



Curriculum Guide- DRAFT

Service Above Self:

A Pictorial History of the U.S. Coast Guard

Respect the Past – Engage the Present – Look to the Future



This Curriculum Guide was created in partnership with:

New London Public Schools
 The Day: Newspapers in Education
 The City of New London
 Connecticut Maritime Museum
 The United States Coast Guard Academy
 New England Science and Sailing (NESS) & Americorps

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ABOUT THE COAST GUARD SUMMER

Governor Dannel P. Malloy has officially designated the summer of 2015 as “Connecticut’s Coast Guard Summer” in celebration of the 225th anniversary of the founding of the United States Coast Guard (USCG) and the USCG Academy’s 100 years at its current location in New London. As part of Connecticut’s Coast Guard Summer, which will run from June through September, 2015, several major event organizers in New London will choose themes to commemorate USCG for its service to the region and nation.

For all of the information and events, please visit www.coastguardsummer.com

ABOUT THE COAST GUARD BOOK

The Day, in partnership with the National Coast Guard Museum Association, Inc. is proud to present “*Service Above Self: A Pictorial History of The U.S. Coast Guard*” – a photo journey through the U.S. Coast Guard’ 225-year history.

For more than two centuries, the Coast Guard has been a guardian of the American seas. Its members have flown into perilous weather to rescue mariners in distress, fought in the nation’s wars, worked to preserve and protect marine life, and much more.

This hardcover commemorative photo book, featuring a foreword written by Admiral R. J. Papp, Jr., USCG, (ret.), takes a look at the many missions of the U.S. Coast Guard and the men and women who have joined this service over the course of its 225-year-old history. Hundreds of images give a visual representation of the Coast Guard’s work, and each chapter includes information on the responsibilities of the service and some of the famous figures who have joined its ranks.

A portion of proceeds will go to support the National Coast Guard Museum Association, Inc., The Coast Guard Foundation, and the Coast Guard Academy Alumni Association.

ABOUT NEWSPAPERS IN EDUCATION

NIE is a cooperative effort of publishers and thousands of schools in the United States where newspapers are used as a tool of instruction. For our part, The Day has provided over 60,000 newspapers to New London County classrooms each year, thanks to the generosity of our business sponsors and thousands of subscribers who donate their vacation copies to NIE.

The Day provides a 100% Digital Newspaper in Education program which includes:

- In-school access to The Day’s electronic edition (e-paper) and app for every student and teacher participant -Free access to over 300 instructional resources
- Core curriculum resources for Language Arts, Math, Science, Civics, etc.

- Curriculum enhancements for Arts & Music, Black History, ESL & Spanish Bilingual, Health & Nutrition, and over twenty other topics

The Day's Newspaper in Education (NIE) program provides students in our region with digital newspapers and curriculum to use as additional learning tools within the classroom environment. NIE is a unique way for schools, businesses, and the local newspaper to work together in a partnership that benefits all of us.

ABOUT THE COAST GUARD



Motto: *Semper Paratus*, meaning “Always Ready”

- Established in 1790
- One of the 5 armed forces of the United States
- Only military organization within the Department of Homeland Security

KEY DATES IN COAST GUARD HISTORY

1790: Revenue-Marine (later renamed Revenue Cutter Service) created within the Treasury Department

1915: Revenue Cutter Service combines with the U.S. Lifesaving Service (est. 1848) to create the Coast Guard

1939: U.S. Lighthouse Service (est. 1789) added

1946: Steamboat Inspection Service (est. 1838) added

1967: Coast Guard transferred to Department of Transportation

2003: Coast Guard transferred to Department of Homeland Security



See Appendix for the “Coast Guard Snapshot”

COAST GUARD RESOURCES IN NEW LONDON, CONNECTICUT

As you learn and explore about the U.S. Coast Guard, you might be surprised to learn how many resources are found right here in New London:

- U.S. Coast Guard Academy
- International Ice Patrol
- Coast Guard Research and Development Facility
- A Coast Guard station on Long Island Sound
- Future site of U.S Coast Guard Museum

BOOK CHAPTERS: THE MISSIONS OF THE COAST GUARD

OVERVIEW & AT-A-GLANCE

Chapter	Topics	Related events & resources
1. Ports, Waterways & Coastal Security	Port security Steamboats Safety on board vessels	Thames River Heritage Park – Water Taxi Dixieland jazz concert w/USCG Band at City Pier Sea Music Festival at Mystic Seaport
2. Law Enforcement	Pirates Amistad Charles W. Morgan Customs	Amistad (May-October) & Custom House Museum US Coast Guard boat tours through New London Maritime Society
3. Lighthouse & Aids to Navigation	Lighthouses Statue of Liberty Buoys, bells, whistles, lights, radio beacons	Lighthouse tours Race Rock Lighthouse Conveyance
4. Search & Rescue	Hurricane Katrina Motorboats, Plans & Helicopters	Cutter (Sep 9-12)
5. Living Marine Resources	Endangered animals Ocean habitats	Sammy the Sea Otter (July 25) Moby Dick marathon at Mystic Seaport
6. Marine Safety	Boating safety Life preservers Distress signals	SOSS Weekend Coast Guard Auxiliary (June 20-21) In-water Boat Show – NL Waterfront Yale-Harvard Regatta
7. Defense Readiness	War of 1812 U.S. Civil War Pearl Harbor	Cutter (Sep 9-12) Civil War Encampment at Mystic Seaport (July 18-19)
8. Migrant Interdiction	Refugees Humanitarian services	Amistad (May-October) & Custom House Museum
9. Marine Environmental Protection	Oil spills <i>Exxon Valdez</i>	
10. Ice Operations	Ice breaking Icebergs Meteorology Oceanology	Icebreaker (July 10-12)
11. Homeland Security	Emergency protocol 9/11	
12. Training & Personnel	Coast Guard Academy Aviation Reserves	EAGLE (Aug 14-16)
13. Future (R&D)	Climate Change Space USCG Museum	

CURRICULUM RESOURCES & CLASSROOM ACTIVITIES

For these and many other resources, activities, and more, please check out:

<https://www.pinterest.com/NewLondonArts/coast-guard-summer/>

HOW TO USE THE BOOK WITH STUDENTS

The new book, *Service Above Self: A Pictorial History of The U.S. Coast Guard* is a photo journey through the U.S. Coast Guard' 225-year history. It becomes a primary source document for students to learn about all of the missions of the U.S Coast Guard.

