

Fossils in the Classroom

A • tated Object L • t

Coprolite

F • Fece (O•c a f •)

F • E ce e E•c (55.8 – 33.9 • ea •)

T /P fF :Tace

T /P fP e e a t :Pe • e a zed

G • re aef zed d /frc • fa • a . T e a ebee /et ed, • te a e • t e e e c e fece ,
a d t e a e • a fef a de. Ofte ,f zed b • f • dae /ee e t • t o /t te . Pa e • ruc t • k d
c • re a d t e /re e e f • d de t e a t ea ab • t a a t a c e ta • a ate.

It ea • b e a t e f • e a c a • a /reco ff fece ca • t • H u e , /a e • ruc t
ca • a e f • e d • e e b • • c f • t e f t e c a r d t e c /t e a d b • • c a t e
b • f • d de t e o /t te . T /a t e a c /t te w u c a t a e c e t a N a d a a a t a t
• ed • c e a ab e • t cat.

Interesting fact: Scientists often study coprolites by cutting very thin slices from them and looking at the slices under a microscope.

Trilobite

3 Brachiopod

S e (O~~o~~ a F)

F u L e Ca b a Pe d Re c e t (542) ea ag & ece)

T /P f F :B d

T /P f P e e a :Re c a zat

Bac u nd ,a ca ed a f e , aea or f a e, eeda a .M abac u nd a e a e
ia ca ed a f d c e t a t e r e t a c e e e t e e a .T e u a a b a e (e e t e
de e),b t t e a db u e f b a e a e a e a a b a c u nd
a e a t e b u e .T da ,b a e a e e a a db a c u nd a e e a t e a e,b t t e f
ee d, t e t t e t e .

Interesting fact: Some fossil brachiopods are found with their original, non-recrystallized shells more or less intact, even though they are millions of years old.

4 Dinosaur Bone

B e (O~~o~~ a F)

F u M d d e T a c Pe d U /P C e r a c e r Pe d (231.4 – 65.5) ea ag)

(N -a a d u a)

T /P f F :B d

T /P f P e e a :Pe a zat

A d u a e e c t a a e t /c t de e a t e (read f /a e d u t e de e z a d).
T e e e e u a a c u n f d u a ; de O t c a a d de S a c a o de
ce a c t ,a c ad u a d b e f /t e c t c e ec , ad u a c ad u a y e d
e d c b f /c a z o a t a da u a c e e e e d b a a .S a c a o de
a u u d ,a c e e a c e a d ad e u o ec ,a d t e r u d ,b y e d a a d u t c a u a
e Tyrannosaurus rex.B d a e a u tec ca t e r u d .A u f t e d u a e c e /f b d u e t e t c b
t e e d f t e C e r a c e r Pe d ,65.5 ea ag .

T i a t o a b e f t e d a c Pe d .Stegosaurus, Allosaurus, a d u u d e Apatosaurus,
Diplodocus, a d Brachiosaurus e e a d u a t a d G u ad d o c t e d a c.Pa e u o c t
a e d u a e e t c t e f e e t .M id u a a e f d t e c t a d u a t e d
b e u t e c f b e .Oft e , t a b e t e a c t e c a a a c e /f b e c a t e t
T e t e t a c d u a b e G u ad a e t a u d .

Interesting fact: **Stegosaurus** is Colorado's state fossil.

5 Horse Tooth

T / P f (Ca t)

F / P E ce e E , c & Rece t (52 ea) ea ae & ece t)

T / P f F : B d

T / P f P e e a t : Pe a za

H e a e a a a t a b o o c t e f a E r d a e . T e t u e e e a a c e t a d o c , b i i
t a t a a u t f u a a c e v e t a t a t o c a e e d e v e d . T e e e e N t A e c a
v e , b i t t e s e t t c a k d 10,000 8,000 ea ae . A a t a v e M t A e c a d a ,
t a t a a c e a d e , a e d e c a t f v e b o c t e e b E v i p a t t e a t 500 ea .

Interesting fact: Teeth from older animals, including horses, are usually more worn down than teeth from younger animals. Over time, the act of chewing food slowly grinds down teeth. This is particularly true when the food includes coarse grasses.

6 Wood from a Tree

Pet ed W d (O a F)

F / P M d d e D e a P e d t R e c e t (385 ea) ea ae & ece t)

T / P f F : B d

T / P f P e e a t : Pet ca

Pet ed d e o t e f ee d . U r a , t e d , p e a z e d a t e a r c a
v a b o c t e e d a c a r e . S t e f ect c a b e f d de p e e d .

Interesting fact: Petrified Forest National Park in Arizona has the petrified logs and stumps of an entire Triassic forest. In Colorado, some of the largest petrified tree stumps in the world can be seen at Florissant Fossil Beds National Monument.

7 Graptolite

G e f G a t e (O a F)

F / P M d d e C a b a P e d L u e C a b f e r P e d (510 – 350 ea) ea ae)

T / P f F : B d

T / P f P e e a t : G a t e

G a t e s e e t a t e a a t a t e d o e . T e a e f a t a f a a c a e d
e c date , e a o c e a e e o e e a e d e e b a t e t a t e e b a t e a e . G a t e
a e e c e e t d e f (eel e e a 2:U o c F a Date R c) b e c e e a e c a v e
t e a d a d e e d a a d e a e f i p e e e a t e v c .

Interesting Fact: The name “graptolite” comes from the Greek words for “written” and “rock,” because their appearance reminded people of hieroglyphs.

