #5: The ocean supports a great diversity of life and ecosystems.

1. Ocean life ranges in size from the smallest virus to the largest animal that has lived on Earth, the blue whale.
2. Most life in the ocean exists as microbes. Microbes are the most important primary producers in the ocean. Not only are they the most abundant life form in the ocean, they have extremely fast growth rates and life cycles.
3. Some major groups are found exclusively in the ocean. The diversity of major groups of organisms is much greater in the ocean than on land.
4. Ocean biology provides many unique examples of life cycles, adaptations and important relationships among organisms (such as symbiosis, predator-prey dynamics and energy transfer) that do not occur on land.
5. The ocean is three-dimensional, offering vast living space and diverse habitats from the surface through the water column to the seafloor. Most of the living space on Earth is in the ocean.
6. Ocean habitats are defined by environmental factors. Due to interactions of abiotic factors such as salinity, temperature, oxygen, pH, light, nutrients, pressure, substrate and circulation, ocean life is not evenly distributed temporally or spatially, i.e., it is "patchy". Some regions of the ocean support more diverse and abundant life than anywhere on Earth, while much of the ocean is considered a desert.
7. There are deep ocean ecosystems that are independent of energy from sunlight and photosynthetic organisms. Hydrothermal vents, submarine hot springs, and methane cold seeps rely only on chemical energy and chemosynthetic organisms to support life.
8. Tides, waves and predation cause vertical zonation patterns along the shore, influencing the distribution and diversity of organisms.
9. Estuaries provide important and productive nursery areas for many marine and aquatic species.

Ocean Literacy Principle #6: The ocean and humans are inextricably interconnected.

1. The ocean affects every human life. It supplies freshwater (most rain comes from the ocean) and nearly all Earth's oxygen. It moderates the Earth's climate, influences our weather, and affects human health.
2. From the ocean we get foods, medicines, and mineral and energy resources. In addition, it provides jobs, supports our nation's economy, serves as a highway for transportation of goods and people, and plays a role in national security.
3. The ocean is a source of inspiration, recreation, rejuvenation and discovery. It is also an important element in the heritage of many cultures.
4. Much of the world's population lives in coastal areas.
5. Humans affect the ocean in a variety of ways. Laws, regulations and resource management affect what is taken out and put into the ocean. Human development and activity leads to pollution (such as point source, non-point source, and noise pollution) and physical modifications (such as changes to beaches, shores and rivers). In addition, humans have removed most of the large vertebrates from the ocean.
6. Coastal regions are susceptible to natural hazards (such as tsunamis, hurricanes, cyclones, sea level change, and storm surges).
7. Everyone is responsible for caring for the ocean. The ocean sustains life on Earth and humans must live in ways that sustain the ocean. Individual and collective actions are needed to effectively manage ocean resources for all.

Ocean Literacy Principle #7: The ocean is largely unexplored.

1. The ocean is the last and largest unexplored place on Earth—less than 5% of it has been explored. This is the great frontier for the next generation's explorers and researchers, where they will find great opportunities for inquiry and investigation.
2. Understanding the ocean is more than a matter of curiosity. Exploration, inquiry and study are required to better understand ocean systems and processes.
3. Over the last 40 years, use of ocean resources has increased significantly, therefore the future sustainability of ocean resources depends on our understanding of those resources and their potential and limitations.
4. New technologies, sensors and tools are expanding our ability to explore the ocean. Ocean scientists are relying more and more on satellites, drifters, buoys, subsea observatories and unmanned submersibles.
5. Use of mathematical models is now an essential part of ocean sciences. Models help us understand the complexity of the ocean and of its interaction with Earth's climate. They process observations and help describe the interactions among systems.
6. Ocean exploration is truly interdisciplinary. It requires close collaboration among biologists, chemists, climatologists, computer programmers, engineers, geologists, meteorologists, and physicists, and new ways of thinking.

