

A Creature Went Walking A Lesson for Gr. 4-6

Introduction: Students will examine fossil tracks featured on this website and imagine, via writing or artwork, what kinds of creatures made them. Students will then compose stories to describe what the animals might have been doing when they left the tracks. They will finish the lesson by comparing their stories and images to what is known about each creature.

Note: all of the fossil tracks can be viewed online in the “Artifacts and Documents” section of this website (<https://www.dinotracksdiscovery.org/supporting/evidenceitem/>). There is a zoom feature that allows for much closer inspection, but in some cases, titles and text give away clues about the creatures.

Teaching the Lesson:

1. From the “Special Features” section of this website show “Hitchcock’s Track Book”, <https://www.dinotracksdiscovery.org/special/feature/>. It provides an explanation of how tracks were formed and why some are raised, rather than being indented.
2. Show “A Rainy Day in the Jurassic” from the “Special Features” section for an example of how to piece together a story of the circumstances under which the tracks were made, based on the evidence.
3. Students work in pairs or groups, each with one image. Ask them to describe in words and/or pictures what each creature might have looked like, be ready to back up their hypotheses, and write a short story about how the prints might have been made. What might the creature have been doing or where might they have been going? There are questions beneath each image to guide students’ thinking.

Fossils to use:

- Fossil batrachopus tracks with mud cracks
 - Otozoum tracks
 - Fossil Middletown sidewalk slab
 - Fossil showing multiple species tracks
 - Fossil chelonian
 - Fossil cheirotherium
4. Students share drawings and stories
 5. Reveal what we know today:
 - Fossil batrachopus- the name means “frog foot”; it was similar to a crocodile and walked on 4 legs; this animal lived on the land and could run very fast; it ate plants; it was an “archosaur”, rather than a dinosaur (archosaurs have two openings behind their eyes and include modern animals such as birds and crocodiles, as well as dinosaurs)
 - Otozoum- (show image of “Prosauropod”) here’s what Edward Hitchcock first thought, but he was eventually proved wrong: “Imagine, now, a collection of Otozoums walking or sporting along the muddy shore; animals approaching the elephant in size, yet allied to the frog tribe, or perhaps the Salamanders.” “Otozoum” refers to a classification of tracks, not animals. Today the creatures that made these tracks are considered to be in the crocodile or “prosauropod” family (prosauropods have long necks & tails, small heads, 5 toes on each foot); the name means “giant animal” and some might have been as long as 30 feet; the tracks are each about 1 foot in length; they ate plants; they usually walked on 2 feet, but sometimes walked on all 4 feet; the smaller animal was walking in the rain
 - Middletown sidewalk slab- (show image of “Dilophosaurus”) one set of prints belongs to a group of tracks known as “Eubrontes”, meaning “true thunder”, referring to the sound such a large animal must have made as it walked along; a dilophosaurus might have made these tracks; originally erroneously thought to be the tracks of a large bird; at first it was thought that they ate plants, but later it was decided that they ate meat; Eubrontes tracks usually measure 10-16 inches in length and have 3 toes on each foot; their toes had sharp claws.
 - Fossil showing multiple species tracks- made at different times by different creatures; these animals might have been following a well-used path, possibly to a water source
 - Fossil chelonian- (show image of “An Example of a Chelonian”) what Edward Hitchcock first thought, but he was eventually proved wrong: “The unusual width of the body has led me to refer this species

to Chelonians [turtles]; and yet the length of the step is great for such animals. But the legs were long if it were a chelonian, since there is no evidence that either tail or carapace [shell] dragged upon the ground." There were several kinds of turtle-like creatures that belonged to the chelonian group; they are not considered to be dinosaurs.

- Fossil cheirotherium- (show image) the name means "hand beast" and the animal was first thought to resemble a bear, ape, or "marsupial" (such as an opossum or kangaroo), and then a large salamander; a reptile-like animal that walked on 2 feet and ate meat; it was also considered to be an archosaur, rather than a dinosaur

6. Wrap-up discussion:

- How do students' images and stories compare?
- What surprises them?

