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# Melting Antarctic Glacier's Global Impact on Millions

## Description

Scientists began the year with an expedition to Antarctica to study Thwaites Glacier, which is melting quickly. If it fully breaks apart, it could raise global sea levels by two feet over several decades, impacting millions of people worldwide.

Maps show some coastal cities at risk, especially areas that could be affected if the glacier collapses soon. This melting will increase sea levels further as global warming continues to affect ice melting in Greenland and expands ocean water.

Thwaites Glacier currently acts as a barrier, keeping other glaciers in Antarctica from entering the sea. If it collapses, those glaciers might follow, worsening sea level rise. Richard Alley, a geosciences professor, warns that this could lead to significant impacts on all of West Antarctica.

Cities, especially in Asia, are at the highest risk. Many of the world's biggest urban areas are near coastlines. For example, Shanghai has over 600,000 residents already living below sea level. A rise of two feet could expose an additional 4.7 million people.

Protecting these cities from flooding and storm surges would be very costly. In New York City, a proposal for coastal protection could exceed \$52 billion. In contrast, cities like Dhaka may struggle to prepare as they grow rapidly yet lack sufficient resources for protection.

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## Vocabulary List:

1. **expedition** //,ɛkspə'dɪʃən// (noun): a journey for a special purpose
2. **collapse** //kə'læps// (verb): fall down or break apart suddenly
3. **barrier** //'bæriə// (noun): something that blocks movement or access
4. **coastal** //'kəʊstəl// (adjective): near or along the land by the sea
5. **expose** //ɪk'spoʊz// (verb): make someone or something able to be harmed
6. **resources** //rɪ'sɔːrsɪz// (noun): money, materials, or help available for use

## Comprehension Questions

### Multiple Choice



1. What is the potential sea level rise if Thwaites Glacier breaks apart?
  - Option: 1 foot
  - Option: 2 feet
  - Option: 3 feet
  - Option: 4 feet
  
2. Which glacier is being studied during the expedition?
  - Option: Greenland Glacier
  - Option: Thwaites Glacier
  - Option: West Antarctica Glacier
  - Option: Antarctic Peninsula Glacier
  
3. Who is Richard Alley?
  - Option: An astronaut
  - Option: A geosciences professor
  - Option: A politician
  - Option: A climate activist
  
4. Which city is mentioned as having over 600,000 residents living below sea level?
  - Option: New York City
  - Option: Shanghai
  - Option: Dhaqa
  - Option: Tokyo
  
5. What is the estimated cost for coastal protection in New York City?
  - Option: \$10 billion
  - Option: \$25 billion
  - Option: \$52 billion
  - Option: \$100 billion
  
6. What is the main reason for the increase in sea levels according to the text?
  - Option: Melting snow
  - Option: Global warming
  - Option: Ocean currents
  - Option: Earthquakes

**True-False**



7. Thwaites Glacier helps keep other glaciers from entering the sea.
8. All coastal cities are at equal risk from rising sea levels.
9. The rise of two feet could expose an additional 4.7 million people.
10. Rich countries will not need to spend money on protecting their coastal cities.
11. Global warming only impacts glaciers in Antarctica.
12. Cities like Dhaka have abundant resources to prepare for rising sea levels.

### Gap-Fill

13. Thwaites Glacier is melting \_\_\_\_\_ quickly.
14. A complete collapse of Thwaites Glacier could raise sea levels by \_\_\_\_\_ feet.
15. Shanghai has over 600,000 residents already living below \_\_\_\_\_ sea level.
16. Richard Alley warns about significant impacts on all of \_\_\_\_\_ Antarctica.
17. Protecting cities from flooding would be very \_\_\_\_\_ costly.
18. In New York City, a proposal for coastal protection could exceed \_\_\_\_\_ billion.