Common Core State Standards can include photos as one possible way to “read text” through observations, inferences and questions. Here are some ways to engage students in looking at the images:

- Make logical inferences from the photo; cite specific textual evidence when writing or speaking to support conclusions drawn from the photo
- Determine central ideas of themes or a photo
- Analyze what is happening in the photo and its connection to the caption
- Interpret the way images are used to convey a message/story and analyze specific choices made by the photographer in capturing that message/story in a photo
- Assess how point of view or purpose shapes the content and style of a photo; analyze how a different point of view might alter the content
- Integrate and evaluate different photos from the same theme
- Locate other texts, photos, or other media or formats and compare and contrast them to photos and content in the photo book

Visual Thinking Strategies are specific methods to look at, analyze and discuss photos or other media; these strategies help students to be close observers. (These strategies can be used in conjunction with the topic-focused lessons in the next session.) Here are a few strategies that can be used on the spot, or with pre-planning:

SEE, THINK, WONDER

This primary strategy helps us to make inferences, careful observations, and/or thoughtful interpretations about the photos.

1. What do you see?
2. What do you think about that?
3. What does it make you wonder?

CLAIM, SUPPORT, QUESTION

Some photos may require us to reason and provide evidence or support, especially with topics that may be open to interpretation.

1. Make a **claim** about the photo (an explanation/ interpretation of some aspect of the photo).
2. Identify/provide **support** for your claim (things you see, feel, and know that support your claim.)
3. Ask a **question** related to your claim (What's left hanging? What isn't explained? What new reasons does your claim raise?)

LOOKING/LISTENING

When we want to make careful observations about a photo, generate/brainstorm descriptive words or phrases for a pre-writing activity.

1. **Look** at a photo for 30 seconds.
2. List 10 words or phrases about any aspect of what you see.
3. Share words, **listen** to what others share.
4. Repeat.

BEGINNING > MIDDLE > END

Photos don't always tell the whole story. When we need to make observations and use our imagination to elaborate on and extend our ideas, to look for connections, patterns, and meanings, and/or to develop writing or storytelling skills and sequencing, asking one of these questions can help us do that.

1. If this photo shows the **beginning** of an event, what might happen next?
2. If it this photo shows the **middle** of an event, what might have happened before? What might be about to happen?
3. If this photo shows the **end** of an event, what might have happened leading up to this?

THINK / PUZZLE / EXPLORE

This strategy can be used when we want to connect to prior knowledge and/or develop our own questions of investigation.

1. What do you **think** about this photo?
2. What questions or **puzzles** do you have?
3. What does the photo make you want to **explore**?

CREATIVE COMPARISONS

Sometimes the best way to start is with questions so we can make inferences, develop good questions and think deeply about a topic. Brainstorm a list of at least 12 questions about the photo using starters: *Why? What are the reasons...? What if...? What is the purpose of...? How would it be different if...? Suppose that...? What if we knew...? What would change if...?*

LESSON SEEDS & ACTIVITIES

The following lesson seeds and activities help students engage with many of the Coast Guard themes and related topics and are aligned with Common Core State Standards. Some use headlines to engage students with current events (see more activities at www.pinterest.com/NewLondonArts/coast-guard-summer/ and nieonline.com).

KINDERGARTEN – GRADE 4

OTHER RELATED BOOKS

The Adventures of Onyx series, by Tyler Benson

Coral Reefs, by Jason Chin

I'm the Best Artist in the Ocean, by Kevin Sherry

Lightship, by Brian Floca

The Littlest Lighthouse, by Ruth Sargent

Scholastic Discover More: Explorers, by Penelope Arlon

The Snail and the Whale, by Julian Donaldson & Axel Scheffler

Tim to the Lighthouse, by Edward Ardizzone

INTERESTING RESOURCES FOR THIS AGE

The Official Coast Guard Coloring Book:

<http://www.uscg.mil/community/Coast%20Guard%20Coloring%20Book.asp>

LESSON SEEDS & ACTIVITIES

Rescue at Sea

In one of the fierce storms that hit New England this winter, an Australian man and his father were rescued on the high seas by the United States Coast Guard. They were plucked by helicopter from their new sailboat that had become disabled in the Atlantic Ocean by high waves in a blizzard near Nantucket Island off the state of Massachusetts. The man and his father were on the first leg of an eight-week journey to their Australian home town in a yacht sailboat they had purchased in Rhode Island. The yacht had lost power, and its sails were torn off in a howling snowstorm when they issued an SOS message for assistance.

The Coast Guard provides rescues and assistance at sea. Other emergency crews rescue people or provide assistance in communities every day. In the newspaper, find and read a story about an emergency crew helping people. Use what you read to write a short letter to the editor thanking the crew for their service.

Tour Ship Gets Stuck

The Clipper City is a 158-foot-long sightseeing boat that takes people on tours around New York Harbor. Recently, 121 tourists got more of an adventure than they had counted on when the boat got stuck in shallow waters near the Statue of Liberty. The tourists had to be evacuated in small boats by emergency teams, and ferried back to a marina located a mile away in lower Manhattan. No injuries were reported, and the 120-foot-tall ship was not damaged, according to Manhattan by Sail, the company that operates it. It apparently ran aground after hitting mud or a shoal when the tide was low, and was returned to port by a tugboat at high tide.

