

## ROCK HOUND

**1. DESCRIPTION:** This event will have 20 stations that the teams will rotate through in 2 minute increments, timed by the event supervisor.

Teams may be viewing any combination of:

samples, pictures, or written descriptions of

rocks and minerals on the 2018 Delaware Division A Rocks and Minerals list.

Teams will be asked multiple questions at each station.

The questions will be:

multiple choice, fill in the blank, short answer, etc. about the sample...

or questions about rocks and minerals in general without any sample.

**2. TEAM:** of 1 or 2      **Safety Requirements** - none

**3. MAXIMUM TIME:** 50 min

**4. TEAMS:** Must bring writing instruments.

Each team may bring one magnifying glass and one three-ring binder of any size...

containing information in any form and from any source attached using the available 3 rings; which may be removed during the event.

**5. THE COMPETITION:** The Teams will be assessed on their knowledge of:

The proper identification of all rocks and minerals on the 2018 Delaware Division A list.

***For rocks -***

a. The environments of formation of igneous, sedimentary, and metamorphic in general

b. The rock cycle

c. The formation of and the difference between the coal varieties on the list

d. Grade of metamorphism including parent rocks for the metamorphic rocks on the list

e. The classification of the rocks on the list

***For minerals -***

f. The methods of formation of minerals in general

g. Moh's hardness scale

h. The habit ( botryoidal, hexagonal, prismatic, etc. ) of the minerals on the list

i. The economic importance or lack of, for the minerals on the list

**6. REPRESENTATIVE STATION ACTIVITIES:**

j. Identify each of the minerals and place them in the correct order according to Moh's scale

k. Match each metamorphic rock with the type of rock from which it may have been formed

**7. SCORING:**

Total highest scores will determine rankings in this event.

Ties will be broken by the accuracy or quality of answers to pre-selected questions.

**Recommended Resources:** All reference and training resources including the Rock & Mineral Teaching Guide (RMCD), the Bio/Earth CD (BECD) and the National Audubon Society Field Guide to North American Rocks and Minerals are available on the Official Science Olympiad Store or Website at [www.soinc.org](http://www.soinc.org), and the Rocks and Minerals kits (\*excluding only silver, gold, and diamond) may be ordered from Ward's Science Olympiad Kits.

# ROCK HOUND

## 2018 Delaware Division A Rocks and Mineral List

For the State of Delaware, you will need to know about - Sillimanite and " Blue Rock " .

### Minerals

***Native Elements:***

Copper  
Graphite

***Borates:***

Ulexite

***Carbonates:***

Aragonite  
Azurite  
Calcite  
Malachite

***Halides:***

Halite

***Oxides:***

Hematite  
Magnetite

***Sulphates:***

Celestite

Gypsum  
variety - Selenite

### Minerals

***Sulfides:***

Chalcopyrite  
Galena  
Pyrite

***Silicates:***

Sodalite  
Staurolite  
  
Feldspar-Amazonite

***Garnet group:***

Almandine

***Mica Group:***

Lepidolite

***Pyroxene Group:***

Rhodonite

***Quartz varieties:***

Amethyst  
Citrine  
Crystal  
Milky Quartz  
Rose Quartz

### Rocks

***Igneous:***

Basalt  
Diorite  
Granite  
Obsidian  
Pumice  
Scoria

***Sedimentary:***

Breccia  
Conglomerate  
Sandstone  
Shale

***Metamorphic:***

Gneiss  
Marble  
Phyllite  
Quartzite  
Schist [Mica]  
Slate

***Coal varieties:***

Anthracite  
Bituminous  
Lignite