South Florida Science Museum

Presents…

Field Trip Guide

Fellow Educators,

Thank you for your interest in the South Florida Science Museum (SFSM). We look forward to meeting with you and your class while you explore our exciting new exhibition *Savage Ancient Seas!*

This Field Trip Guide is designed to enhance your Museum experience by helping you and your students to best prepare for your visit. This guide will answer questions such as: how long you can expect to spend at the museum and where you can eat your lunch. As you know, by preparing students in advance for their trip, they will better focus on the science content.

Additionally, our Education Team has created pre- and post-visit activities perfect for use in the classroom to introduce the content they will experience at the Museum, and then follow-up their experience in hopes of extending the experience and enhancing retention. These activities are also contained in this guide. Have additional questions? Please call our Group Sales office at (561) 832-2026. It is our sincere hope that your experience embodies our mission of "exciting curiosity and furthering the understanding and appreciation of science and technology." We'll see you at the Museum!

Sincerely,

The Education Team
South Florida Science Museum

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Field Trip Planner

If you would like to schedule a trip to the South Florida Science Museum, please call our Group Sales Office at 561-832-2026. Field trips may be scheduled at any time during the year. Also, when you call be sure to ask how you can order Subway boxed lunches for your group, including a sub, juice, and chips or cookie for only $5.00! *Savage Ancient Seas* will be available from June 15 until September 16, 2013.

Pricing

Pricing for groups scheduled in advance
Boxed lunch from Subway per student…….....$5.00
Self-guided visit admission per student…….....$6.00
Visit plus an additional educational program per student….....$7.50
Visit plus a laboratory program per student…….$9.00-$12.00
*One chaperone is required per 5 students at $6.00 per chaperone

Policies

• A 20% non-refundable deposit is due within 14 days of confirming your reservation.
• Final payment and headcount are due 14 days prior to your scheduled visit.
• No refunds will be made for no-shows the day of visit.
• If final payment has not been received by the indicated day, reservations are subject to cancellation. NO REFUNDS WILL BE GRANTED. A $25 fee will apply to any cancellations and rescheduling. Cancellations made seven (7) or more days prior to scheduled visits will be refunded less the 20% deposit. Rescheduling cannot be guaranteed due to limited availability.
• Reservations will be made when final payment is received. All reservations are nonrefundable and non-exchangeable (if applicable).
• On the day of your scheduled visit, check in for your group at the Front Desk under your group/contact name. Additional tickets may be purchased at the group rate, on the day of your scheduled visit, providing space is available.
• Increase in headcount should be called in as soon as possible to ensure availability.
• Acceptable forms of payment are check, money order, or credit card (Visa, American Express or Master Card).
• Please make checks or money orders payable to the *South Florida Science Museum* and mail to:

South Florida Science Museum
4801 Dreher Trail North
West Palm Beach, FL 33405
Attention: Group Sales

• Surcharges may apply for special event days and holidays.

• Museum Memberships, coupons and other discounts are not applicable with school group rates.
• Teacher Members receive $25 off the total cost of any educational programs on their first visit.

Directions and Map

The South Florida Science Museum is located at:

4801 Dreher Trail North,
West Palm Beach, FL 33405.
Phone: (561) 832-1988

From the Florida Turnpike:

Take the Southern Boulevard exit 97 east, and continue just past I-95. Make a right into Dreher Park. Follow Dreher Trail to the South Florida Science Museum.

From I-95, heading south:

Take exit 68, Southern Boulevard and head east. Immediately over the I-95 bridge, make a right into Dreher Park.
Follow Dreher Trail to the South Florida Science Museum.

From I-95, heading north:

Take exit 68, Forest Hill Boulevard east to Parker Avenue. Turn left on Parker Avenue (north) to Summit Boulevard. Turn right on Summit (west). At the first light (Dreher Trail North), turn right and continue around to the Museum.

Museum Manners

PLEASE REVIEW THESE GUIDELINES WITH YOUR STUDENTS BEFORE YOU ARRIVE AT THE MUSEUM.

Please walk, do not run, while in the museum. This is for your safety, as well as the safety of other visitors.