Emergency teams rescue or assist people in communities all over the country. As a class, find a story in the newspaper or online about a rescue or assist by an emergency team. Write the word "EMERGENCY" down the side of a sheet of paper. Then use each letter of the word to start a line of a poem or rhyme describing the event. Use colorful language!

Another Historic Voyage

The British Cunard company runs ships that provide vacation cruises for people on the world's oceans. This summer Cunard will offer a special cruise that re-creates its first voyage across the Atlantic Ocean. That trip by a ship named Britannia traveled from Liverpool, England to Boston, Massachusetts in 1840. The Britannia was a paddleboat steamer, but this summer's trip will be on the ocean liner named the Queen Mary 2. Historians and entertainers will be aboard the ocean liner to help transport passengers back in time with parties, dinners, performances and lectures. The trip begins July 4 and wraps up in New York City (a bonus leg not included in the original voyage).

If you could take a special vacation trip, where would you go? In the ads, photos and stories of the newspaper, find a place you would like to visit. Do some research about the place and use what you read to write a paragraph explaining why you would like to visit this place. Share with the class.

12 days at Sea

A 67-year-old fisherman from the state of Hawaii survived being lost at sea for 12 days and when rescued was suffering only from weakness, hunger and dehydration. Ron Ingraham was found by a U.S. Navy vessel and brought back to shore on the island of Molokai. The U.S. Coast Guard had conducted an extensive search after receiving "mayday" emergency radio calls, but suspended the effort when Ingraham could not be found. Then a Navy destroyer heard another "mayday" and was able to find and rescue the man three miles away. He had survived by eating raw fish, which he said wasn't quite "as good as a sushi bar" restaurant but provided nutrients and water.

People often make news when they survive unfortunate events. In the newspaper or online, find a story about a person who survived an unfortunate event or challenge. Read the story closely and write a summary of the key points that allowed the person to survive.

Largest Marine Preserve

A wide stretch of ocean is being set aside for an expanded and protected marine preserve. The United States is declaring the waters off limits to oil drilling and most fishing in a bid to protect fragile underwater life in the Pacific Ocean. The area is located in the expanded Pacific Remote Islands Marine National Monument, which covers 490,000 square miles of water around island territories controlled by the U.S. The area is roughly three times the size of California and is the world's largest marine reserve. Millions of seabirds, turtles and marine mammals will be protected in the area, as will more than 130 underwater mountains, where rare and previously unknown species are often found.

There are many benefits to protecting wildlife habitats. As a class, discuss some with regard to the new Pacific Ocean marine preserve. Use points from the discussion to draw a series of comic strips showing ways the new marine preserve will benefit wildlife, and people.

Baby Orca Spotted

A baby orca has been spotted in the Pacific Ocean off the Washington State coast — the third birth in the wild that has been recorded this winter for the endangered species. That is an encouraging sign for the area's population of orcas, which also are known as "killer whales." Yet the orca population is still dangerously low, with only about 80 orcas known to be living in the Puget Sound region. Pollution, lack of food and other causes are endangering the orcas, which are known for their black and white markings. They've been having babies, a Center for Whale Research scientist noted, but the offspring "just haven't survived."

Efforts to study or protect endangered species often are in the news. In the newspaper or online, find and read a story about an endangered species. Use your imagination and brainstorm an idea for a cartoon or short movie featuring the endangered species. Have a member of species talk about dangers or problems it faces, and how people could help.

Whale Gets Free

A 45-ton humpback whale was freed recently after more than a week tangled up in heavy fishing line in Pacific Ocean waters off the coast of Hawaii. A crew from the Hawaiian Islands Humpback Whale National Marine Sanctuary used a pole equipped with a knife to saw the line free. After a weather delay, the crew approached the whale in an inflatable boat and attached buoys to keep it from diving while the rest of the rope was removed. A small piece of line was lodged in a wound, but it is expected to heal.

Humans often step in to help wildlife if they are endangered or experiencing problems. In the newspaper or online, closely read a story about a wild species that humans could help in some way. Write a short editorial for the newspaper giving your opinion on ways humans could help this species.

Coral Reefs Boost Fish

Coral reefs are often in the news because they are threatened around the world by pollution and climate change. Yet they are the reason there is a wide variety of fish species in many areas. A recent study of the islands and reefs of the Malay archipelago between Australia and Southeast Asia concludes that reefs have provided fish a safe home and the means to evolve into new species for 3 million years. The findings show “that the past shapes the present,” the author notes in the journal *Science*. “The farther you go... from reef habitats... the fewer fish you find. ...We need to manage and maintain lots of reefs.”

Oceans provide habitats for a wide variety of fish and wildlife. They also help humans in many ways. With family or friends, talk about all the ways humans benefit from oceans. Then use photos, headlines and images from the newspaper to create an art collage highlighting how oceans benefit humans.

Plastic in the Oceans

Scientists have a new way to measure ocean trash, and things are even worse than they had thought. A study in the journal *Science* estimates there now are 8 million tons of plastic floating on the surface of the world’s oceans in “garbage patches.” That’s far more than what’s been measured previously. The researchers predict that the amount of plastic trash will increase by 10 times in the next 10 years unless a way is found to improve how trash is collected and managed in coastal countries. The study identifies what countries produce the most ocean plastic. The Asian nation of China was the worst offender, followed by five other Asian countries. The United States was 20th on the list.

Recycling plastic, glass and metals can reduce the amount of pollution in oceans, waterways and other natural areas. In the newspaper or online, find and read a story about a natural area that could be damaged by pollution. Use what you read to design a poster encouraging people to recycle to reduce pollution in the natural area. Write a complete sentence stating why recycling would help.

That’s Really Sticky!

