Awww Yeah
Mnstrviola's Dynamic Planet Practice Test: GLACIERS!

Team Name: _____

Participants:

_____ _____

Favorite Ice-Type Pokemon:

_____

Instructions~

This test consists of 6 sections: A, B, C, D, E, and F. Your responses to sections A through D will be mostly written responses. The score for sections A - D will be multiplied by 2 for a total of 128 points. Section E is multiple choice, and will be worth 40 points. Ties will be broken by your response to the tiebreaker question in section F.

---This font means proctor use only---

Total Score: _____

Tiebreaker Score, if necessary: _____

Section A: General Glacier Knowledge.

Here's a hard one- what exactly is a glacier? Be as specific as possible. [6 points]

About how many glaciers are there currently on Earth? (Answer in a power of 10). On what continent[s] are glaciers found? [3 Points]

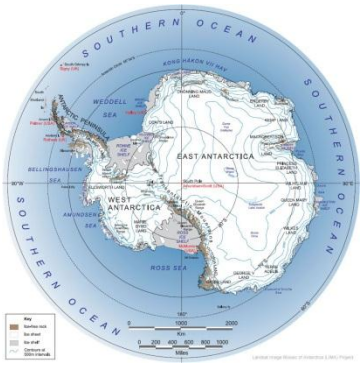
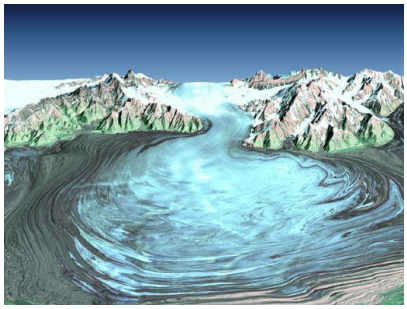
Why are glaciers studied? [3 points]

How do glaciers affect their environment? Give an example [6 points]

Score for this page
_____ out of 18

Section B: Glacier Type Identification

Identify these glacier types [9 Points].

a	b	c
		

a.
b.
c.

What are the lines in glacier B called? [2 Points]

Which of these is the largest? [1 Point]

Which glacier demonstrates linear flow the best? [1 Point]

How is glacier C formed? [2 Points]

Score for this page:
_____ out of 15

Section C: How do Glaciers Move?

Identify and Describe two **factors** affecting the speed Alpine Glaciers move. [8 points]

What is Plastic Flow, and where does it occur within a glacier? [5 points]

When a glacier moves fast, it is called _____ [1 point]. This can lead to large cracks on the surface of the glacier when it passes over a bump; these cracks are called _____[1 point].

At the bottom of a glacier, ice can dislodge and pick up chunks of rocks; this process is called _____[1 point]. When a lot of plucking occurs over a small hill, the hill can be transformed into a _____ [1 point].

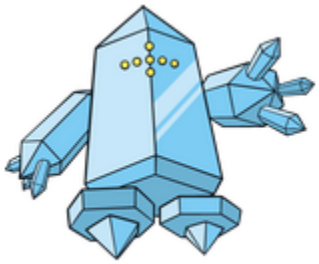
Score for this page:
_____ out of 17

Section D: Weathering, Erosion, and Deposition

What is the difference between Erosion, Deposition, and Weathering? [3 points, all or none!]

Circle the correct phrase. [1 point each]

- Ice is a {powerful / not-so-powerful} agent of erosion.
- Material deposited by glaciers is usually {well / poorly} sorted.
- Abrasion is an example of {weathering / deposition}.
- Moraines are formed by {erosion / deposition}.
- Meltwater from glaciers deposit sorted till called {till / outwash}.
- Valley glaciers occupy mountain basins called {drainage basins / cirques}
- Concerning glaciers, ice itself is the primary erosional substrate: {true / false}
- Drumlins point {toward / away} from their glacial source.
- Recessional Moraines are located {behind / in front of} the terminus of a glacier.
- Entrainment is a(n) {erosional / depositional} process.
- Kettle lakes are primarily formed by {erosion / deposition}