Please do not touch the glass on any exhibits, including the aquarium, as fingerprints and smudges can make it hard for everyone to see.

Please enjoy yourselves and the hands-on exhibits, but leave them the way you found them.

Please keep eating and drinking to the vending machine area and outdoors only.

Please have students remain with their chaperone at all times.

Violation of the rules could result in your group being asked to leave the museum.

No refunds will be given.

Museum Store Rules

Please do not allow more than 5 children per chaperone in the store at one time.

All sales are final, so please choose carefully.

Most importantly, enjoy your visit!

What to Do at the Museum

Arrival

Welcome! Once you arrive at the museum, have students either remain on the bus or sit on the benches leading up to the front doors. Have your group leader check in at the front desk and get directions on where to go first. One of our SFSM staff members will welcome and orient your group as a whole.

Programs

Favorite programs such as planetarium shows, Nitromania, or Touch Tanks can be scheduled for a small fee to be added in with your field trip. Call (561) 832-2026 in advance to schedule. Continue below to find a list of programs that specifically relate to our *Savage Ancient Seas* Exhibit.

Lunch

Make lunch easy, fresh, and healthy for your students by ordering Subway boxed lunches in advance. This $5 boxed lunch includes one turkey, ham, veggie, or Italian sub, juice box, and chips or cookies. If you order more than 15 boxed lunches, an adult's lunch is FREE. Call (561) 370-7741 to order your Subway boxed lunches.

You could also pack a lunch and store it on the bus until you are ready to eat. Picnic tables are available on the Science Trail or you can eat within Dreher Park, surrounding the Museum.

Exhibits

There are lots of exciting things to see at the SFSM.

Savage Ancient Seas: The Ancient Aquatic Deep

Prepare yourself for the ancient deep aquatic world of the late Cretaceous period over 70 million years ago. Peer into the mouth of the largest aquatic reptile ever discovered. Gasp in awe at Archelon, the 17-foot-wide sea turtle. "Swim" with a school of the first three-dimensional reconstructions of the carnivorous fish of the day. Sift through time and sediments as flying reptiles soar overhead. Lean how these ancient aquatic creatures lived and

died… and who survived to today.

States of Matter
Explore the basic principles of science with hands-on displays representing the states of matter, including solid, liquid, gas, and plasma displays. Continue through the gallery for more basic principles of electricity revealed through conversion machines and Jacob's Ladder.

Apollo 14 Moon Rock
Part of the Ambassadors of Space Exploration, the Museum was honored by Apollo 14 Astronaut Dr. Edgar Mitchell with a long-term loan of an authentic Moon rock collected during the Fra Mauro expedition. Mitchell was the Lunar Module Pilot on NASA's 3rd Moon expedition where Mitchell became the 6th man to walk on the Moon. Authentic mission footage accompanies this rare display.

Aquariums of the Atlantic
See ocean life from around the world in over 5,000 gallons of salt-water sea life. A living coral reef, sharks, eels, mangrove sea life and a "touch tank" create this wonderful undersea room.

Marvin Dekelboum Planetarium
Sit back and be transported through the Universe with daily star shows, weekend laser concerts and interactive astronomy shows. It's only $2.50 more per adult/child visitor to book as a group.

WS4FSM Ham Radio Center (days and hours of operation vary)
Welcome to WS4FSM, the museum's exciting new Ham Radio Station, where you can broadcast to others in Argentina, Amsterdam, St. Kitts, or one of two million amateur radio operators around the world! The West Palm Beach Amateur Radio Club will assist visitors in writing their name in Morse code and in making contacts with other "hams" worldwide.

Science Trail
Enjoy a walk around a winding trail of interactive exhibits. This outdoor trail features parabolic whisper dishes, a fossil dig with authentic Florida fossils, dinosaur tracks which tell a story and even an all original turtle-hop game! Along the way, enjoy the flora and fauna while gazing through our Nature's Kaleidoscopes. There's a surprise around every corner of our trail, with new exhibits opening throughout the year.