Some sea creatures are good at sticking to things, even underwater, so researchers are taking a close look at them. What’s more, they have taken the natural proteins used by mussels when sticking to rocks to create a new adhesive. The new product, it is hoped, can be used for everything from repairing ships to closing surgical wounds. Stronger than natural mussel proteins, the man-made material is the strongest biologically-created adhesive to date.

Scientific research often leads to new inventions. As a class, closely read a story about a scientific research discovery. In teams, brainstorm ways the discovery could be used to create a new product. Give your product a name and design an ad to promote it.

Nature's Strongest Material

Scientists have discovered nature's strongest material — the teeth of snail-like water creatures called limpets. The limpets use their teeth to scrape food off ocean rocks. The teeth are so small they can't be seen without using a microscope. They contain a hard mineral called goethite (pronounced GUR-tite). Researchers found that the material had about five times the strength of most spider web "silks," which previously had been thought to be the strongest material in nature. The amount of weight the limpet tooth can withstand, one scientist said, can be compared to a strand of spaghetti holding up the weight of an adult hippopotamus.

Things can be strong in many different ways. In the newspaper find and read about strong things and write down different ways they are strong. Then choose 10 strong things and use what you have read to write a poem, rap or rhyme about them. Title your poem "Strong as a ...". Read poems aloud with the class.

Pink Sea Slugs

One unexpected result of global warming may be the "pinking" of ocean waters in central and northern California. Increasing temperatures have caused an explosion in the population of the Hopkins rose sea slug, which up to now has lived mostly in southern California. Recently, however, they have been sighted far north of San Francisco in the West Coast state, giving a pink hue to coastal waters. Scientists say the temperature of the waters off the coast have risen about five degrees in recent years, and are getting warmer. Also, the sea slug's main source of food can now be found as far north as British Columbia in Canada.

As a class, discuss ways global warming is changing the lives and behavior of wildlife around the world. Then find and read an article about an affected species as a class. Draw a comic strip or picture showing how warming is affecting the species.

Earth's Warmest Year Yet

Despite relatively cold weather across the U.S., including monster snowstorms in the East, Earth is on track for its warmest year on record, reports the National Oceanic and Atmospheric Administration. Record heat has hit large chunks of Europe, Russia and the Pacific Ocean region. The global heat is being increased by warming ocean waters and surface temperatures, scientists say. Those temperatures are rising because "greenhouse gases" like carbon dioxide are trapping heat in the Earth's atmosphere, the scientists note.

Carbon dioxide is produced by burning fossil fuels like gasoline, oil and coal. Warmer temperatures can affect habitats, wildlife and even humans. In the newspaper find a photo with a story about an outdoor habitat. Read the story and study the picture closely. Then use what you read to write a paragraph describing what could change if the temperature of the pictured habitat got warmer and warmer.

GRADES 5-8

RELATED BOOKS

The Ghosts of Black Point, by Penn Millen

The Light at Tern Rock, by Julia Sauer

From Slave Ship to Freedom Road, by Julius Lester

Scholastic Discover More: Ocean and Sea, by Steve Parker

So Others May Live – Coast Guard's Rescue Swimmers: Saving Lives, Defying Death, by Martha J. LaGuardia-Kotite

INTERESTING RESOURCES FOR THIS AGE

Celebrities who were in the Coast Guard:

<http://www.uscg.mil/history/faqs/celeb.asp>

LESSON SEEDS & ACTIVITIES

Old Ironsides in 'Dry Dock'

The USS Constitution, better known as the ship "Old Ironsides," has left its berth in Boston Harbor for a three-year restoration. During this period, the three-mast sailing ship will remain open for public tours at a "dry dock" work site. Old Ironsides won fame in America's War of 1812 when cannon fire from British ships reportedly bounced off the sides of the U.S. vessel. When it left Charleston Navy Yard for its dry dock repair site, it fired a 21-gun salute with its cannons off Fort Independence in Boston Harbor and 17 guns at the U.S. Coast Guard's Boston base. About 500 guests were on board for the trip around the harbor.

The USS Constitution is a historic attraction in Boston. What historic attractions does your community or state have? Discuss some as a class. Then pick one and design an ad for the newspaper, telling people why they should visit and what they could learn.

Kayaker Rescued in Pacific

Eleven days into a nearly 2,400-mile Pacific Ocean voyage from California to Hawaii, a kayaker had to be rescued by the U.S. Coast Guard. The 57-year-old, who had sent a distress call, was reported in good health. The kayak, which had set out from Monterey, was equipped with a solar panel that charged all its electronic equipment, but when it malfunctioned the kayaker was forced to turn back. The kayak was spotted about 60 miles southwest of Santa Barbara by a helicopter that directed a Coast Guard cutter to the site.

People are helped by rescue or emergency crews in many ways. In the newspaper or online, find a story about someone being assisted. Read it closely and write a letter to the editor, thanking the rescue or emergency crew for their actions.

Treading Water Overnight

Two people who fell from their boat survived for hours at night in the ocean off Hallandale Beach, Florida — without flotation devices and with nothing to signal for help. The man, 50, and woman, 52, were uninjured after staying afloat for 14 hours by “treading water” — moving their arms and legs as if they were walking on land. They were rescued by a group of men on a fishing trip who were in the area.

Newspapers often write human interest stories that convey the feelings and emotions of people like the couple rescued at sea. In the newspaper, find a story about a person in the news. Imagine what the person may have felt and experienced, and write a creative story or poem describing those emotions. Give your work a creative title and share with the class.

Adrift for a Week

Emaciated and exhausted, a Mexican fisherman was rescued recently after having been adrift at sea for a week. People aboard a sailboat found him, floating in a giant foam cooler normally used to hold his catch of fish. He was about six miles off the region of Acapulco. His boat had been swamped by a tropical storm, and a companion was later found dead in the boat. The rescued fisherman had caught a seagull for food, and “the poor man didn’t want to let go of it,” the sailboat captain reported.

