

Glaciers of the Cryosphere

Questions for Class

1. Which of these apply to glaciers? (Check all that apply; hint: only one is not true!)

a moving or deforming body of ice

they are made of ice that lasts for more than two summers (perennial ice)

they capture snow and grow in the winter and melt and shrink in the summer

the largest glaciers are near the equator

they are at risk because of climate change

2. Glaciers are important because: (check all that apply)

they provide water during warm and dry seasons

they store water for when our ecosystems need it most

they produce oxygen through photosynthesis

they help reduce global warming by reflecting solar rays

they keep local environments cool because they are cold

3. *Cryogenetic Powers* include: (check the only one that DOES NOT apply)

Frost Heave

Solar radiation

Frost Wedging

Cryosuction

4. *Frost Heave* is a cryo-genetic power that expands frozen grounds and pushes rock to the surface

True

False

5. Ablation is another word for melt?

True

False

6. The *Equilibrium Line* of a Glacier is: (check two)

the area between snow accumulation and ice melt on a glacier

the terminus line of a glacier

only a feature of a subsurface and invisible rock glacier

is sometimes visible as the transition between white and grey surface color of a glacier

7. *Seracs* are: (check only one)

blade-like cones of ice that resemble stalagmites

large pieces of breaking glacier usually found at the terminus of a glacier

tiny pieces of floating ice

bits of ice that wedge between rocks and cause frost wedging

8. Rock Glaciers are: (check ALL that apply)

a special type of glacier covered by rocks

usually just below visible white glaciers, where it's a little warmer

the ice in rock glaciers is protected from heat by its rock cover

rock glaciers can be found in all mountains

climate change doesn't affect rock glaciers because they are fully protected by their cover

9. Pingos are:

- both a natural land and ice form and a myth of the Eskimo culture
- are found in frozen earth (permafrost) environments
- can build up water and gas pressure beneath the surface of the Earth
- ice mounds that can erupt like volcanos with ice and water
- all of the above
- none of the above, Pingos are Arabian Horses that can walk on their hind legs

10. Why are glaciers blue on the inside: (choose only one)

- because that's the color of water
- because the ice reflects the color of the sky
- because compacting ice pushes out oxygen
- it's actually not blue, it's an optical illusion, they're actually white straight through the middle

11. Florida doesn't have glaciers because: (check ALL that apply)

- it's too warm for most of the year
- it doesn't snow or have any perennial ice
- it doesn't have high mountains and it's far from the Earth's poles
- glaciers never reach the sea and you're always near a beach in Florida

12. Glaciers in the United States exist in: (check ALL that apply)

- Alaska
- The Appalachia
- The Rocky Mountains
- California's Sierra Nevada

13. During an ICE AGE, sea levels will fall?

- True
- False

14. As the polar ice caps and mountains glaciers melt, sea level will surely rise?

- True
- False

15. What are the two types of Climate Change? (check 2)

- Natural (caused by natural phenomenon)
- Anthropogenic (caused by humans)
- Autochthonous (pertaining to the place you are in)

16. Which of these is not a Cryo-Power Superhero:

- Frozone
- Jack Frost
- Ice Cube
- Elsa
- The Yeti