Related Books & Websites

Here is a list of books and websites to bring into your classroom to incorporate the topic of *Savage of the Seas* before or after your visit to the museum.

Books:

Ages 5+

- Burnie, David, (2001). *The Kingfisher Illustrated Dinosaur Encyclopedia*. Kingfisher, NY.
- I Wonder Why (series): *Fish Grew Legs and Other Questions about Prehistoric Life.*
- Jenkins, Ian, (2000). *The Big Golden Book of Dinosaurs*. A Golden Book, NY.
- O'Brien, Patrick, (2001). *Megatooth*. Henry Holt and Co., NY

Ages 8+

- Arnold, Caroline, ill. by Laurie Caple (2000). *Giant Shark: Megalodon*, Prehistoric Super Predator, Calrion Books, NY.
- Chandler, Fiona, Sam Toplin, and Jane Bingham, (2000). *Prehistoric World*, Usborne World History.
- Lindsay, William (1994). Eyewitness Books: *Prehistoric Life*. Dorling Kindersley.
- Pellant, Chris (1994). *Fossils of the World*. Thunder Bay Press, San Diego (easy-to-do science projects).
- Taylor, Paul D. (1990) Eyewitness Books: *Fossils*. Alfred A. Knopf.
- Troll, Ray and Matsen, Brad, (1996). *Raptors, Fossils, Fins and Fangs.* Tricycle Press.
- Zimmerman, Howard (2001). *Beyond the Dinosaurs*, Byron Preiss Visual Publications, Inc., Atheneum Books for Young Readers.

Relate Websites:

- www.oceansofkansas.com
  This website takes you on a virtual journey more than 85 million years "back in time." It provides illustrations and descriptions of ancient marine reptiles through the eyes of real paleontologists.
- www.amnh.org
  This is a great teacher resource for gathering background information and activity ideas related to our exhibit.
- http://www.ucmp.berkeley.edu/
  The website for the University Of California Museum Of Paleontology offers up-to-date research, online dinosaur exhibits and collections, links to paleontology resources, along with information and activities specifically for K-12 teachers.
- http://www.search4dinosaurs.com/index.html
  Use this website to find the pictures of any dinosaur or prehistoric animal you could think of!

Related Educational Programs

"*Savage Ancient Seas*" offers a wide range of activities and information all relating the unique characteristics of ancient marine reptiles, discovering ancient fossils, and examining what type of environment these ancient creatures lived in. Enhance your students' experience of "*Savage Ancient Seas*" by also booking one of our educational programs that relate to this fascinating topic. For more information on these programs, check out our Educator Guide or call our Group Sales office at (561)832-2026.

"Sea Monsters: A Prehistoric Adventure" Planetarium Movie (Grades 3-12)
Transport back to the prehistoric Late Cretaceous as the movie follows a curious and adventurous Dolichorynchops. She travels through the most dangerous oceans in history, encountering giant turtles, fierce sharks, and the most dangerous sea monster of all, the Mosasaur. This full dome adventure weaves together a series of paleontological digs from around the globe in a compelling story about scientists working as detectives to answer questions about this ancient and mysterious ocean world.

"Kaluoka 'hina – The Enchanted Reef" Planetarium Movie (Grades K-5)
Discover the modern day sea creatures and the habitats they live in from coral reefs to kelp forests. Many of these animals, such as the sea turtle and sharks, are also featured in the *Savage Ancient Sea* exhibit in much larger ancient forms. This digital fulldome planetarium show follows animated creatures through their world of adventure, danger, myths, and mysteries.

Jurassic Theater (Grade 3-8)
In this theater presentation, students will have dino-sized fun as they examine and handle authentic fossils including petrified wood, woolly mammoth tooth, and part of a stegosaurus tail! They will be able to learn how fossils are formed and what they teach scientists about life in Earth's distant past.

Shark Tooth Lab (Grades 3-8)
Explore the fascinating world of sharks and their relatives. Students will examine genuine fossil shark teeth and real shark jaws as they discover the animal's amazing senses. Students will gain knowledge of various shark habitats ad will get to create their own shark tooth necklace!

