Fossil Frenzy – Student Response Sheet

Answer Key: Each answer worth 1 point unless indicated. Total Points: _______
Tiebreakers:

Station 1
1. A __TRICERATOPS__
   B __STEGOSAURUS__
   C __ANKLYOSAURUS__
   D __APATOSAURUS__
2. __HERBIVORES__
3. __CARNIVORES__

Station 2
4. __CORALS__
5. __CRUSTACEANS__
6. __ECHINODIDS__
7. __CEPHALOPODS__

Station 3
8. A B C D
9. A B C D
10. A B C D
11. A B C D

Station 4
12. A B C
13. A B C
14. __MAMMALS__

Station 5
15. __PETRIFIED WOOD__
16. __DESCRIBES THAT TREE’S MATERIAL IS REPLACED BY MINERALS (or makes it harden)__
17. A B C D

Station 6
18. __CAST/MOLD__
19. __MINERAL REPLACEMENT__
20. __ENCEAEMENT IN AMBER__
21. __ENTRAPMENT IN TAR__
22. __PETRIFICATION__

Station 7
23. A B C D
24. A B C D
25. A B C D
26. A B C D

Station 8
27. __TYRANNOSAURUS REX__
    __ALLOSAURUS__
    __ACROCANTHOSAURUS__
28. __JURASSIC__
    __CRETAEOUS (NEED BOTH)__
29. A B C
30. A B C

Station 9
31. __CORALS__
32. __ANIMALS__
33. A B C

Station 10
34. __M__
35. __O__
36. __SOFT BODY DOESN’T MAKE AN IMPRESSION TO PRESERVE__

Station 11
37. __TRILOBITE__
38. A B C D
39. A B C D
40. __INVERTEBRATES__
Station 12
41. ___AMMONITES___
42. 
Drawing should look like a squid with this shell on the body

43. A B C D

Station 13
44. ___D? (depends on setup)___
45. ___YES_____
46. ___BIVALVES___

Station 14
47. ___4.6 BILLION___
48. A B C D
49. ___ERA (BIGGEST)___
   ___PERIOD___
   ___EPOCH (SMALLEST)___

Station 15
50. A. ___COELOPHYSIS___
    B. ___ARCHAEOPTERYX___
    C. ___PARASAUROLOPHUS___
51. A. ___TRIASSIC___
    B. ___JURASSIC___
    C. ___CRETACEOUS___
52. ___A AND B (NEED BOTH)___
   _______________________

Station 16
53. ___C___
54. A B C D

Station 17
55. ___D___

Station 18
56. ___HAS A SPINE/BACKBONE___
57. ___D___

Station 19
58. A B C D
59. A B C D
60. A B C D
61. A B C D

Station 20
62. ___THREE (3)___
63. ___CARNIVORE___
64. A B C D

Station 20
65. MARINE or TERRESTRIAL
66. MARINE or TERRESTRIAL
67. MARINE or TERRESTRIAL
68. MARINE or TERRESTRIAL
1. Identify the specimens A - D at this station. Choose from:

<table>
<thead>
<tr>
<th>Acrocanthosaurus</th>
<th>Coelophysis</th>
<th>Velociraptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allosaurus</td>
<td>Deinonychus</td>
<td>Tyrannosaurus Rex</td>
</tr>
<tr>
<td>Ankylosaurus</td>
<td>Diplodocus</td>
<td>Iguanodon</td>
</tr>
<tr>
<td>Apatosaurus</td>
<td>Parasaurolophus</td>
<td>Stegosaurus</td>
</tr>
<tr>
<td>Archaeopteryx</td>
<td>Plateosaurus</td>
<td>Triceratops</td>
</tr>
</tbody>
</table>

All the specimens at this station have body parts and size to defend against predators.
(choose from herbivores or carnivores)

2. These specimens were _________.
3. Their predators were _________.
Station 2

Look at the fossils at this station. Identify from the list:

<table>
<thead>
<tr>
<th>Corals</th>
<th>Bivalves</th>
<th>Crustaceans</th>
<th>Echinoids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trilobites</td>
<td>Cephalopods</td>
<td>Brachiopods</td>
<td>Asteroids</td>
</tr>
</tbody>
</table>
8. Which of the following types of fossil is NOT considered a “Trace Fossil”:
   a. coprolites
   b. burrows
   c. footprints
   d. casts

9. Which of the following fossil types would be most useful for learning what a dinosaur ate?
   a. coprolites
   b. burrows
   c. footprints
   d. casts

10. Which of the following would be most useful for learning if a dinosaur traveled in herds?
    a. coprolites
    b. burrows
    c. footprints
    d. casts

11. What would be the most useful for understanding if an animal had a subterranean habitat?
    a. coprolites
    b. burrows
    c. footprints
    d. casts
Station 4

Teeth/jaws can tell scientists much about an organism.

A.

B.

C.

12. Which organism is a carnivore?
13. Which organism is an omnivore?
14. Are these skulls from reptiles, fish, or mammals?
15. What is this specimen?

16. Write a sentence that describes how this type of fossil forms.

17. Many of these fossils can be found in the deserts of the American Southwest. How do scientists explain that?
   a. That area was once covered by ocean.
   b. The area was occupied by dinosaurs.
   c. Climate change converted the area to a desert.
   d. Mountain tops have eroded into desert.
Station 6

<table>
<thead>
<tr>
<th>Word Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>petrification</td>
</tr>
<tr>
<td>mineral replacement</td>
</tr>
<tr>
<td>cast/mold</td>
</tr>
<tr>
<td>imprint</td>
</tr>
<tr>
<td>encasement in amber</td>
</tr>
<tr>
<td>mummification</td>
</tr>
<tr>
<td>freezing</td>
</tr>
<tr>
<td>entrapment in tar/asphalt</td>
</tr>
</tbody>
</table>

Name the type of preservation for each example shown below.
23. How is the fossilized skeleton of a dinosaur similar to the modern skeleton of a lizard?
   a. They are both small and two-legged
   b. Both have hearts and lungs
   c. They have backbones and tails
   d. Their skin is the same color

24. Why is a fossil dinosaur bone much heavier than the original bone it was made from?
   a. It has absorbed water
   b. It is much older
   c. Much of it has dissolved
   d. It is now made of minerals

25. Why are sharks' teeth some of the most common fossils, but almost never are sharks' skeletons found?
   a. The teeth are squeezed out when the shark is buried.
   b. Sharks do not have a skeleton.
   c. Predators of sharks digest their skeleton but not the teeth.
   d. The teeth of a living shark have more hard minerals than do the skeletons.

26. What is a common cause of plant and animal extinction?
   a. The climate changes.
   b. They die out from over-eating.
   c. They run out of homes to live in.
   d. They are trapped and moved.
27. This dinosaur is a large theropod dinosaur. What are the 3 large theropods on your official dinosaur list?

<table>
<thead>
<tr>
<th>Acrocanthosaurus</th>
<th>Coelophysis</th>
<th>Velociraptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allosaurus</td>
<td>Deinonychus</td>
<td>Tyrannosaurus Rex</td>
</tr>
<tr>
<td>Ankylosaurus</td>
<td>Diplodocus</td>
<td>Iguanodon</td>
</tr>
<tr>
<td>Apatosaurus</td>
<td>Parasaurolophus</td>
<td>Stegosaurus</td>
</tr>
<tr>
<td>Archaeopteryx</td>
<td>Plateosaurus</td>
<td>Triceratops</td>
</tr>
</tbody>
</table>

28. During which geologic period could you find one of these dinosaurs (list all that apply)?

29. How did theropods eat?
   a. Hunted/scavenged other animals
   b. Foraged for berries/ate eggs of other dinosaurs
   c. Ate plants

30. Many scientists believe that these large theropods had a highly developed sense of ____________.
   a. sight
   b. smell
   c. touch
31. What is the name of all these examples?

32. Are these plants or animals?

33. These species usually live in:

   a. muddy freshwater
   b. warm, shallow seas
   c. dry, dusty deserts
   d. hydrothermal vents
34. Which of these is in the Family Asteroid?