People often make news when they overcome great obstacles. In the newspaper or online, find a story about a person overcoming an obstacle. Read the story and brainstorm an idea for a movie or TV show about the person’s experience. Write a description of the plot and then outline what would happen in the first scene.

Ancient Shipwreck Discovered

Divers have discovered the skeleton of a ship that sank thousands of years ago in the dark Mediterranean waters north of Sicily near the European nation of Italy. Archaeologists believe the ship may date back to the ancient Punic Wars between Rome and Carthage. Scientists believe the ship Panarea III was a 50-foot-long vessel supplying the Roman military in the war more than 2,200 years ago, and may have broken up on rocks before sinking. The cargo of the ship lies scattered on the ocean floor amid piles of terra cotta jars called “amphora.” Italian and American researchers are working with Global Underwater Explorers, a Florida-based group, on the project.

Shipwrecks give archaeologists information about the past because they often contain things the ships were carrying. In the newspaper or online, find a modern form of transportation people use. Think of the things people would carry or bring with them when using this kind of transportation. Write a paragraph describing what these things would tell future scientists about the way people live today.

Museum Near Slave Site

An area near the harbor in Charleston, South Carolina, has been chosen as the site for the \$75 million International African American Museum. And the spot is significant because it is near the wharf where slave ships unloaded thousands of black Africans in the late 18th and early 19th centuries. The Africans brought into America at the site represent about 40 percent of the African slaves brought to the United States. Part of the tract is city land, and the family that owns the other part has agreed to sell it to the city. Construction of the 42,000-square-foot museum, scheduled to open in 2018, will be funded by private donations, plus money from the city, county and state. Charleston's role in the slave trade was a significant chapter in African American history.

New chapters are being written every day by African Americans achieving new successes. In the newspaper, find an African American achieving success in his/her career. Write a short editorial for the newspaper detailing how this person's success could be an inspiration to others.

Dig It

For nearly 150 years, the Suez Canal has been one of the most important waterways in the world. Connecting the Mediterranean Sea and the Red Sea in the Middle East, the Egyptian canal enables ships to travel from Europe to Asia without going all the way around the continent of Africa. Now Egypt is making major changes to the canal to deepen it and add a 22-mile parallel canal to allow ships to pass each other going in opposite directions. The \$4 billion expansion of the canal is one of several projects planned by Egypt's government to boost its struggling economy. The expanded canal is expected to open in August.

The Suez Canal is an important place in the shipment of products and goods around the world. In the newspaper or online, read a story about another place that is important to such shipments and world trade. Do additional research on this place and write a paragraph or short essay detailing why this place is important to shipments and trade, what facilities it offers and how it benefits its city or state by being a shipping hub.

Undersea Adhesive

Some sea creatures are good at sticking to things, even under water, so researchers have taken the natural proteins secreted by mussels to create a new adhesive. The new product, it is hoped, will have applications ranging from ship repair to closing surgical wounds. Stronger than natural mussel proteins, the material is the strongest biologically-created adhesive to date. The researchers hope to test other protein varieties to see if they can increase the strength of the adhesive.

Oceans are important to people's lives in many ways. With the newspaper or Internet, compile a list of ways the world's oceans contribute to the lives of people. Use what you find to design a poster detailing the ways "Amazing Oceans" help people. Share and discuss as a class.

Beached Sea Lions

Emaciated and dehydrated sea lion pups are washing ashore in record numbers on California beaches, so SeaWorld San Diego suspended its “Sea Lions LIVE” show to help with rescue efforts. SeaWorld personnel rescued more than 400 of the pups, twice the number it usually rescues in an entire year. By suspending the sea lion show in San Diego, SeaWorld assigned its animal specialists to the rescue program. Scientists say bands of abnormally warm ocean water have swept up the Pacific Coast since the end of 2014, driving fish that the sea lions feed on deeper into the sea. The warmer waters may be connected to larger trends of global warming, according to experts.

People often get involved when wildlife face problems or become endangered. In the newspaper or online, find a story about people helping wildlife in some way. Use what you read to write a short editorial thanking the people for their involvement and detailing how it helped.

Sediment Harming Coral

Large amounts of coral in the bay near the Port of Miami, Florida are dead or dying, divers report, and it's believed they are being suffocated by sediment from a \$205 million dredging project. The project, which is expanding a channel to serve supersize cargo ships, was supposed to protect the coral by relocating it away from the dredge site. But for some reason, yet to be determined, most of the endangered staghorn coral was never relocated, even though 924 other corals were moved. Ironically, only the staghorn is on the endangered species list. The strategy was intended to balance Miami's economic interests with the concerns of environmentalists about threats to coral reefs across South Florida.

Protecting wildlife and the environment is a concern in many communities. In the newspaper or online, find and read a story about an effort to protect wildlife or an environmental habitat. Draw a series of comic strips for the newspaper, showing why protection is being sought.

Hotter Summer Ahead

You can expect a hotter summer than usual this year, because climate change has weakened the summer winds that bring cooler ocean breezes, according to new reports. The rapid warming of the Arctic region around the Earth's North Pole disrupts the air streams that reduce cooling summer storms, resulting in more heat waves. Summer heat waves are also made more intense by heat-trapping “greenhouse” gases created by burning oil, coal and natural gas, according to reports by the International Energy Agency and the Potsdam Institute for Climate Impact Research.

The effects of climate change and global warming are being felt in different ways all over the world. In the newspaper or online, find and read a story about how climate change and warming are having an impact on people, wildlife or habitats. Use what you read to design a poster or public service ad highlighting one set of changes. Give your ad an eye-catching headline.