Secrets of Egypt (Grades 3-8)
Just like paleontologist study ancient creatures, Egyptologists work to find and study artifacts and treasures from ancient Egypt. Take a journey back in time as we unlock the secrets of Egypt and discover what life along the Nile was really like. Just like treasure hunters, students will explore artifacts and utilize the scientific method to determine the culture, religion and daily lifestyle of Ancient Egypt.

Touch Tank (Grades K-3)
Your students will get to experience ocean organisms through hands-on observation, touch and fun narration. They will discover these creatures' living environment, internal and external structures, and what keeps them alive.

Related Sunshine State Standards

Big Ideas: 1, 6, 14, 15, 17

Not only will your students have an amazing time exploring our new exhibit, but they will be learning as well! Here are just some of the Sunshine State Standards that the exhibit covers.

K-2:
SC.K.L.14.2 Recognize that some books and other media portray animals and plants with characteristics and behaviors they do not have in real life.
SC.K.L.14.3 Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do.
SC.K.N.1.1 Collaborate with a partner to collect information.
SC.K.N.1.2 Make observations of the natural world and know that they are descriptors collected using the five senses.
SC.K.N.1.3 Keep records as appropriate -- such as pictorial records -- of investigations conducted.
SC.K.N.1.4 Observe and create a visual representation of an object which includes its major features.
SC.K.N.1.5 Recognize that learning can come from careful observation.
SC.1.L.14.3 Differentiate between living and nonliving things.
SC.1.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration, and generate appropriate explanations based on those explorations.
SC.1.N.1.2 Using the five senses as tools, make careful observations, describe objects in terms of number, shape, texture, size, weight, color, and motion, and compare their observations with others.
SC.1.N.1.3 Keep records as appropriate - such as pictorial and written records - of investigations conducted.
SC.1.N.1.4 Ask "how do you know?" in appropriate situations.
SC.2.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.
SC.2.N.1.3 Ask "how do you know?" in appropriate situations and attempt reasonable answers when asked the same question by others.
SC.2.N.1.5 Distinguish between empirical observation (what you see, hear, feel, smell, or taste) and ideas or inferences (what you think).
SC.2.N.1.6 Explain how scientists alone or in groups are always investigating new ways to solve problems.

3-5:
SC.3.L.15.1 Classify animals into major groups (mammals, birds, reptiles, amphibians, fish, arthropods, vertebrates and invertebrates, those having live births and those which lay eggs) according to their physical characteristics and behaviors.

SC.3.N.1.1 Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.
SC.3.N.1.3 Keep records as appropriate, such as pictorial, written, or simple charts and graphs, of investigations conducted.
SC.3.N.1.4 Recognize the importance of communication among scientists.
SC.3.N.1.5 Recognize that scientists question, discuss, and check each others' evidence and explanations.
SC.3.N.1.6 Infer based on observation.
SC.3.N.3.2 Recognize that scientists use models to help understand and explain how things work.
SC.4.N.1.1 Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.
SC.4.N.1.7 Recognize and explain that scientists base their explanations on evidence.
SC.4.N.1.8 Recognize that science involves creativity in designing experiments.
SC.4.N.2.1 Explain that science focuses solely on the natural world.
SC.4.N.3.1 Explain that models can be three dimensional, two dimensional, an explanation in your mind, or a computer model.
SC.5.L.15.1 Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.
SC.5.L.17.1 Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.
SC.5.N.1.6 Recognize and explain the difference between personal opinion/interpretation and verified observation.
SC.5.N.2.1 Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence.

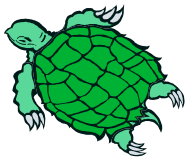
6-8:
SC.6.N.1.5 Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.
SC.6.N.2.2 Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered.
SC.6.N.2.3 Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SC.6.N.3.4 Identify the role of models in the context of the sixth grade science benchmarks.
SC.7.E.6.3 Identify current methods for measuring the age of Earth and its parts, including the law of superposition and radioactive dating.
SC.7.L.15.1 Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.