English Language Arts Standards » Writing

Grade 4

CCSS.ELA-LITERACY.W.4.1

Write opinion pieces on topics or texts, supporting a point of view with reasons and information.

CCSS.ELA-LITERACY.W.4.1.B

Provide reasons that are supported by facts and details.

CCSS.ELA-LITERACY.W.4.3

Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

CCSS.ELA-LITERACY.W.4.3.A

Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.

CCSS.ELA-LITERACY.W.4.3.D

Use concrete words and phrases and sensory details to convey experiences and events precisely.

Grade 5

CCSS.ELA-LITERACY.W.5.1

Write opinion pieces on topics or texts, supporting a point of view with reasons and information.

CCSS.ELA-LITERACY.W.5.1.B

Provide logically ordered reasons that are supported by facts and details.

CCSS.ELA-LITERACY.W.5.3

Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

CCSS.ELA-LITERACY.W.5.3.A

Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.

CCSS.ELA-LITERACY.W.5.3.D

Use concrete words and phrases and sensory details to convey experiences and events precisely.

Grade 6

CCSS.ELA-LITERACY.W.6.3

Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.

CCSS.ELA-LITERACY.W.6.3.A

Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.

CCSS.ELA-LITERACY.W.6.3.D

Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.

Massachusetts 1999 Arts Framework

Strand: Arts Disciplines: Visual Arts

Topic: Critical Response

Grades PreK-4

5.1 In the course of making and viewing art, learn ways of discussing it, such as by making a list of all of the images seen in an artwork (visual inventory); and identifying kinds of color, line, texture, shapes, and forms in the work.

Topic: Observation, Abstraction, Invention, and Expression

Grades PreK-4

3.1 Create 2D and 3D artwork from direct observation.

3.3 Create 2D and 3D artwork from memory or imagination to tell a story or embody an idea or fantasy.

Grades 5-8

3.4 Create 2D and 3D representational artwork from direct observation in order to develop skills of perception, discrimination, physical coordination, and memory of detail.

Fossil Batrachopus Tracks with Mud Cracks



Notice “6 inches” in the bottom right corner. That’s the width of the fossil. What does that tell you about the size of this creature?

This animal is part of a group of animals called “crocodylomorph”. Hidden in that word is a clue to what this one looked like. With that other animal in mind, would this animal walk on 2 or 4 feet?

Do you think all of the tracks were made by one creature and all at the same time?

Why might this spot have so many tracks?

Fossil Chelonian



Was this creature small or big?

Did it have long or short legs? How can you tell?

Was it walking or running when it made these tracks?

Do you think it could run fast?

Fossil showing Multiple Species Tracks



More than one kind of animal made these tracks. How many different kinds of tracks do you see?

Do you think all of the animals were in the same spot at the same time?

Why might this have been such a popular spot?

Fossil Middletown Sidewalk Slab



The slab measures 3 by 5 feet. What does that tell you about the size of these creatures?