Score for this page:
_____ out of 14

Score Calculation
_____ score for A

_____ score for B
_____ and for C
_____ finally, for D
+_____ … add 'em all!
_____ total, out of 64
x_____ … multiply by 2
_____ TOTAL SCORE FOR SECTIONS A through D out of 128
_____ score for section E
+_____ add 'em up
_____ TOTAL SCORE FOR WHOLE TEST: A, B, C, D, and E

Section E: Multiple Choice

Choose **all** correct choices by writing the correct letter(s) in the answer boxes below. (There may be more than one, or there may be none! If there are no answers, leave it blank or put N). 1 point for each completely correct answer.

1.	2.	3.	4.
5.	6.	7.	8.
9.	10.	11.	12.
13.	14.	15.	16.
17.	18.	19.	20.
21.	22.	23.	24.
25.	26.	27.	28.
29.	30.	31.	32.
33.	34.	35.	36.
37.	38.	39.	40.

1. Which of these are NOT part of the Milankovitch Cycles?
    A. The change in the tilt of Earth's axis
    B. The change in the speed of Earth's rotation
    C. The change in the amount of CO2 in Earth's atmosphere
    D. The change in the shape of Earth's orbit

2. We are currently in the/a...
    A. Pleistocene Epoch
    B. Holocene Epoch
    C. Quaternary Period
    D. Interglacial Period

3. Continental Ice Sheets...
    A. are a type of glacier
    B. subsidise the land underneath them
    C. reflect sunlight back into space, an example of negative feedback
    D. are the same thing as ice fields

4. Which of these does not belong?
    A. Bergschrund
    B. Ravine
    C. Crevasse
    D. Icefall

5. Which of these are least associated with the word "periglacial"?
    A. frost action
    B. shattering
    C. abrasion
    D. frost push

6. Which of these factors affect the extent of periglaciation in a certain area?
    A. Latitude
    B. Altitude
    C. Ocean Currents
    D. Continentality

7. Which of these contribute the most H20 to glaciers?
    A. Human Impact
    B. Rain that freezes on the ground
    C. Snow
    D. Ocean Water that freezes to icebergs

8. Which of these are not a form of precipitation?
    A. Rain
    B. Snow
    C. Sleet
    D. Hail

9. Icebergs...
    A. Combine to form glaciers
    B. Are made from glaciers
    C. Are considered mini glaciers
    D. Are made of freshwater

10. Ice Cores...
    A. are used to determine the atmosphere from previous times
    B. are used to determine the climate from previous times
    C. are relatively sturdy and can withstand temperatures above freezing
    D. consist primarily of glacially eroded sediment

11. What is true of a typical ice age?
    A. The earth was completely covered in ice
    B. It was wet and snowed and rained a lot
    C. It was caused by an asteroid impact
    D. All animals on earth become extinct

12. How does basal melting affect abrasion?
    A. Higher melting results in more abrasion
    B. Higher melting results in less abrasion
    C. It doesn't affect it at all
    D. Basal melting is never present during abrasion

13. If a glacier's ablation is 384m^3 and accumulation is 176m^3, what is its mass balance?
    A. 208m^3
    B. 560m^3
    C. -208m^3
    D. 71424m^3

14. What landforms can be identified in this picture?
    A. Horn
    B. Arête
    C. Serac
    D. Crevasse

15. What landform can be identified in
this picture?
A. Serac
B. Roche Moutonnee
C. Drumlin
D. Horn

16. What landform can be identified in this picture?
A. Roche Moutonnee
B. Drumlin
C. Sheepback
D. Terminal Moraine

17. What letter can describe the shape of a glacially-eroded valley?
A. Q
B. V
C. I
D. U

18. What is an ice wedge?
A. An erosional agent
B. A depression in the ground filled with ice
C. A tool used to break ice
D. A weapon carved of glacial ice