A Whale That Ages Gracefully

For the secret of aging gracefully, people should check out the bowhead whale. This resident of Arctic waters can live more than 200 years, and scientists studying its genetic blueprint have discovered clues to its longevity and remarkable resistance to disease. It's "the biggest animal whose genome has been sequenced thus far," the study's leader notes in the scientific journal *Cell Reports*, and from what has been learned about its genes "we hope to learn ... the secret for living long term healthier [human] lives."

Genes and DNA, which are contained in every living cell, determine the characteristics of all living things. In the newspaper or online, find and read a story about genetics or DNA testing being used to answer medical or scientific questions. Write a summary of the key points and how the use of genetics or DNA is an advance over how things were done previously.

An Ice-Free Arctic?

The Arctic area around the Earth's North Pole continues to warm up faster than the rest of our planet, causing a wide range of environmental changes. Below-average snow cover (a record low in some areas) has led to rising sea surface temperatures, a bloom of tiny marine plants and melting of sea ice. That in turn has caused a decline in polar bears (which rely on sea ice to travel and hunt) and a rise in sea levels. These changes have been attributed, at least partially, to emissions of greenhouse gases created by burning fossil fuels like gasoline and oil. Many scientists expect the Arctic to be ice-free in the summertime by the end of the century, if not sooner.

Global warming and climate change are often in the news. In the newspaper or online, find a story about the issues and read it closely. Use what you read to brainstorm an idea for a short video on the issue. Write an outline for the video, including what images you would use.

Oceans Awash with Plastic

New studies show that plastic debris pollutes 88 percent of the world's oceans. That concerns scientists, but not for the reason you'd think. They're concerned because it's actually less than researchers had expected. Scientists believe a lot more plastic trash exists and they're unsure where it is. Debris collected in nets in the Indian, Atlantic and Pacific oceans included pieces of such items as bags, food containers and toys, but more may have broken down into microscopic pieces that can't be collected. Scientists fear that microscopic plastic bits could enter the food chain when eaten by fish or other marine life, and ultimately end up on human plates. Other plastics may have sunk to deeper, less explored waters.

Pollution from plastics and other debris is a problem in all the world's oceans, and in many land areas. Recycling reduces the amount of plastics pollution and the amount of plastic in landfills. In the newspaper or online, read about recycling programs for plastics. Use what you read to design a public service ad for the newspaper to persuade more people to recycle plastics.

GRADES 9-12

RELATED BOOKS

Brother of the Fin: A Coast Guard Rescue Swimmer's Story, by Gerald R. Hoover

A Storm Too Soon: A True Story of Disaster, Survival and an Incredible Rescue, by Michael J. Tougias

INTERESTING RESOURCES FOR THIS AGE

Films:

The Guardian, starring Kevin Costner & Ashton Kutcher

Amistad, starring Djimon Hounsou, Matthew McConaughey & Anthony Hopkins

LESSON SEEDS & ACTIVITIES

Sea Perils

This year is on track to be the deadliest ever for migrants crossing the Mediterranean Sea to Europe from North Africa and the Middle East. In one recent week, two loaded boats were wrecked, killing as many as 700 people and raising the total number of deaths this year to about 2,900. The steep death toll, according to the International Organization for Migration, reflects the extreme turmoil in the migrants' homelands, because many are willing to board smugglers' unsafe boats for a chance to get away.

When people flee war or harsh conditions in a country, they often become refugees or migrants with uncertain futures. In the newspaper or online, find a story about a country where many people are seeking to leave. Read the story closely and write a paragraph describing why they are leaving, where they are going and what challenges they will face when they get there.

Ocean Extinctions

Scientists fear that today's ocean wildlife are facing the same pressures that led to the extinction of many land animals when the world industrialized in the 1800s. In the journal *Science*, the researchers note that ocean life was not affected by the Industrial Revolution because fishing was still performed in smaller areas close to shore, but "a lot has changed." To keep the oceans relatively healthy for wildlife, the scientists suggest declaring larger areas off limits to fishing, mining and industrial development. Otherwise, they warn, "we are setting ourselves up in the oceans to replay the armageddon we engineered on land."

Protecting wildlife is an issue important to people all over the world. As a class, discuss different reasons people feel this way. Then find and read a story about a wildlife species in the newspaper or online. Use what you read to write a paragraph detailing three reasons people might want to protect this species.

Threat to Shellfish

The world's oceans are growing more acidic, and the change is threatening the \$1 billion shelled mollusk industry. That is bad news for lovers of shellfish like oysters and clams, but also for the economies of 15 states. It's already cost the Pacific Northwest oyster industry nearly \$110 million, jeopardizing about 3,200 jobs. Similar impact could affect seacoast states from Maine to Louisiana. In a report published in the journal *Nature Climate Change*, environmentalists attribute the acidification to rising greenhouse gas emissions from the burning of fossil fuels such as gasoline, oil and coal. Gases created by burning fossil fuels cause "acid rain," which increases the acidity of oceans when it falls into them.

When pollution has a negative effect on the environment, it can have a negative effect on businesses that rely on the environment. In the newspaper or online, find and read a story about a business that relies on the environment in some way. Brainstorm ways that pollution could negatively affect the environment and the business. Write a paragraph or short essay explaining the effects.

Obama: Climate Change Hurts Economy

Further delay in addressing climate change is not only bad for the environment, but also for the American economy, President Obama has warned. Rising temperatures could cost Americans the equivalent of \$150 billion a year, his Council of Economic Advisers has predicted, "because of the permanent damage ... resulting from the delay." The President is considering new executive actions to lessen the impact of climate change in the face of what he considers inaction by the U.S. Congress. Republicans have said his call for more extensive regulation of carbon emissions would slow the economy and cost jobs, but the new report said long-term costs of delay would be higher than any possible short-term costs.

