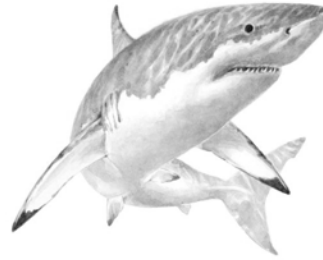


Shark Cartoons



Topics

Art, Sharks

Grades

3-5

Site

Indoors

Duration

30 minutes

Materials

- Nonfiction shark resources (books, magazines and websites)
- Cartoon examples
- Shark School of Art
- Cartoon Planning Guide
- Cartoon Evaluation Sample Rubric
- Drawing paper
- Pencils, crayons, markers or other art supplies

Vocabulary

illustration, threatened

National Science Education Standards

Science as Inquiry

(K-4) (5-8)

Ability to do scientific inquiry

Understanding of scientific inquiry

Life Science (K-4)

The characteristics of organisms

Organisms and their environments

Overview

What challenges do sharks face in the wild? Students explore nonfiction resources to learn about those challenges and to discover the importance of sharks in maintaining a balanced ocean ecosystem. Then students develop a conservation message and create a cartoon designed to improve people's perception of sharks.

Objectives

Students will be able to:

- Explain the importance of sharks in the ecosystem and describe threats facing sharks.
- Develop a conservation message around sharks or other topic.
- Use language art skills to develop a meaningful cartoon about a scientific topic.

Background

Sharks play an important role as top ocean predators, helping to maintain biodiversity in ecosystems. However, it is estimated that every year humans kill approximately 100 million sharks. In contrast, less than 12 humans per year die as a result of shark attacks. Many species of sharks are considered **threatened** by the International Union for Conservation of Nature (IUCN).

Shark deaths occur for many reasons. Fishermen catch sharks for food, pharmaceutical purposes and even leather production. Many other sharks die as bycatch when commercial fishermen catch them accidentally in their fishing lines or nets while trying to catch other fish. Some fishermen are only interested in the shark's fins for shark fin soup, which is considered a delicacy in some cultures. They cut the fins from sharks and toss the sharks back into the water where they are no longer able to swim and consequently die.

Humans negatively impact shark habitats by depositing pollutants into the ocean, i.e., oil, plastics and other debris. Human impacts are intensified by the fact that sharks have a very slow rate of reproduction. Many sharks do not reach sexual maturity until late in life. And once they do reach that age, they only give birth to a small number of pups at a time. These conditions make it difficult for species to recover if the population number is low.



VOCABULARY

Threatened: any species which are vulnerable to extinction in the near future

Illustration: artwork used to explain or make something understandable



ELL TIP

Family support is essential for all learners' success. Family Discovery Events are a great way to engage families in their child's learning. They introduce potentially new concepts and methods to families that can be applied to many of the students' academic studies. Use the attached table label at your event.

One way to develop awareness and communicate about the challenges that sharks face is through cartoons. Cartoons, comic strips and **illustrations** have been used throughout history to record events and express views with others. In colonial America, cartoons focused on political issues. Ben Franklin is considered the first U.S. political cartoonist. In satirical, editorial or political cartoons, cartoonists use caricature (deliberate exaggeration of physical features or mannerisms), allusion (an indirect reference to something) or metaphors (a figure of speech in which one thing is spoken of as if it were another) to help readers understand their cartoons' messages.

Procedure

1. EXPLORE VARIOUS CARTOONS WITH STUDENTS.

Have students bring in their favorite cartoon strip from the newspaper or internet. Provide a variety of cartoons for students to explore as well. Sherman's Lagoon (www.slagoon.com), The Far Side (www.thefarside.com) and Professor Garfield's Comics Lab (www.professorgarfield.org) are all online sites with cartoons. If possible choose some with conservation messages or that focus on the natural world. Give students time to read a variety of comics and make observations about cartoons. Tell students they will be creating a cartoon about sharks.

2. STUDENTS USE NONFICTION RESOURCES TO COLLECT INFORMATION ABOUT SHARKS.

Challenge students to learn as much as they can about sharks. Have them look at survival characteristics such as physical structures, behaviors, diet, habitat and interesting facts. You may choose to have them refine their research on a specific concept (adaptations, role in food web, habitat) or species (Great white, Hammerhead, etc.). See **Resources** for nonfiction books on sharks. If possible, visit a local aquarium to observe sharks and record findings or watch free, short videos on sharks on Monterey Bay Aquarium's website.