### Answer

**Multiple Choice:** 1. 2 feet 2. Thwaites Glacier 3. A geosciences professor 4. Shanghai 5. \$52 billion 6. Global warming

**True-False:** 7. True 8. False 9. True 10. False 11. False 12. False

**Gap-Fill:** 13. very 14. two 15. sea 16. West 17. costly 18. 52

### Vocabulary quizzes

**Multiple Choice ( Select the Correct answer for each question. )**



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1. What is usually tested to ensure systems can work together?
    - Option: capability
    - Option: compatibility
    - Option: scalability
    - Option: reliability
  
  2. What term refers to the permanent software programmed into a hardware device?
    - Option: software
    - Option: firmware
    - Option: malware
    - Option: application
  
  3. What do we call materials or assets that can be utilized for various purposes?
    - Option: tools
    - Option: resources
    - Option: assets
    - Option: infrastructure
  
  4. What term describes a journey undertaken for a specific purpose, often exploration?
    - Option: quest
    - Option: expedition
    - Option: mission
    - Option: voyage
  
  5. What do we call the alteration of the original shape or appearance of something?
    - Option: distortion
    - Option: representation
    - Option: clarity
    - Option: alignment
  
  6. What is the type of electricity that remains stationary until discharged?
    - Option: current electricity
    - Option: dynamic electricity
    - Option: static electricity
    - Option: induced electricity
  
  7. What term is used to refer to sound waves with a lower frequency?
    - Option: high-frequency
    - Option: mid-frequency
    - Option: low-frequency
    - Option: ultrasonic



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8. What is created around a magnet or a current-carrying conductor?  
Option: electric field  
Option: gravitational field  
Option: magnetic field  
Option: radiation field
9. What technology allows users to control devices through spoken commands?  
Option: remote control  
Option: manual control  
Option: voice control  
Option: fingerprint control
10. What term refers to areas located near the shore of a sea or ocean?  
Option: interior  
Option: rural  
Option: urban  
Option: coastal

**Gap-Fill ( Fill in the blanks with the correct word from the vocabulary list. )**

11. The issue between the two parties was finally \_\_\_\_\_ after extensive discussions.
12. There has been significant \_\_\_\_\_ in technology over the past decade.
13. The new software is focused on \_\_\_\_\_ user experience and interface.
14. The unexpected \_\_\_\_\_ of the building shocked the entire city.
15. Language can often act as a \_\_\_\_\_ to effective communication.
16. Investigation was crucial to \_\_\_\_\_ the truth behind the incident.
17. The event was exclusive and required an \_\_\_\_\_ to attend.
18. Players were thrilled to receive \_\_\_\_\_ to the highly anticipated game.
19. The team is focused on \_\_\_\_\_ the data for better analysis.
20. The software update fixed several critical \_\_\_\_\_ that were affecting performance.



**Matching Sentences ( Match each definition to the correct word from the vocabulary list. )**

21. The whistler can produce a variety of melodic tones that are pleasing to the ear.
22. Solar wind consists of charged particles released from the sun's atmosphere into space.
23. Jellyfish are fascinating creatures known for their translucent bodies and ability to drift through water.
24. A crystal is a solid material whose atoms are arranged in a highly ordered structure.
25. The glow of the phosphorescent material illuminated the dark room beautifully.
26. Proteins are vital macromolecules that perform a variety of functions in living organisms.
27. Researchers are constantly exploring new methods to improve scientific understanding.
28. Electromagnetic waves include a spectrum of radiation such as radio waves, microwaves, and X-rays.
29. Static electricity can be observed when one rubs a balloon on their hair and it makes the hair stand up.
30. A magnetic field is generated by moving electric charges and can influence the behavior of other magnets.

**Answer**

**Multiple Choice:** 1. compatibility 2. firmware 3. resources 4. expedition 5. distortion 6. static electricity 7. low-frequency 8. magnetic field 9. voice control 10. coastal

**Gap-Fill:** 11. resolved 12. progression 13. enhancing 14. collapse 15. barrier 16. expose 17. invite-only 18. early access 19. categorising 20. bugs

**Matching sentence:** 1. whistler 2. solar wind 3. jellyfish 4. crystal 5. glow 6. protein 7. researchers 8. electromagnetic 9. static electricity 10. magnetic field

**CATEGORY**

1. Sci/Tech - LEVEL3

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