Scioly Summer Session 2019 Fossils B: BennyTheJett's KEY

Station 1:

1. Genus Acer
2. Genus Platanus
3. Canada
4. Planes/Plane Trees. Accept Sycamores.
5. Deciduous
6. Cenozoic
7. Swamps/Wetlands.
8. Carolus Linnaeus

Station 2:

1. Hydnoceras
2. Nummulites
3. Isotelus
4. Eldredgeops
5. Glass Sponge
6. Isotelus
7. Calymene
8. Sandstone/Siltstone (Accept Sedimentary rocks at your discretion)

Station 3

1. Archeopteryx
2. Basilosaurus
3. Solnhofen Limestone
4. WHALE
5. Insects, Small reptiles and amphibians.
6. Taphonomy
7. King Lizard
8. Mississippi/Alabama
9. Reptiles and Birds

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Station 4

1. H. neanderthalensis
2. Dimetrodon
3. Megacerops
4. Mammut
5. B, because Dimetrodon is NOT a mammal. (only ½ for just the answer)
6. Eocene
7. Courtship (Finding a mate), and body temperature regulation
8. North America, Europe, Asia
9. Extinct

Station 5

1. Deltoid
2. Mouth
3. Anus
4. Ambulacra
5. Pentamerism (only ½ for radial)
6. Hydrospires
7. 250 mya
8. Filter Feeding.

Station 6

1. Rhynochonellida
2. Platystrophia
3. Lingula
4. Leptaena
5. Specimen C, because Lingula is inarticulate, and the others are articulate.
6. Articulate
7. Ordovician to Silurian.
8. Ordovician
9. Pedicle

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Station 7

1. Trails
2. Coprolites
3. Burrows
4. Coquina
5. D
6. Hell Creek
7. inorganic objects, markings, or impressions that might be mistaken for fossils.
8. Repichnia
9. $CaCO_3$

Station 8

1. Coelacanthiformes
2. Carcharocles
3. Bothriolepis
4. Batoidea
5. A taxon that is believed to have been extinct, but show up in the fossil record significantly later.
6. C. Megalodon
7. Extant
8. It was widespread and lived a short time.
9. Detritivore
10. A fossil deposited in a rock where the fossil is older than the rock.

Station 9

1. Equus
2. Dactylioceras
3. Orthoceras
4. Cypraea
5. Turritella
6. Glycymeris
7. Cretaceous
8. Green River Formation
9. A clade is a bunch of organisms that all descended from a common ancestor.

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Station 10

1. Genus Tiktaalik
2. Acanthostega
3. Lobe Finned Fish (Accept just fish)
4. A
5. 3 meters
6. Transitional fossils are direct examples of evolution happening. They are the "bridges between organisms".

Station 11

1. Glossopteris
2. Annularia
3. Nautilus
4. Archimedes
5. Permian
6. Horsetails
7. Jet Propulsion
8. 3
9. Screw-like body shape. The shape of a screw was discovered to move water efficiently.

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Station 12

1. E
2. G
3. L
4. C
5. H
6. M
7. D
8. J
9. A
10. N
11. K
12. B
13. F
14. Igneous
15. Shallow Ocean/Seas (do NOT accept "Oceans")

Station 13

1. Silurian
2. The appearance or extinction of organisms
3. 88%
4. 2
5. 11,460 years ago.

Station 14

1. Beach Sands, Sand Dunes, Floodplains,
2. Velociraptor
3. Oogenera
4. Structure of the egg shells (do NOT accept "composition of eggs")
5. Spherulitic, Prismatic, Ornithoid (⅓ point per correct answer)
6. Acid Dissolution, CAT scans, Microscopes, Gel Electrophoresis, Cathodoluminesence, Allosterics, X-Rays (½ point per correct answer)

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Station 15

1. Carbonization
2. Pyritization
3. Amber
4. Mummification
5. Class insecta
6. Ordovician-Silurian, Late Devonian, Permian-Triassic, Triassic-Jurassic Cretaceous-Paleogene
7. Late Devonian

Station 16

1. Gave us many of the major animal phyla we see today, developed more advanced organisms, the overall animal diversity increased drastically, basically set up modern Earth. (PRETTY OPEN ENDED, accept at your discretion (does it make sense?).

   Judge based on quality and detail of answers. 1 point for attempt, 2-10 for a correct answer depending on quality, score the average around 6.5-7.