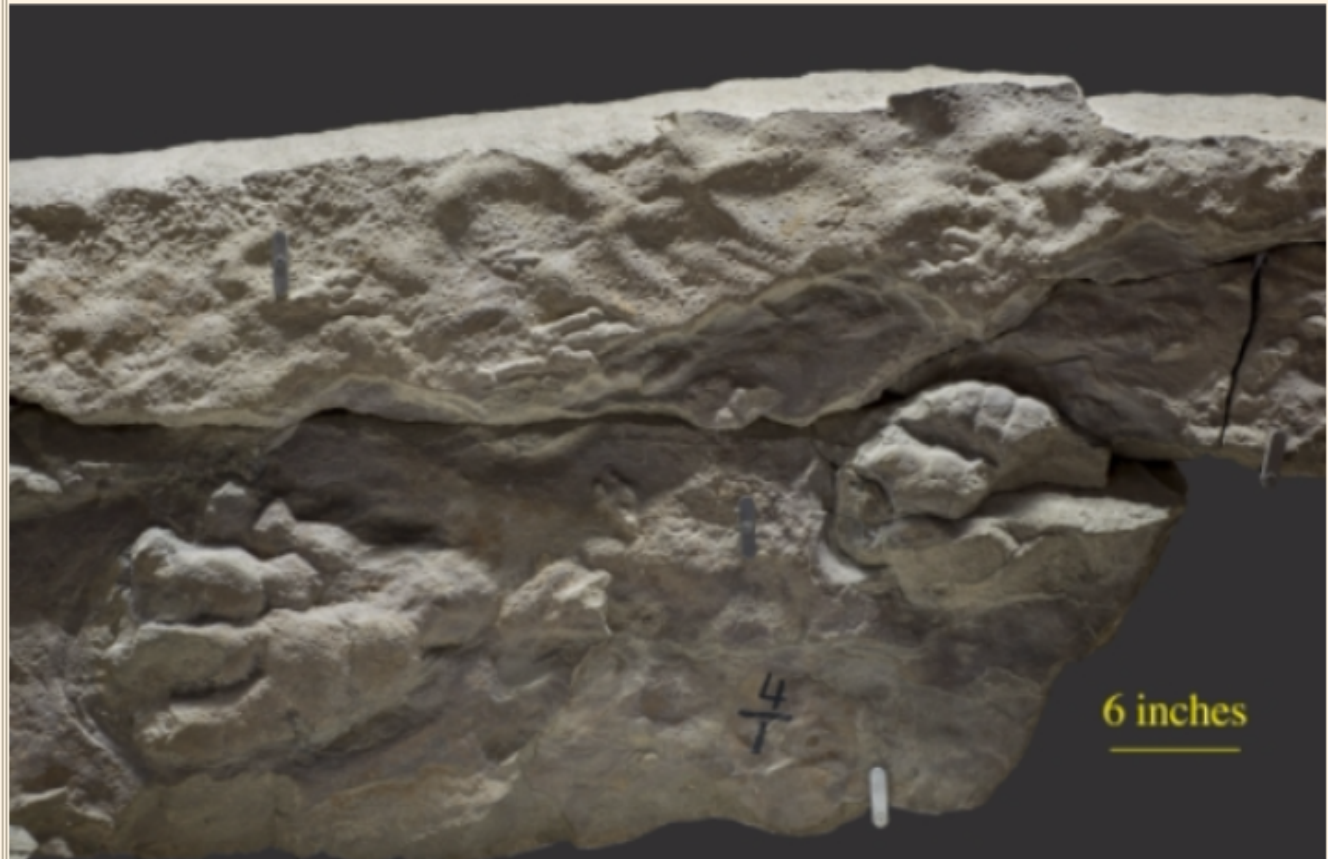
Look carefully at the feet. What makes the toes so pointy?

Do you think all of these tracks were made by the same type of animal?

Do you think all of the tracks were made at the same time?

Why might this have been such a popular spot?

Fossil Otozoum Tracks



Look above the crack that goes across the slab for one kind of animal track and look below the crack for another type of track.

How are the two tracks different?

What makes the toes on one set of tracks look so pointy?

Each of the bigger footprints is about 1 foot long. About how big do you think each animal might have been?

Look closely at other marks on the slab. What might the weather have been like when some of these creatures went walking? How can you tell?

Do you think all of these creatures were in this spot at the same time?

Fossil Cheirotherium



How many toes does this creature have?

Does this print remind you of something else?

What animals today can make prints like this?