COASTAL AMERICA'S
**OCEAN
ART
CONTEST**

2011-2012



**Participating
Coastal Ecosystem
Learning Centers:**

- Acuario de Veracruz
- Alaska SeaLife Center
- Aquarium of the Pacific
- Audubon Aquarium of the Americas
- Dauphin Island Sea Lab -
Alabama Dept. of Marine Resources
- The Florida Aquarium
- Georgia Aquarium
- IGFA Fishing Hall of Fame & Museum
- John G. Shedd Aquarium
- USM Gulf Coast Research Laboratory -
Marine Education Center
- Mystic Aquarium
- National Aquarium In Baltimore
- National Mississippi River Museum & Aquarium
- New Jersey Aquarium
- North Carolina Aquariums
- Hatfield Marine Science Center -
Oregon Coast Aquarium
- Seattle Aquarium
- TX State Aquarium
- Vancouver Aquarium
- Waikiki Aquarium

**Contact a
Coastal Ecosystem
Learning Center
near you or go to
CoastalAmerica.gov
to learn more.**



Coastal America Student Art Contest Rules

The "Coastal America Student Art Contest" was created to draw upon young people's artistic expression to convey the importance of the ocean, coasts and Great Lakes through the Seven Essential Principles of Ocean Sciences created by the Ocean Literacy Network. The purpose is to enhance public awareness of the importance of the ocean in the artists' and viewers' lives and to convey how personal actions affect the ocean.

Winning artwork at each Learning Center will advance to the overall competition. A panel of ocean experts will review the finalists and determine a first place winner for each of the five age groups. The winning artwork will be displayed in a public venue in Washington D.C. and an awards ceremony will be held.



Emeline Prince - Aquarium of the Pacific -
First Place - Group 5 - 2008

Submissions:

Contestants must submit their artwork to the Education Department of the Learning Center closest to them. Participating Learning Centers in the "Coastal America Student Art Contest" will begin accepting entries in September 2011 for the regional competitions. Entries must be received no later than **December 20, 2011**. Regional winners will automatically be entered in the overall competition, for which winners will be selected by May 2012. For a list of participating Learning Centers or for more information please visit <http://www.coastalamerica.gov/>

Eligibility:

The contest is open to all students in the United States, Mexico and Canada enrolled in grades K-12 as well as full-time university and college students.

Age Groups:

- Group 1: Grades K-2
- Group 2: Grades 3-5
- Group 3: Grades 6-8
- Group 4: Grades 9-12
- Group 5: Full-time University & College Students

Entry Requirements:

Entries shall be submitted in one of the two categories, Art or Photography. A narrative, not to exceed 150 words, explaining how the art or photo relates to one of the Seven Principles of Ocean Literacy, must be attached to the back of the submission, together with the artist's name, grade and school, contact information, and teacher or facilitator's name.

- Art work must be two dimensional, original and not exceed 20 x32 inches. Acceptable media include paint, pencil, markers, ink, crayon, chalk, cloth and collage.
- Photography must have been created during the past year. If the submission includes recognizable individuals please provide a statement, signed by the subject in which they agree to their inclusion in the photo. Entries should be provided digitally with a minimum resolution of 300 DPI (JPEG or PDF preferred). Photo entries may also be provided in hard copy, at a maximum size of 8.5 x 11 inches.

Winners:

Winners of each Learning Center contest will be announced and their artwork will be displayed at that Learning Center's discretion. The regional contest winners from each age group will automatically be submitted to the overall ocean art contest. Winners of the overall competition will be invited to Washington, D.C. for a Coastal America ceremony.

Judging Criteria:

Submissions will be judged on visual impact, communication of the ocean literacy principle, and artistic merit. Each Learning Center will select a panel of judges for their regional competition. From those regional competitions, a panel of judges selected by the Coastal America Partnership will choose first place winners in each age group based on digital images of the work.

Each winner's submission must reflect one of the Seven Essential Principles of Ocean Literacy:

1. Earth has one big ocean with many features.
2. The ocean and life in the ocean shape the features of Earth.
3. The ocean is a major influence on weather and climate.
4. The ocean makes Earth habitable.
5. The ocean supports a great diversity of life and ecosystems.
6. The ocean and humans are inextricably linked.
7. The ocean is largely unexplored.

Rights:

Coastal America retains all rights to original and digital copies of art work sent to Washington, DC to be judged in the overall competition, including but not limited to reproduction, exhibit by Coastal America and its CWRP partners and other governmental and non-governmental institutions, size modification for display, digital submission to the media, use in promotional materials, and posting on the Internet or use in traditional publications.



Malinalli Ramirez Martinez - Veracruz Aquarium -
First Place - Group 2 - 2008

Coastal America is a partnership among federal, state and local governments and private alliances to protect, preserve and restore our nation's coastal and marine ecosystems.