Global warming and climate change are having effects all over the world. In the newspaper or online, find a story about one situation and effects described by scientists. Write a paragraph summarizing the effects and what could be done to address them.

Divers vs. Lionfish

Invasive Pacific lionfish are threatening the native fish population and endangering the reefs around the island of Curacao in the Caribbean Sea south of the United States. The problem has inspired a program to eradicate the invaders — and tourists are being recruited to help. The nonprofit Reef Environmental Education Foundation (REEF) is planning to train participants in its 2015 field survey trip to spear lionfish to reduce their number. REEF staff and instructors will lead dives and hold seminars about the effect of this invasive species.

Habitats all over the world can get out of balance when an invasive species is introduced. With the newspaper and Internet, do some research about an invasive species affecting your community or state. Then use what you find to brainstorm a public service TV commercial to publicize the problem and urge the community to take action.

Claiming the North Pole

The tiny European nation of Denmark has claimed the Earth's North Pole as a territory. Denmark made the claim because Greenland, a semi-independent Danish territory, is geologically attached to an underwater mountain ridge that runs under the North Pole. Other nations with territory near the North Pole also would like to claim it, including the United States, Canada, Russia and Norway. Why would anyone want the North Pole? It's an area of 345,600 square miles that is believed to cover many valuable natural resources, including as much as 22 percent of the world's natural gas.

Natural resources are valuable in many ways. As a class, discuss valuable things that nature provides for people, including fuel, food, building materials and more. Pick one natural resource from the discussion and find a story that involves it in the newspaper or online. Read the story closely and write a paragraph describing why the resources is valuable to people.

19th Century Wreck

Wreckage from an 1848 voyage to sail and map a Northwest Passage from the Atlantic Ocean to the Pacific has been discovered by a remotely controlled underwater vehicle in Canada's Nunavut territory near the Earth's North Pole. The ship was one of two led by Sir John Franklin that were abandoned by their crews, and the ships' mysterious disappearance prompted 32 unsuccessful search missions. It is believed that discovery of the wreckage near King William Island was made possible by the thinning of Arctic ice as a result of climate change. There is also speculation that with less ice in the Arctic, a Northwest Passage may yet become a major shipping route.

Expeditions by explorers and scientists help people learn new things about nature and the Earth. In the newspaper or online, find a place you think would be interesting to explore. Write a paragraph describing what things you could learn by exploring it.

Ecosystems Under the Ice

At the bottom of Antarctica's thick ice caps, it is dark and very, very cold. It would not seem a place likely to support life, but it has viable ecosystems, researchers report in Nature magazine. Scientists have pulled thousands of different types of micro-organisms from Lake Whillans, which is buried under the Antarctic ice sheet near the Earth's South Pole. The setting, they note, is similar to that of icy moons around the planets Jupiter and Saturn, leading to speculation that perhaps life could exist elsewhere in our solar system. To survive in cold surroundings far from the energy of a light source, organisms must utilize the chemistry of the lake's water, rock and sediment particles, the scientists note.

Scientists study ecosystems on Earth to gain knowledge about our Earth and other planets in the solar system. In the newspaper or online, find a story about another study of an ecosystem. Read it closely and write a summary of what scientists hope to learn by studying the ecosystem.

CREDITS & ADDITIONAL RESOURCES

Coast Guard Summer – official website:

<http://www.coastguardsummer.com>

Coast Guard Summer resources in every theme:

<https://www.pinterest.com/NewLondonArts/coast-guard-summer/>

Newspapers in Education:

<http://nieonline.com/>

Teacher’s Lighthouse Resource for Grades K-4:

<https://www.uscg.mil/history/articles/LighthouseCurriculum.pdf>

Sammy the Sea Otter - coloring book (reproducible):

<https://www.uscg.mil/hq/cg5/cg544/docs/Sammy%20Coloring%20Book.pdf>

Visual Thinking Strategies:

<http://www.vtshome.org/>

“The Coast Guard has traditionally been an inclusive service.

Women began serving as lighthouse keepers in the 1830s, and the first uniformed reservists appeared in 1918. Joseph Ximenez was the first Hispanic-American to command one of the service’s ships, taking the helm of the lightship at Carysfort Reef in Florida in 1843. Michael A.

Healy became the first African-American to be commissioned into the Revenue Cutter Service in 1865, and he would go on to become the first African-American to command a federal government vessel in 1877.”

WORKFORCE DEMOGRAPHICS

ACTIVE DUTY WORKFORCE

- Men – 85.7%
- Women – 14.3%

MARRIED

- Enlisted – 58%
- Officers – 75%

ACTIVE DUTY WORKFORCE RACE/ETHNICITY

- American Indian / Alaskan Native – 2.4%
- Asian – 1.0%
- Black – 5.4%
- Multiple race – 5.7%
- Native Hawaiian / Pacific Islander – .07%
- White – 76.5%
- Unknown or Declined – 8.3%

AVERAGE AGE (YEARS)

- Enlisted – 30
- Officers – 37

AVERAGE TIME IN SERVICE (YEARS)

- Enlisted – 8
- Officers – 15



COAST GUARD Snapshot 2012

WORKFORCE TOTALS:

Military Active – 42,190 Active Retired – 33,859
 Military Reserve – 7,899 Reserve Retired – 6,537
 Civilian – 8,722 Auxiliary – 32,156

FY12 BUDGET:

\$10.6
Billion

LOCATIONS

9

Districts

35

Sectors

1208

Units

6 PROGRAMS

- Maritime Security Operations
- Maritime Law Enforcement
- Maritime Prevention
- Maritime Response
- Defense Operations
- Marine Transportation System Management

ASSET TOTALS

244

Cutters

1776

Boats

198

Aircraft

“We protect those on the Sea, We protect America from threats delivered by Sea, and We protect the Sea itself.”