3. AS A CLASS, REVIEW THE INFORMATION STUDENTS HAVE GATHERED ABOUT SHARKS.

Ask students to share some interesting shark facts with the class. Review shark attributes and adaptations. (*a keen sense of smell for locating their prey, a special eye membrane that closes when attacking prey, fins shaped for quick maneuvering*) What role do sharks play in an ocean ecosystem?

4. CLEAR UP MISCONCEPTIONS AND DISCUSS SOME THREATS TO SHARKS.

Ask students what sharks eat. (*fish, crustaceans, some marine mammals, etc.*) Do sharks eat people? (*No, sometimes they have mistaken people for seals or their natural prey.*) Can people be a danger to sharks? (*Yes, threats may include habitat pollution, decreased food sources, and fishing methods.*) Why should we care about sharks? (*Besides being amazing animals, they serve an important role as top predators in the ocean.*)

5. BRAINSTORM CONSERVATION MESSAGES AS A CLASS.

Discuss the use of words or thoughts, caricature and satire to convey a message. Ask the students to think of conservation messages that might increase people's awareness of factors which impact sharks' lives or improve the image of sharks.

6. REVIEW METHODS FOR MAKING GOOD ILLUSTRATIONS OR CARTOONS.

Pass out the Comics Planning Guide and/or Shark School of Art to help guide students. They may visit the Monterey Bay Aquarium web site at www.montereybayaquarium.org/lc/activities/sharks_cartooning.asp for illustrating tips. Review the sample rubric attached to decide how to assess students' cartoons. Leave out the example cartoons and comic strips for reference.

7. STUDENTS MAKE SHARK CARTOONS INDIVIDUALLY OR IN SMALL GROUPS.

Have students share their cartoons with the class. What kinds of conservation messages did they create? What are some actions people can take to positively impact sharks?

Extensions

- Challenge your students to give a shark or other animal a "voice" by going to blabberize.com. Have students write out a script for their animal. Students will need a computer with a microphone.
- Create posters with shark cartoons and conservation messages to display at school. They can create an online, interactive poster at edu.glogster.com. Students will need a computer.
- Design a comic strip that illustrates the need for shark conservation, some of the misconceptions people have about sharks or what they can do to positively impact sharks.

Resources

Websites

Cartoon Factory. www.cartoonfactory.net

Visit the web site for the Cartoon Factory TV show and learn how to create cartoons from numbers, letters and common everyday shapes.

Concept Cartoons: Science. www.conceptcartoons.com/science

Find examples of student-developed cartoons about science concepts and find research on using concept cartoons in the classroom.

Monterey Bay Aquarium. www.montereybayaquarium.org

View live web cams to observe sharks or watch videos on shark behaviors. Find information about sharks in the "Sharks, Skates and Rays" chapter of the *Sea Searcher's Handbook* in the teacher resources section of the website.

Books

Eyewitness Books: Shark. MacQuitty, Miranda. Dorling Kindersley, 2008.

Scary Creatures: Sharks. Clarke, Penny, and Mark Bergin. Franklin Watts, 2003.

Why I Care about Sharks. Cook, Lisa, and Joel Simonetti. Mantec Production Co., 2003.



CONSERVATION TIP

Sharks sometimes are accidentally caught by certain fishing methods and end up as bycatch.

Use Monterey Bay Aquarium's Seafood Watch guide at seafood-watch.org to support better fishing methods and make sustainable seafood choices. Fish in the green column are best choices. If possible, avoid eating fish in the red column.



