

Geological History of The Sugarloaf at Hallett Cove

Geology · Answer Key · 20 Questions

1. What is the best-known feature in the park?

- A) The Glacier
- B) The Sugarloaf**
- C) The River
- D) The Ice Cap

2. What is The Sugarloaf named for?

- A) Its resemblance to a sugar cube
- B) Its sweet taste
- C) Its resemblance to a mass of hard refined sugar**
- D) Its white color

3. What are the primary agents of erosion that shaped The Sugarloaf's current shape?

- A) Water and ice
- B) Wind and rain**
- C) Volcanic activity and earthquakes
- D) Glaciers and rivers

4. Approximately how many million years ago was southern Australia covered by an ice cap?

- A) 290 million years ago
- B) 3 million years ago
- C) 295 million years ago**
- D) 5 million years ago

5. What geological period is associated with the ice cap that covered southern Australia?

- A) Jurassic
- B) Cretaceous
- C) Permian**
- D) Triassic

6. The lower red layers of boulders and sediment were deposited on the bottom of what?

- A) An ancient ocean
- B) A glacial meltwater lake**
- C) A river delta
- D) A volcanic caldera

7. What happened after the ancient glacial meltwater lake drained?

- A) The red sediments were washed away
- B) White sand was blown over the red sediments**
- C) Brown clay was deposited
- D) The area became a desert

8. What is the brown cap on The Sugarloaf composed of?

- A) Windblown sand
- B) Volcanic ash
- C) Glacial till
- D) Clay deposited from rivers**

9. Approximately how many million years ago was the brown clay cap deposited?

- A) 295 million years ago
- B) 290 million years ago
- C) 3 million years ago**
- D) 5 million years ago

10. What did the Permian ice sheet do to the Hallett Cove area?

- A) It melted and formed a lake
- B) It deposited layers of sand
- C) It slowly scoured out a basin**
- D) It caused erosion by wind and rain

11. What are 'dropstones'?

- A) Pebbles that fell from icebergs
- B) Rocks embedded in ice that fell out as the ice melted**
- C) Sediments deposited by rivers
- D) Boulders carried by wind

12. What was embedded in the ice that formed the glacial lake?

- A) Only sand and silt
- B) Pebbles, rocks, and boulders**
- C) Only clay
- D) Fossils of marine life

13. What is the direction of the present-day Gulf St Vincent relative to Hallett Cove?

- A) East
- B) West**
- C) North
- D) South

14. The text mentions 'Bedrock' in the diagram. What is bedrock?

- A) Loose sediment
- B) The solid rock underlying loose deposits**
- C) A layer of clay
- D) Glacial ice

15. Which of the following is NOT a layer described in the formation of The Sugarloaf?

- A) Red boulders and sediment
- B) White sand
- C) Brown clay
- D) Black volcanic rock**

16. The story told by the layers of The Sugarloaf is a much longer story than its current shape suggests.

- A) True**
- B) False

17. The melting of the ice cap led to the formation of:

- A) A desert
- B) A shallow sea
- C) A glacial lake**
- D) A mountain range

18. What is the significance of the Permian period in the context of Hallett Cove?

- A) It was a period of intense volcanic activity
- B) It was when the area was covered by an ice sheet**
- C) It was when the white sand was deposited
- D) It was when the brown clay was deposited

19. The white sand layer was deposited by:

- A) Rivers
- B) Wind**
- C) Glaciers
- D) The ocean

20. The red layers are primarily made of:

- A) Clay and silt
- B) Sand and pebbles
- C) Boulders and sediment**
- D) Organic material