SC.7.L.15.2 Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.
SC.7.L.15.3 Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.
SC.7.N.1.3 Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.
SC.7.N.1.5 Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.
SC.7.N.1.6 Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.
SC.7.N.1.7 Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.
SC.7.N.2.1 Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.
SC.8.N.1.5 Analyze the methods used to develop a scientific explanation as seen in different fields of science.
SC.8.N.1.6 Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.

9-12:
SC.912.L.15.1 Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
SC.912.L.15.2 Discuss the use of molecular clocks to estimate how long ago various groups of organisms diverged evolutionarily from one another.
SC.912.L.15.3 Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.
SC.912.N.1.3 Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
SC.912.N.1.4 Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
SC.912.N.1.6 Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
SC.912.N.1.7 Recognize the role of creativity in constructing scientific questions, methods and explanations.
SC.912.N.2.4 Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.

SC.912.N.2.5 Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
SC.912.N.3.1 Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.
SC.912.N.3.5 Describe the function of models in science, and identify the wide range of models used in science.

Pre Activity:
Create a Creature



Purpose
Most ancient animals have long and foreign-sounding names, but they are not arbitrarily named. In this activity, students will use Greek and Latin descriptors to come up with the names of new animals. Then they will create the animal based on its descriptive name.

Suggested Grade Level 3-5

Material List
- Greek and Latin Descriptor list
- Pencil and paper
- Drawing paper with markers or crayons OR modeling clay

Activity
1. Using the Greek and Latin descriptor list, create ten new names of animals and write the names on paper. Use two or more descriptors for each.
2. Choose one of the new names and draw or model that animal to fit the name.
3. Write an accompanying paragraph describing the creature, its physical characteristics, behavior, and habitat.

GREEK AND LATIN DESCRIPTORS

Animal Parts

arm	brachio-
beak	rostr- rhyncho-
claw	ungui- chelo- onycho-
finger	datyl- stenotes
foot	pedi- podo- elmi pos pes
head	capit- cephalo- top
horned	cornut- cera-
jaw	gnathus
nose	rhino-
skin	derm
tail	caud- cerco- luro
toes	phalangia
tooth	denti- odonto- don den
winged	ptero

Textures

bare	nudi- gymno-
bearded	criniti- pogono-
hairy	hirsut- lasio- trichodo-
lumpy	nodo
plated	elasmo
ridged	lopho
rough	asper- trachy-
sharp	angusti
spiked	canthus echino
spiny	spini- acantho- echino-
wooly	lana
wrinkled	corrugat- rugos-

Numbers

one	mono- uni-
two	bi- duo- di-
three	tri- tria-
four	quadri- tetra-
five	penta-
seven	septem- hepta-
ten	decim- deca-
many	pola- poly-
single	mono-

Sizes

dwarf	pumili- nano
gigantic	ingenti- colosso-
heavy	baro-
huge	mega-
large	grandi- macro- mega-
short	brevi- brachy
tall	proceri- alti- aepy-

Shapes

curved	Cyrto-; gampso-
egg-shaped	ovat-
flat	Plani-; platy-; placo-; plateo-
hollow	cavi- coelo
narrow	steneo
round	Circuli-; cyclo-; gyro-
slender	lepto

Colors

black	atri- nigri- melano-
blue	cerule- cyano-
green	viridi- chloro-
white	albi- leuco-
yellow	flav- xantho-

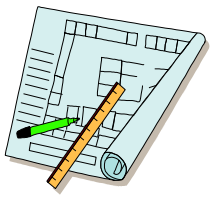
Other

alarming	tarbo
beast	thero
bird	ornitho-
deceptive	apato-
fast	velox veloci
fearsome	phobo
good mother	maia
iguana	iguano
king	rex
lizard	saurus
mimic	mimus

mixed	hetero-
no, not	a ar and
ostrich	stuthio
pointed	mucro
pretty	compso
reptile	saurus
robber	lestes
roofed	stego
running	dromaeo
shaped	morpho
sloping	preno

slow	segno
speedy	velox veloci
strange	allo
terrible	deino
thick	pachy
thief	raptor
top	acro-
thunder	bronto
twin	stereo
tyrant	tyranno-
wounding	drypto

Pre Activity:
Creature Scale



Purpose
Prehistoric animals were much larger than present day animals. Using graph paper, students will draw the specimen that they will see at our exhibit to scale.