Chirotherium (Cheirotherium)
www.topontiki.gr



doernenburg.alien.de



Prosauropod
www.spxdaily.com



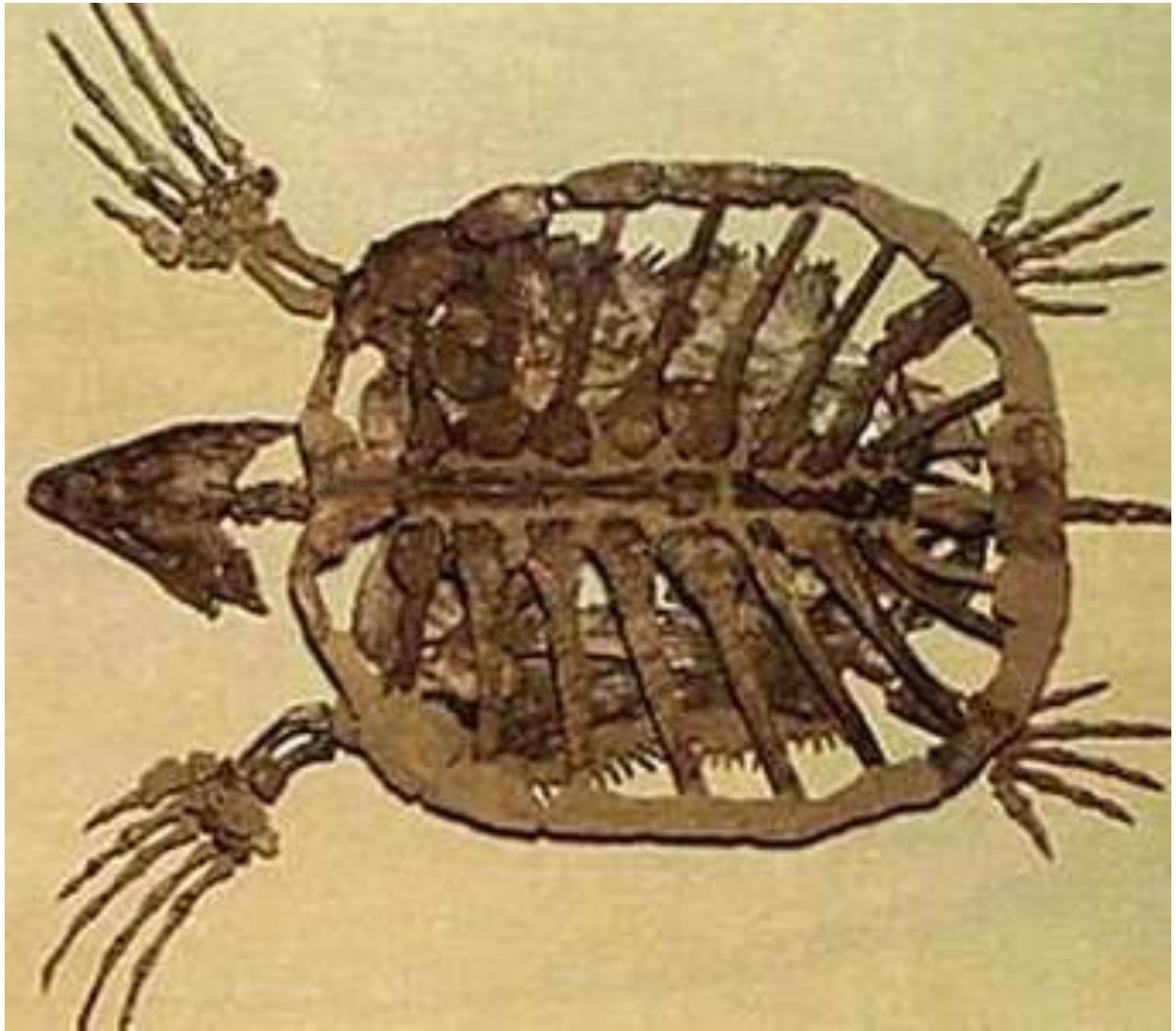
rainbow.ldeo.columbia.edu



Dilophosaurus

depthome.brooklyn.cuny.edu

One of the dinosaurs that might have made the tracks on the Middletown sidewalk slab



An Example of a Chelonian, www.dinosoria.com