

2019 NYS REGIONAL SCIENCE OLYMPIAD*FOSSILS***Divisions B & C**

Dear Event Supervisors:

The 2019 NYS Regional Tournament will be written for 20 stations. As in the past with Rocks and Minerals or Fossils events, each station will require students to identify some of the specimens and answer questions about them. The written test will be all short answer, with multiple choice and short fill in. The fill ins will most be the identification. It should be straightforward to grade. I have learned to make any questions that could have multiple answers multiple choice. For example, what is the “common name” of this specimen? So there should not be too many issues with having non-experts help grade.

This year, students are allowed to bring a standard 3 inch three ring binder with resources from any source. The resources must be hole punched and must remain in the binder. I wouldn't be too strict on the size of the binder as long as it is a standard 3 inch. Some kids may overstuff their binder, which may extend the dimensions if it were to be measured. They are allowed and encouraged to remove their fossil list from the binder. Field guides and reference books are NOT permitted. Of course, some students may cut up their books and insert into the binder if they choose.

The list below includes the specimens that are needed for each station. Whenever possible, use real specimens or models. I will provide images//graphics of various specimens that are more difficult or impossible to obtain, such as most of the vertebrates. I am sending you the list early to give you time to acquire the specimens.

Most of the invertebrate specimens selected for this competition are relatively common, and should be available for purchase from a fossil dealer or borrowed from a local university or museum. I have a limited number of specimens that I may be able loan if we can make arrangements.

Below each station, I have indicated if specimens are preferred or if I will provide graphics.

Please don't hesitate to contact me if you need any advice or have any questions or concerns.

I hope this helps as you prepare for the upcoming 2019 regional tournaments.

Regards,

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2019 NYS REGIONAL SCIENCE OLYMPIAD**Divisions B & C***FOSSILS***Materials:**

Fossil specimens, photos or illustrations, magnifier, Geologic Time Scale, tape

List of Samples:

STATION 1 **A. *Heliophyllum* (any horn coral)** **B. *Hexagonaria*** **C. *Favosites***
(specimens)

STATION 2 **A. *Clam*** **B. *Gryphaea*** **C. *Pecten*** **D. *Brachiopod (mucrospirifer)***
(specimens)

STATION 3 **A. *Pentremites*** **B. Crinoid stem** **C. Echinoid**
(specimens)

STATION 4 **A. *Acanthostega*** **B. *Diplocaulus*** **C. *Tiktalik*** **D. Coelacanth**
(images provided)

STATION 5 **A. *Mucrospirifer*** **B. *Atrypa*** **C. *Composita*** **D. *Pyritized brachiopod***
(specimens)

STATION 6 **A. *Acer*** **B. *Glossopteris*** **C. *Metasequoia*** **D. *Calamites/Annularia*** **E. *Pectoperis***
(specimens)

STATION 7 **A. Eurypterid** **B. Crab.** **C. Insect** **D. Trilobite**
(use specimens or images provided)

STATION 8 **A. *Conus*** **B. *Turritella* (Internal mold)** **C. *Platyceras***
(specimens)

STATION 9 **A. *Archimedes*** **B. graptolite** **C. *Hydnoceras* (sponge)**
(specimens and image of Hydnoceras)

STATION 10 **A. *Elrathia*** **B. *Calymene*** **C. *Eldredgeops/Phacops***
(specimens)

STATION 11 A. *Archeopteryx* B. *Titanis*. C. *Velociraptor*
(images or models)

STATION 12 A. Ammonite B. *Orthoceras* C. *Nautilus*. D. *Belemnitella*
(specimens)

STATION 13 A. Bony fish skeleton B. *C. megalodon* C. *Dunkleosteus*. D. *Lobe finned fish*
(images, models, specimens)

STATION 14 A. *Dimetrodon* B. *Lystrosaurus*. C. *Mammut* D. *Homo neanderthalensis*
(images/models)

STATION 15 A. *Diplodocus* B: *Tyrannosaurus* C. *Coelophysis* D. *Dilophosaurus*
(images/models)

STATION 16 A. *Stegosaurus*. B. *Parasaurolophus* C. *Ankylosaurus* D. *Iguanodon*
(images/models)

STATION 17 Geologic Cross Section Provided

STATION 18 A. *Megacerops* B. *Mesohippus (tooth)* C. *Equus (tooth)*
(images/specimens)

STATION 19 A. Ichthyosaur. B. Mosasaur C. Pterosaur. D. *Basilosaurus*
(images provided)

STATION 20 Assemblage: *Rafinesquina*, *Platystrophia*, crinoid stem, branching bryozoan, horn coral, *Cryptolithus*, fossil limestone

(use specimens or provided photos)