Directions: This exam consists of 20 stations, each based on different aspects of the Fossils Science Olympiad event. Each Station has an overarching theme which can play to the advantage of well-reasoned teams and can be used to make well time deductions. Each station will last for 2:00 minutes.

Directions for Proctor: This exam is often taken in a room of 20 seats, stationed in a 4x5 row-major order, and listed based on what is convenient for movement and snaking backwards. For example, the first row of seats (closest to the “front” of the room where the proctors time each station) would be labeled from West to East numerically (1-5) and the station immediately behind the fifth station would be labeled as “6”. In this manner, students can snake around the classroom without moving too far save having to move from station “20” to “1”.

Answer Sheet: Each station is numbered on the answer sheet. Do NOT start on the first station if you are not seated at the appropriate station. You will receive no credit for answers written on the wrong station even if they are correct. If the right answer is not in the right place, it is of no use. Some stations will have labeled items. It is your job to know whether or not to write a specimen name or specimen/item label. For example, if a question provides a carcharodon tooth with a label “A” and asks for the label of a carcharodon sample, writing the animal’s name or the word “tooth” would be marked as incorrect as they would be inappropriate responses. Some questions are in fact write-in and may have multiple answers as some items go by multiple scientific names. No extra points will be given for providing more than one correct answer.

For any questions or concerns, please email scienceolympiadedison@gmail.com!
Station 1:
1) ______________________________________
2) ______________________________________
3) ______________________________________
4) ______________________________________
5) ______________________________________
6) ______________________________________
7) ______________________________________
8) ______________________________________

<table>
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<tr>
<th></th>
<th>Stratigraphic Range for A'</th>
<th>Stratigraphic Range for B'</th>
<th>Age of Assemblage</th>
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<td>Carboniferous</td>
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<tr>
<td>Devonian</td>
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Station 2:
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4) ______________________________________
5) ______________________________________
6) ______________________________________

Station 3:
1) ______________________________________
2) ______________________________________
3) ______________________________________
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5) ______________________________________
6) ______________________________________
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<th>Station 4:</th>
<th>Station 5:</th>
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<td>12)</td>
<td>12) True/False</td>
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<td>13)</td>
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Station 6:

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2) 

3) 

4) 

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6) 

7) 

8) 

9) 

10) 

11) □ Mazon Creek
    □ Yixian Formation
    □ Beecher’s Trilobite Bed
    □ Green River Formation

12) 

13) 

14) 

Station 7:

1) 

2) 

3) 

4) 

5) 

6) 

7) 

8) 

9) 

10) 

11) 

12)
Station 8:
1) 

2) 

3) 

4) 

5) 

6) 

7) 

8) 

9) True/False 

10) 

Station 9:
1) 

2) 

3) 

4) 

5) 

6) 

7) 

8) 

9) 

10) 

Station 10:
1) 

2) 

3) 

4) 

5) True/False 

6) 

7) True/False 

8) 

9) 

10) 

Station 11:
1) 

2) 

3)
Station 12:
1) __________
2) __________
3) __________
4) __________
5) __________
6) __________

7) □ Filter feeder
   □ Predator/Carnivore
   □ Autotrophic
   □ Grazing/Consumer

8) _______ Nektonic
    _______ Benthic Infaunal
    _______ Pelagic
    _______ Sessile

9) _______
10) __________
11) True/False

Station 13:
1) __________
2) __________
3) __________
4) __________
5) __________
6) __________
7) __________
8) __________

(Question 9 is on the following page)
9) Oldest  
   ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
Youngest  ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  

Station 14: 
1) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
2) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
3) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
4) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
5) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
   ☐ Nomadic lifestyle  
   ☐ Sedentary lifestyle  
   ☐ Tribal lifestyle  
   ☐ Warrior lifestyle  
6) ☐ Autotrophs  
   ☐ Omnivores  
   ☐ Herbivores  
   ☐ Filter Feeders  
7) ☐ The obscurance of the atmosphere by ash  
   ☐ The immediate destruction of multiple habitats  
   ☐ The suffocation of many breathing creatures  
   ☐ The elimination of most small mammals  
8) ☐ True/False  
9) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
10) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  

Station 15: 
1) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
2) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
3) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
4) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
5) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
   ☐ The obscurance of the atmosphere by ash  
   ☐ The immediate destruction of multiple habitats  
   ☐ The suffocation of many breathing creatures  
   ☐ The elimination of most small mammals  
6) ☐ True/False  
7) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
8) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
9) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  
10) ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐  

7️⃣
### Station 16:

1)  

2)  

3)  

4)  

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6)  

7)  

8)  

- Ghost Ranch  
- Yixian Formation  
- LaBrea Tar Pits  
- Green River Formation

### Station 17:

1)  

2)  

3)  

4)  

5)  

6)  

7)  

8)  

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10)  

11)  

- Archaeopteryx  
- Hydnoceras  
- Coelacanthiformes  
- Tiktaalik

### Station 18:

1)  

2)  

3)  

4)  

5)  

6)  

7)  

8)
5) 

6) True/False
7) 

8) 

9) 

Station 19:
1) 

2) 

3) 

4) 

5) 

6) 

7) 

8) True/False
9) 

10) 

11) 

Most ancient  

Most recent  

Station 20:
1) 

2) 

3) 

4) 

5) 

6) 

7) 

8) True/False
9) 

10) 

11) 

12)  

- Solnhofen Limestone
- Burgess Shale
- Beecher’s Trilobite Bed
- Yixian Formation