— ADMIRAL ROBERT J. PAPP, JR.
24TH COMMANDANT OF THE U.S. COAST GUARD

COAST GUARD STRATEGY: The Coast Guard ensures the safety, security and stewardship of the Nation’s waters. We are the lead Federal agency for law enforcement, incident response, homeland security and disaster management in the maritime environment. Our highly skilled workforce and capable assets allow the Service to fulfill its mission and protect the Nation.

IN REVIEW



JANUARY CGC MIDGETT
Interdicts semi-submersible
 The endurance cutter was participating in joint operations with Inr1 Coast Guards when they intercepted approx. 13,000 pounds of cocaine.

FEBRUARY Time for Inspection
 Port state examiners stationed in Sector San Francisco's Prevention Department, conducted an inspection on the Carnival Splendor cruise ship, while the ship undergoes repairs at dry dock.



MARCH Japanese Trawler Aftermath
 Inspection teams worked to assess damage to the West Coast in advance of the swell, while cutters assisted with the recovery of vessels. Marine safety experts coordinated with gov partners to mitigate effects of debris and pollution.

APRIL Fight for Fish
 To protect the region's natural resources, CGC Buick's crew conducted a regional patrol to help secure protected fishing grounds, belonging to both the U.S. and our neighbors throughout the Pacific.



MAY Strength in Training
 A U.S. Coast Guard Advanced Interdiction Team (AIT) participated in counter-piracy boarding operations training exercises alongside the visit, board, search and seizure (VBSS) team aboard USCGC Meigs.

JUNE Honoring our Past
 The Coast Guard Cutter Eagle moored to the Landungsbrücken Pier in Hamburg, Germany, visited in celebration of its construction 75 years ago at the Blohm and Voess Shipyard.



JULY Busy Roundup
 Through the five day event, CG crews serviced 1,250 navigational aids along 42,000 miles of coastline while actively participating in search and rescue, environmental protection, and law enforcement missions.

AUGUST Back in business after Hurricane Irene
 The CG worked with partners and the shipping industry to ready more than 1,000 miles of coastline and 45 ports, minimizing economic disruption as a result of the storm.



SEPTEMBER CGA RANKS #1
 With a perfect overall score, the Coast Guard Academy appears in U.S. News and World Report's "Best Colleges" issue, placing first in the Regional College (North) category.

OCTOBER Red King Crab Season
 Local CG units prepare for Alaska's volatile environment through vessel inspections, verifying licensing gear and nav. equipment. As always, the CG stands ready to respond to fisherman in distress.



NOVEMBER WAESCHE'S Inaugural Deployment
 proving she is more than capable of executing the most challenging maritime security missions, the National Security Cutter interdicted two separate drug smuggling vessels.

DECEMBER Coastline in Space
 Retired Coast Guard Capt. Daniel Burbank, commander of Expedition 30 and the CG's second astronaut, transmits a holiday message from space while working from the International Space Station.



WWW.USCG.MIL

Recruiting – GOCOASTGUARD.COM

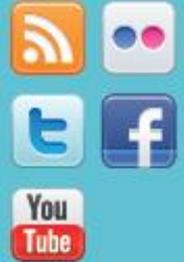
Academy – CGA.EDU

Civilian Employment – USCG.MIL/CIVILIAN

Coast Guard Auxiliary – CGAUX.ORG

Boating Safety – USCGBOATING.ORG

In Your Community – USCG.MIL/COMMUNITY



Last year, more than 43,000 active duty members, more than 7,800 reservists, more than 8,300 civilian employees and almost 33,000 volunteer auxiliaries:

- Responded to 20,310 Search and Rescue cases and saved over 3,800 lives.
- Removed over 166,000 pounds of cocaine bound toward the U.S. via the Transit Zone.
- Continued the deployment of six Patrol Boats and 400 personnel to protect Iraqi critical maritime oil infrastructure and train Iraqi naval forces.
- Provided security for over 230 military outload evolutions, which provided supplies to support Operation New Dawn and Operation Enduring Freedom.
- Conducted nearly 1,700 security boardings on High Interest Vessels bound for the United States.
- Interdicted nearly 2,300 undocumented migrants attempting to illegally enter the United States.
- Conducted over 10,400 annual inspections on U.S. flag vessels inspected and certificated in accordance with 46 Code of Federal Regulation (CFR) § 2.01-7.
- Conducted over 9,300 Port State Control safety and environmental exams on foreign vessels entering U.S. ports.
- Conducted over 6,200 Marine Casualty investigations, including over 4,200 marine casualties for vessels and more than 1,200 investigations for pollution from vessels.
- Conducted over 46,000 recreational vessel boardings, issued over 8,000 citations, and visited 1,150 recreational boat manufacturers in conjunction with state efforts to provide education and ensure compliance with federal regulations.
- Conducted over 3,300 fisheries conservation boardings.
- Expended \$127 million of the \$142 million appropriated under the American Recovery and Reinvestment Act.
- Investigated and responded to over 3,000 pollution incidents.
- Verified more than 70,760 Transportation Worker Identification Credentials.
- Screened over 472,000 vessels, including 122,000 commercial vessels and 28.7 million crewmembers and passengers prior to arrival in U.S. ports.

PROUD HISTORY, POWERFUL FUTURE. Some of us were born ready. We jump right in. We step right off. We look at the world and see one big green light. We define our lives by action. Challenges met. Obstacles overcome. And we like to be around other people like us. People who were born ready. The U.S. Coast Guard was born ready. In 1790 we hung out a sign that said, "bring it on." And the calls have never stopped. We are an armed service. We are a law enforcement agency. We are the men and women you look for in your darkest hour. And the sea invents new ones for us daily. If you look around you and see a country worth protecting. If adrenaline is something you can't live without. If you are your own captain, but wouldn't mind serving another. If you were born ready. Then we might be the right place for you. Find us.