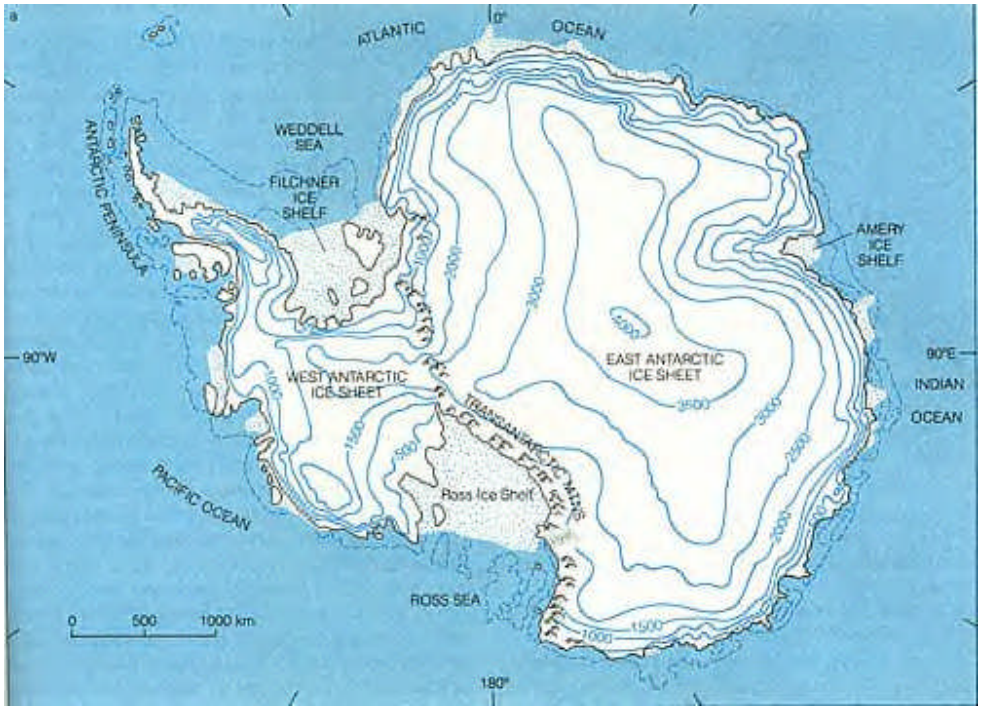

Figure 12

21. What is another name for this type of glacier?

22. What feature divides Antarctica's two major ice sheets?

23. What is the difference between an ice sheet and an ilce shelf?

24. Explain two differences between an ice sheet and a valley glacier?

25. How is glacial flow of an ice sheet different from that of a valley glacier?

26. Describe a method you could use to identify the exact location of the South Pole on this map.

27. The contour interval of this map is 500 meters. Between what two contours does the South Pole lie?

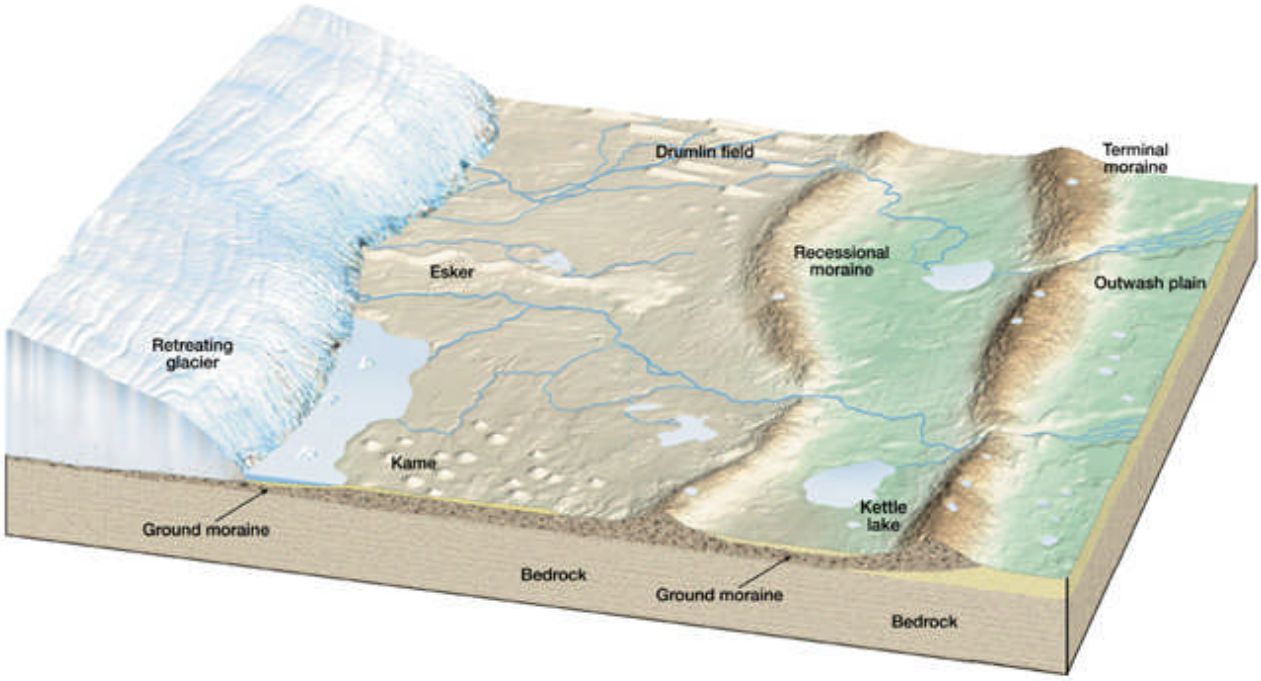

Figure 13: Diagram illustrating features formed as a result of glaciation.

28. With what type of glacier are these features usually associated?

29. Which features resulted from deposition by glacial meltwater streams?

30. Which features are composed of unsorted till?

31. Which feature marks the farthest extent of glaciation?

32. Explain the processes that formed the terminal and recessional moraines.

This image is featured in the Glacier Chapter in TASA's Earth's Dynamic Surface CD available for purchase at http://www.otherworlds-edu.com/prod02.htm