8 Knightia (Fish)

F Seet (0.8 a F)

F E ce e E, c (55.8 – 33.9 ea)

T / P fF : B d

T / P fP e e a : C A re .

Knightia a aces f a, e de t at ed fe late a e. T e se e fa c a te re
N t A e ca, e / eca a at W. T e se e a f a d f a, t e t / P f , a
t e f b e a e bee f d t e a t a d a c f a x f zed e et . Knightia
e at ed a da ' e .

Interesting fact: Knightia is the state fossil of Wyoming.

9 Leaf (smooth edge)

(0.8 a F)

F E ce e E, c (55.8 – 33.9 ea)

T / P fF : B d

T / P fP e e a : C A re .

S t -ecked ea e a e e c a c ate . S c e t t a e t t r e , b t
t ed e a t e a ffect t e a t e a t e t e e t e a d f e e t t e / a t
c ate t e a t e .

Interesting fact: The aquatic plant duckweed has the smallest known leaves of any plant: less than 0.04 inches (1 millimeter) in diameter.

10 Leaf (jagged edge)

(0.8 a F)

F E ce e E, c (55.8 – 33.9 ea)

T / P fF : B d

T / P fP e e a : C A re .

Jagged-edged ea e a e e c a c ate . Aca , c e t t a e t t r e , b t t a u n
e / t t e e t e ea t e o c ea , t a t ca a a ze t e o c t e b e e t e
c aca .

Interesting fact: In autumn, as days get shorter, plants are able to get less light. This loss of light triggers the process of leaves changing color and falling off.

11 Fern

(O•c a F)

Fern Middle Dev. a Period Recent (375 ea ac & ece t)

Type fF : B d

Type fPee at : C A re .

Ferns are free-living plants, autotrophs. They have a Period, but they are not a tree. Ferns are aquatic, feeding on the ground, using roots to absorb water and minerals. They have a complex life cycle involving alternation of generations.

Interesting fact: Young sporophyte ferns are called "fiddleheads" because the way they are curled looks like the top of a violin.

12 Shark Tooth

Tooth (O•c a F)

Fossil Upper Silurian Period Recent (420 ea ac & ece t)

Type fF : B d

Type fPee at : Penea zat

Shark teeth are found in the sea, 420 million years ago. Megalodon had large fangs, each about 10 cm long. Megalodon was a apex predator, feeding on large mammals like whales, seals, and sea lions. It had a powerful bite force, estimated to be up to 1000 kg/cm².

Interesting fact: The ancient shark megalodon was so big an adult human could have stood up inside its mouth. Megalodon has been extinct for 1.5 million years.

13 Modern Mammal Bone

Bone (O•c a)

Recent

Type fF : N/A

Type fPee at : N/A

Bone is a cancellous framework of trabeculae. It is a dense, solid structure with a central cavity. The trabeculae are interconnected by a network of bone tissue, providing strength and stability. Bone marrow is located in the cancellous bone, where blood cells are produced.

Interesting fact: Bone marrow in the cancellous bone is where blood cells are produced.

14 Modern Bivalve

S e (O•c a)

Rece t

T /p fF : N/A

T /p fP e e at : N/A

T a /p e e f b a e t a t a e d a . It a e c t e , • t a f . G a e u c e f
b a c u f d . B a e e • t e a t e t a d b u t o r d b e e t e t h b u t a f t e
e l b a c u f d , t e b u t a t e t a t e t !

Interesting fact: Scallops, clams, and oysters are all modern day bivalves that are eaten by humans.

15 Cave Bear Tooth

T u t (Ca t)

F u t Pe e e E , c (2.59 t ea a e 24,000 ea a e)

T /p fF : B d

T /p fP e e at : Pe a zat

Bear a e a t a t a b e o c t e f a U dae . Bear a a o r , a e b e a r d c e t e a t E ce e
E , c , abo t 38 t ea a , a d a e t a r d da . Cave bear a e e a c e b e a t a t e t c
abo t 24,000 ea a . Cave bear e e a e t i e t • E u p a c a e .

T u t a t a , o f t e e t a t e b a c f t e b e a ' t a . M a t a , o d b e a , • e , a d
t a , a e t a . Ma t a t a v a e / e t a (t e e t f t e t a), ca e (t e t ,
t e c e - a y d t e e t), a d c v (t e e t a t e f t e t).

Interesting fact: Cave bears are depicted in ancient cave paintings across Europe, and their remains have even been found near the burials of Neanderthals and humans.

16 Spinosaurus Tooth

T u t (Ca t)

F u t C e a c e r P e v d (112.6 – 70.6 t ea a e)

T /p fF : B d

T /p fP e e at : Pe a zat

Spinosaurus a t /p f a c e t e f d d a , a b e e b c e t a Tyrannosaurus . It ad a o c , a u
• t a d a a • t bac . F u t f Spinosaurus a e f d N t Af ca . S /n g t /t bab /t e t a f
t a e a t a d a e a f . A e c t e d c a t at Spinosaurus a a e a o a /p c e t e
t a t d d a d , c d b e e t e f r a f a d v a .

Interesting fact: A German scientist found the first recorded Spinosaurus specimen in Egypt. Bombing destroyed it during World War Two.

Theropod Footprint

Tac (Ca)

F  Ta c Pe d U  Ce a ce Pe d (231.4 – 65.5  ea ee)
T  f F : Tace