



SCIENCE OLYMPIAD
AT THE
UNIVERSITY OF FLORIDA

Northern Regional: January 19th, 2019

Dynamic Planet C Answer Key

Name(s): _____

Team Name: _____

School Name: _____

Team Number: _____

Rank: _____

Score: _____

Answer Key

1. D
2. C
3. B
4. B
5. A
6. D
7. B
8. C
9. B
10. Accept between 27%-30%
11. C
12. Valley glaciers, ice sheets
13. A
14. B
15. A
16. A
17. A
18. D
19. C
20. Medial, Ground, Terminal, Lateral
21. A previous glacier sunk the land and the crust is now undergoing isostatic rebound.
22. Accept between 40,000-60,000 years
23. 15,000 years ago, pleistocene
24. **Alpine glaciers** -- Modern glaciers in the Swiss Alps and Norway had once extended farther down their valleys than today = uniformitarian process, local events
Mountain ice caps -- Glacier cover in the Swiss Alps and Norway had once been much thicker (or mountains higher) so that ice caps formed and spread into adjacent regions = extended uniformitarian process, regional events
Continental ice sheet -- Vast sheet of ice spread from the Arctic and covered all of Europe as far south as the Mediterranean (also in North America) = global catastrophe and biological extinctions
25. Floating equilibrium between crust and mantle; weight of glacier contributes to crust
26. Lambert glacier, Antarctica
27. Cordilleran, Laurentide
28. About 2.5 meters per decade. 1 point for number. 1 point for unit
29. a. Ablation was greater than accumulation, glacier had a negative mass balance. Only 1 point if they say global warming, ice melting, greenhouse effect.

- b. Water can now cross between lakes (danger from salt vs fresh, animals can cross/invasive species), pollution from one side could now cross to the other
30. (NASA's answer) Arctic ice is confined on all sides by land, while Antarctic ice is on the edge of the continent. This means it has more room to grow in the winter & can melt more completely in the summer. In addition, Antarctic ice is subject to a wider range of influences from land, the atmosphere, and the ocean
 31. Hanging Valley
 32. Corries (or cirques)
 33. Aretes
 34. Tarn
 35. Kettle (lake)
 36. Crevasse
 37. Bergschrund
 38. Ogives
 39. Roche moutonnee
 40. Pingo
 41. Piedmont glacier
 42. Laurentide Ice Sheet
 43. Cordilleran Ice Sheet
 44. Pyramidal Peak
 45. Arêtes
 46. Corrie (or cirque)
 47. Corrie Lochan, Tarn (one point each)
 48. Alluvial fan
 49. Ribbon Lake
 50. Truncated Spur
 51. Misfit Stream
 52. Hanging Valley
 53. "U" Shaped Valley