**THE MISSION OF THE
MONTEREY BAY
AQUARIUM
IS TO INSPIRE
CONSERVATION OF THE
OCEANS.**

Standards

California Science Standards

Grade 3: 3a, c, d; 5b

Grade 4: 2b; 3a, b; 6a

Grade 5: 2c; 6h

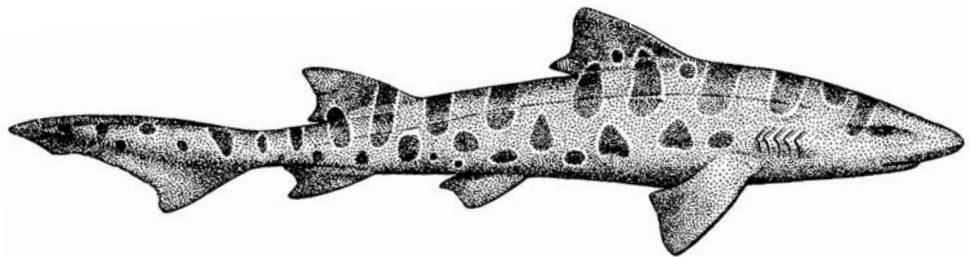
California Language Arts Standards

Reading

Writing

Written and Oral English Language Conventions

Visual Arts

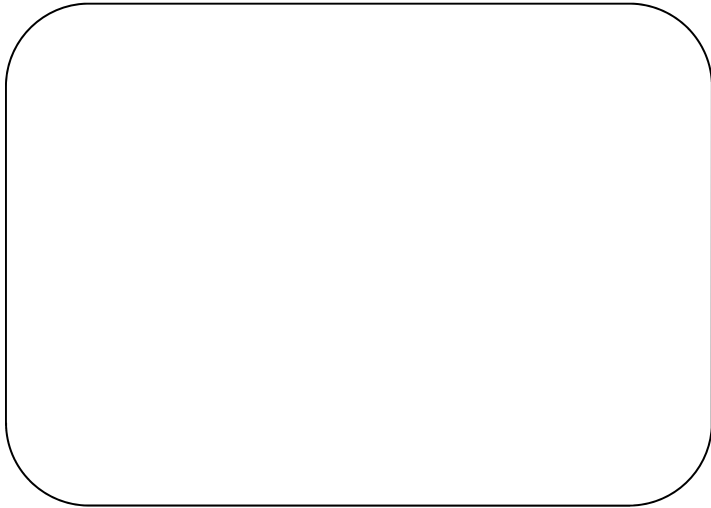


Cartoon Planning Guide

Cartoon Title: _____

By (your name): _____

Summary of Cartoon:

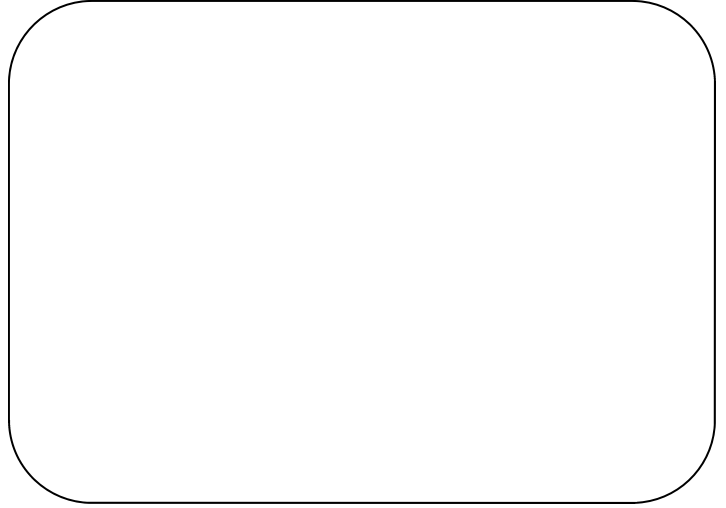


Panel One

Characters: _____

Action(s): _____

Text: _____



Panel Two

Characters: _____

Action(s): _____

Text: _____

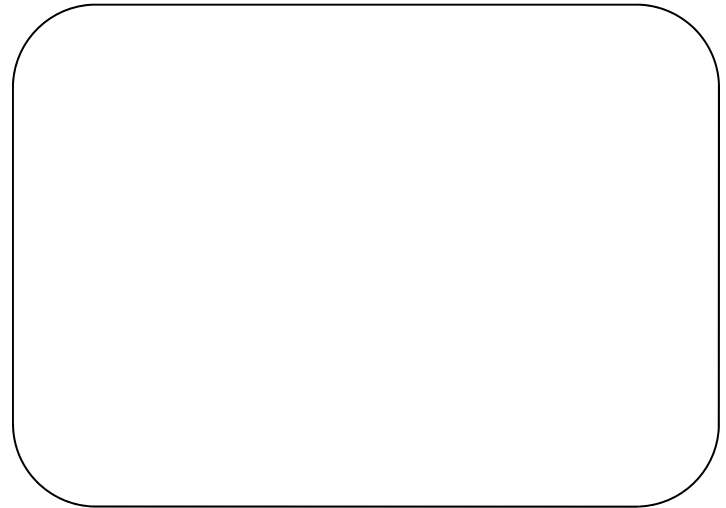


Panel Three

Characters: _____

Action(s): _____

Text: _____



Panel Four

Characters: _____

Action(s): _____

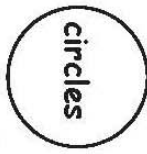
Text: _____

Shark School of Art

Now it's your turn to make a cartoon! Below are some simple panels to start with. You can make your own panels and fill them with cartoons on another piece of paper. Use them to tell a story about the need for saving sharks or some of the misconceptions people have about sharks.

Shark Drawing Tips!

Think of the shark
You are drawing as a
collection of shapes.



circles



ovals



triangles

and others!



Some ideas for a shark cartoon...

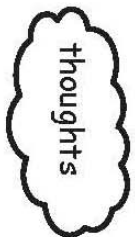
- Falling coconuts kill more than shark attacks!
- Most sharks are killed solely for their fins, while the remaining parts of the bodies are thrown overboard as waste.

Cartoon Parts:

Balloons



words

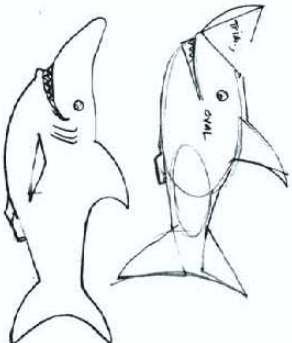


thoughts

Panels



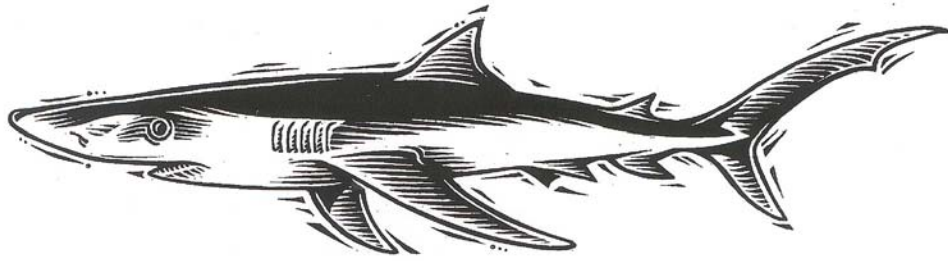
Characters



Cartoon Evaluation Sample Rubric

Element	2 Used Well	1 Used	0 Did Not Use
Sequence <ul style="list-style-type: none"> • Speech bubbles in order • Panels in order 			
Content <ul style="list-style-type: none"> • Demonstrates understanding of subject • Coherent storyline and theme (setting, action, outcome) • Conservation message present 			
Language <ul style="list-style-type: none"> • Captions used appropriately (to add meaning) • Content vocabulary • Appropriate grammar and sentence structure 			
Sound <ul style="list-style-type: none"> • Onomatopoeia • Graphics indicating sound 			
Visual <ul style="list-style-type: none"> • Setting appropriate • Objects that illustrate dialogue • Objects that add to meaning • Creative use of voice (tone distinguished by bold or italicized font bold, capitals, word shape) 			
Peer Evaluation <ul style="list-style-type: none"> • Complete feedback • Thoughtful feedback 			

Family Discovery Event Table Label



Shark Cartoons

1. Think of a conservation message or cool fact about sharks.
 2. Show your idea about sharks with pictures and short sentences.
 3. Now you have a shark cartoon!
-

Tiras cómicas de tiburones

1. Piense sobre un mensaje de conservación o un dato "cool" sobre tiburones.
2. Muestre su idea sobre tiburones con dibujos y frases cortas.
3. ¡Ahora tiene una tira cómica de tiburones!