Suggested Grade Level 4-8

Material List
- Graph paper
- Calculator
- Ruler

Activity
1. Using graph paper, draw several of the creatures in the exhibit (see the Specimen List below) to scale. Each square on the graph paper can represent a specific number of meters or feet.
2. Label each animal with its name and its actual size. Include the scale ratio used.

SPECIMEN LIST

Archelon (12ft x 17ft x 12ft, 800 lbs) - a genus of extinct sea turtle, the largest that has ever been documented

Baculites (5x1x1, 40 lbs) – sometimes referred to as "walking stick rock," is an extinct cephalopod genus with a nearly straight shell

Carcharadon megalodon (8x8x8.5, 480 lbs) – the *Megalodon* ("big tooth"), is an extinct species of shark that lived approximately 28 to 1.5 million years ago, during the Cenozoic Era

Dolichorhynchops bonneri and baby (14x15x5, 400lbs) - an extinct genus of polycotylid plesiosaur from the Late Cretaceous (early Turonian to late Campanian stage) of North America

Elasmosaur (42x10x10, 600lbs) - had the longest necks of the plesiosaurs and survived from the Late Triassic to the end of the Cretaceous

Pachyrhizodus (6x3x3, 40lbs) - an extinct genus of bony fish

Placenticeras ammonite (3x1x3, 30lbs) - an ammonite genus from the Late Cretaceous

Pteranodon (5x11x1, 40 lbs) – known as “flying female” and was a flying reptile from the Late Cretaceous

Toxochelys juvenile (1x1x1, 5 lbs) - an extinct genus of sea turtle from the Cretaceous period.

Tylosaurus Skull (6x3x2, 250lbs) - a mosasaur, and along with plesiosaurs, sharks, fish, and other genera of mosasaurs, it was a dominant predator of the Western Interior Seaway during the Late Cretaceous.

Xiphactinus (17x4x4, 250 lbs) – from the Latin and Greek for “sword-ray,” was a predatory bony fish that lived in the Western Interior Sea, over what is now the middle of North America, during the Late Cretaceous.

Post Activity:
Prehistoric Mobile

Purpose
Explore in more detail some of your favorite prehistoric animals by creating a mobile and researching fun facts.

Suggested Grade Level 3-8

Material List
- Wire hangers or wooden dowels
- String
- Construction paper
- Cardboard, clay or pipe cleaners
- Books on prehistoric animals
- Markers or crayons

Activity
1. Select five or six prehistoric animals
2. Make cardboard, clay, or pipe cleaner models of the animals
3. Create a mobile using a clothes hanger or dowel rods.
4. Write interesting facts directly on the models or hang companion fact cards with each animal.

Post Activity:
Cretaceous Composer

Purpose
Compose a song or rap, describing one of the creatures you saw in the *Savage Ancient Seas* exhibit.

Suggested Grade Level 3-8

Material List
- Background accompaniment music (optional)
- Rhythm instruments
- Props
- Art paper

Activity
1. Write new lyrics to a familiar tune, including facts about the creature (see specimen list in Post Activity "Creature Scale.")
2. Use drums, sticks, or other rhythm instruments to accompany the performance of the song.
3. You could also create a shape poem or haiku to describe one of the creatures. Use the outline of the animal to structure the poem, or write a haiku with accompanying illustration and roll the finished paper like a scroll.

Classroom Museum

Purpose
Design a classroom museum to display prehistoric underwater animals.

Suggested Grade Level K-5

Material List
- Construction paper, markers and variety of art supplies
- Graph paper
- Meter Sticks

Activity
1. Either individually or in teams, have students work on particular models of the different prehistoric underwater animals. For older students, you can encourage the models to proportionate to the actual size.
2. Have students create signage to educate others about each animal. Hang the models from the ceiling at various heights. For older students, they could make a floor plan of the classroom/museum, using graph paper, to determine the placement of the specimens.
3. Students could also compose brochures to explain the exhibit, and invite parents and other classes to visit.