Figure 14: Glacial Movement

Base your answers to questions 31-35 on the three maps below. The maps show the ice movement and changes at the ice front (terminus) of an alpine glacier from the years 1874 to 1882.

Points A, B, C, D, and E represent the positions of large markers placed on the glacial ice and left there for the 8 year period.

The position of the glacial ice front for 1874, 1878, and 1882 is indicated on each map.

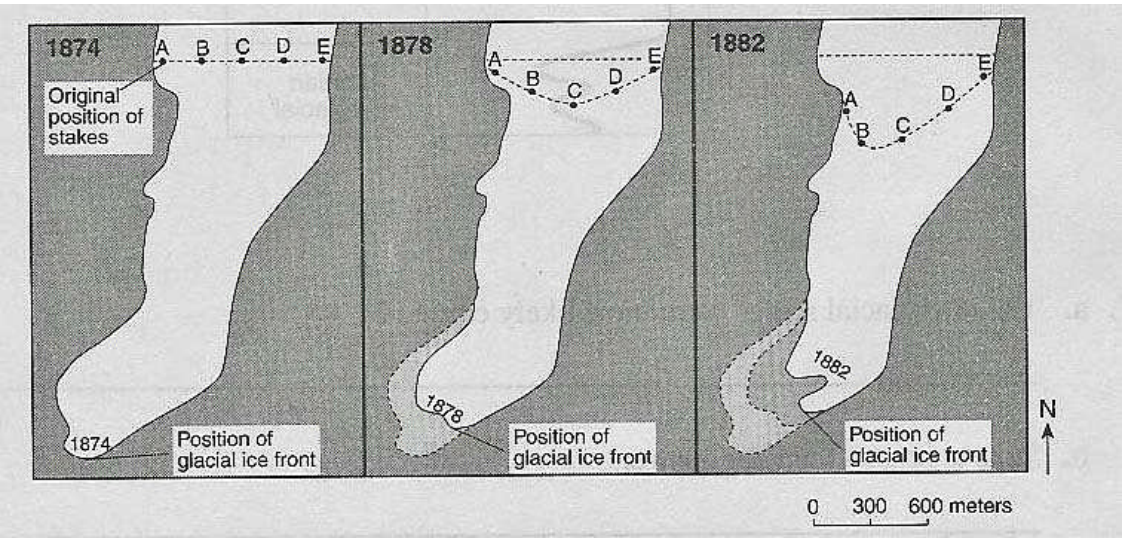

Figure 14: Retreating glacier. NYS Education Department (Earth Science Regents)

33. Explain what caused the glacial ice (as indicated by stakes A-E) to move as it did from 1874 – 1882.

34. Based on the position of the glacial ice front, is the glacier advancing, retreating, or remaining in the same place?

35. What is the relationship between accumulation and melting (ablation) for this 8 year period?

36. In reference to question 35, what is a likely cause for the relationship during this period?

37. Calculate the rate that the ice front changed from 1874 and 1882. Use the position of the ice front indicated to the maximum extent of the glacier in 1874. Include correct units.

Use the formula: Rate = Change in distance/Time