35. Which is most likely to be found in a fossil with other species that live in a swamp?

36. Very few fossils of sample N have ever been found. Explain why.
37. What is the name of this animal?

38. This animal is classified as a(n):
   a. Crustaceans
   b. Asteroids
   c. Arthropods
   d. Corals

39. These species usually live in:
   a. muddy freshwater
   b. warm, shallow seas
   c. dry, dusty deserts
   d. hydrothermal vents

40. Are these animals vertebrates or invertebrates?
41. What group do these fossils belong to?

42. This is not the whole body of this animal. Draw what this animal looked like on your answer sheet.

43. These animals went extinct with many others in what major event 65 million years ago?
   a. K-T extinction
   b. O-S extinction
   c. Late Devonian extinction
   d. Triassic-Jurassic extinction
Station 13

44. Which of these samples is not a bivalve?

45. Are these animals still alive today?

46. Did brachiopods or bivalves increase in number after the Permian extinction?
Station 14

Answer the following questions based on information from the diagram above:

47. Geologists are reasonably convinced that Earth is _________ years old.

48. Two large events that wiped out much of the life on Earth happened at the end of the _____ and _____ Periods.
   a. Silurian; Jurassic
   b. Permian; Cretaceous
   c. Pliocene; Cambrian
   d. Cenozoic; Triassic

49. On your answer sheet arrange these words from biggest chunks of geologic time to the smallest:
   Period       Epoch       Era
Station 15

50. What is the name of each dinosaur at this station?

<table>
<thead>
<tr>
<th>Acrocanthosaurus</th>
<th>Coelophysis</th>
<th>Velociraptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allosaurus</td>
<td>Deinonychus</td>
<td>Tyrannosaurus Rex</td>
</tr>
<tr>
<td>Anklyosaurus</td>
<td>Diplodocus</td>
<td>Iguanodon</td>
</tr>
<tr>
<td>Apatosaurus</td>
<td>Parasaurolophus</td>
<td>Stegosaurus</td>
</tr>
<tr>
<td>Archaeopteryx</td>
<td>Plateosaurus</td>
<td>Triceratops</td>
</tr>
</tbody>
</table>

51. What geologic period did each specimen live?

52. Which were carnivores? List all that apply.
53. Scientists cannot observe extinct animals as they move. They have to use fossil evidence to learn about that animal’s way of life. Which section of the diagram above could be used by a scientist to predict how tall a dinosaur might have been?

54. In section A, you can see how a track becomes fossilized. If the “true track” undergoes infilling and later creates a “natural cast”, which of the types of fossil is the “true track”?
   a. mold
   b. petrified wood
   c. coprolite
   d. amber
Station 17

55. Which of these is a pterosaur?

56. These animals are vertebrates. What does the term “vertebrate” mean?

57. Which of the animals at this station does not live in the same environment as the others?
Station 18

58. When hiking in the mountains you notice fossilized brachiopods in the exposed rock. Which of the following is the most probable conclusion?
   a. Sea creatures were eaten by animals there.
   b. The ocean was once very deep.
   c. The mountain was once part of an ocean bottom.
   d. Shelled animals once lived on mountain tops.

59. What type of rocks are almost all fossils found in?
   a. Sedimentary
   b. Igneous
   c. Metamorphic
   d. Quartz

60. A scientist that studies ancient life to understand events that happened long ago is a _____.
   a. Biologist
   b. Chemist
   c. Geologist
   d. Paleontologist

61. Which of the following will not make a fossil?
   a. decomposed organic material
   b. plant impressions
   c. animal footprints
   d. loose animal bones
Station 19

Dinosaur State Park in Rocky Hill, Connecticut houses one of the largest fossilized track sites in the world. Here is a picture of the trackbed.

62. How many toes did this dinosaur have on its hind foot?

63. Would this dinosaur have been a herbivore or a carnivore?

64. In which environment are fossilized footprints are preserved best?
   a. Arctic tundra
   b. Desert
   c. Freshwater lakeshore
   d. Thick forest
Station 20

List the environment where each of the following would have lived. Choose from: Marine or Terrestrial.