19. Which of these do not belong, based on shape?
A. Suncup
B. Ribbon Lake
C. Esker
D. They all are shaped the same

20. Which of these lakes are not formed by glaciers?
    A. Ribbon Lake
    B. Kettle Lake
    C. Oxbow Lake
    D. The Great Lakes

21. What is stoss and lee, respectively?
    A. Erosional landforms and depositional landforms
    B. Depositional landforms and erosional landforms
    C. Upstream side and downstream side
    D. When a glacier is moving, and when it is in equilibrium

22. Identify this landform.
    A. Cyroconite
    B. Moulin
    C. Penitent
    D. Erratic

23. Identify this body of water, an inlet formed by glacial erosion.
    A. Nunatak
    B. Fjord
    C. Estuary
    D. Aquifer

24. Identify this mountain landform, a circular depression.
    A. Cirque
    B. Nunatak
    C. Arête
    D. Sheepback

25. Identify this landform, a glacially-carved peak
   A. Horn
   B. Arête
   C. Acmete
   D. Mountop

26. River : Waterfall :: Glacier : ? (Rivers are to waterfalls as glaciers are to ?)
    A. Glacierfall
    B. Icefall
    C. Serac
    D. Avalanches

27. Which of these are the most potentially harmful (pick 1)?
    A. Jokulhlaup
    B. Kettle
    C. Kame
    D. Glacierfall

28. Identify these small lakes formed
  by melting of glacier ice chunks
  A. Moulin
  B. Cyroconite
  C. Kettle
  D. Kame

29. Identify this type of glacier.
   A. Rock glacier
   B. Sedimented glacier
   B. Dirty glacier
   D. Outspill glacier

30. A higher concentration of O18 to O16 in an ice core mainly correlates to...
    A. Higher temperatures
    B. Lower temperatures
    C. More compact ice
    D. More oxygenated ice

31. Fluvially-sorted sediment tends to be...
    A. more mixed, more sharp
    B. better sorted, more sharp
    C. more mixed, more rounded
    D. better sorted, more rounded

32. Which of these tend to be bigger?
     A. cyroconites
    B. bergschrund
    C. they are the same size
    D. they can not be measured in size

33. What is currently the largest glacier in the world?
    A. Agassiz Glacier
    B. Laurentide Glacier
    C. Malaspina Glacier
    D. Lambert Glacier

34. What is true of the Laurentide Ice Sheet?
    A. It was/is located in North America
    B. It is still present today
    C. It left behind glacially-scoured valleys and glacial till
    D. It was present during most of the Pliocene Epoch

35. What is true of isostatic rebound?
    A. It causes a relative rise in sea levels (relative to the landmass that is rebounding)
    B. It causes a relative fall in sea levels (relative to the landmass that is rebounding)
    C. It can be caused when a glacier melts
    D. It can be caused when a glacier grows

36. What is true of the Younger Dryas event?
    A. Humans were alive during the time
    D. It was a warm interglacial period
    C. There are many theories as to how it began
    D. It lasted over 3000 years

37. What is true of a moulin?
    A. They are depositional landforms
    B. They can be very deep, and lead to caves
    C. They make good temporary shelters for glaciologists
    D. They can carry meltwater internally

38. Which is true about ice and water?
    A. They are of the same element
    B. Water is more dense
    C. Ice is part of the water cycle
    D. Ice floats in water

39. What is the process where water goes from a gaseous to solid state?
    A. Sublimation
    B. Immediatation
    C. Solufication
    D. Precipitation

40. Where is most of Earth's fresh water stored? (pick one)
    A. In the oceans
    B. In glaciers
    C. In aquifers, underground
    D. In man-made water storages

Section F: Tiebreaker

What methods do we have for measuring a glacier's mass-balance? How can a change in a glacier's mass-balance affect the area around it?