

Name: _____

Surface Processes

Date: _____ Period: _____

Earth Science

Lab Activity: Glaciers

INTRODUCTION:

The two major types of glaciers are valley glaciers and continental glaciers. Valley glaciers form at high elevations and move due to the slope of the mountain valley and under their own weight. Continental glaciers are sheets of ice that cover large surface areas and move radially from the zone of accumulation due to their own weight

Glaciers carry large amounts of sediment under, within, or on top of the ice. As a glacier melts, sediments are deposited forming a variety of glacial features. Unsorted deposits are formed from sediments dropped directly by the ice, whereas meltwaters flowing from the base form sorted deposits.

OBJECTIVE:

You will gain understanding of glaciers, glacial movement, and their depositional features.

VOCABULARY:

Glacier -

Glacial Grooves -

Terminal Moraine -

Outwash Plain -

Kettle Lake -

Lab Activity: Glaciers

PROCEDURE:

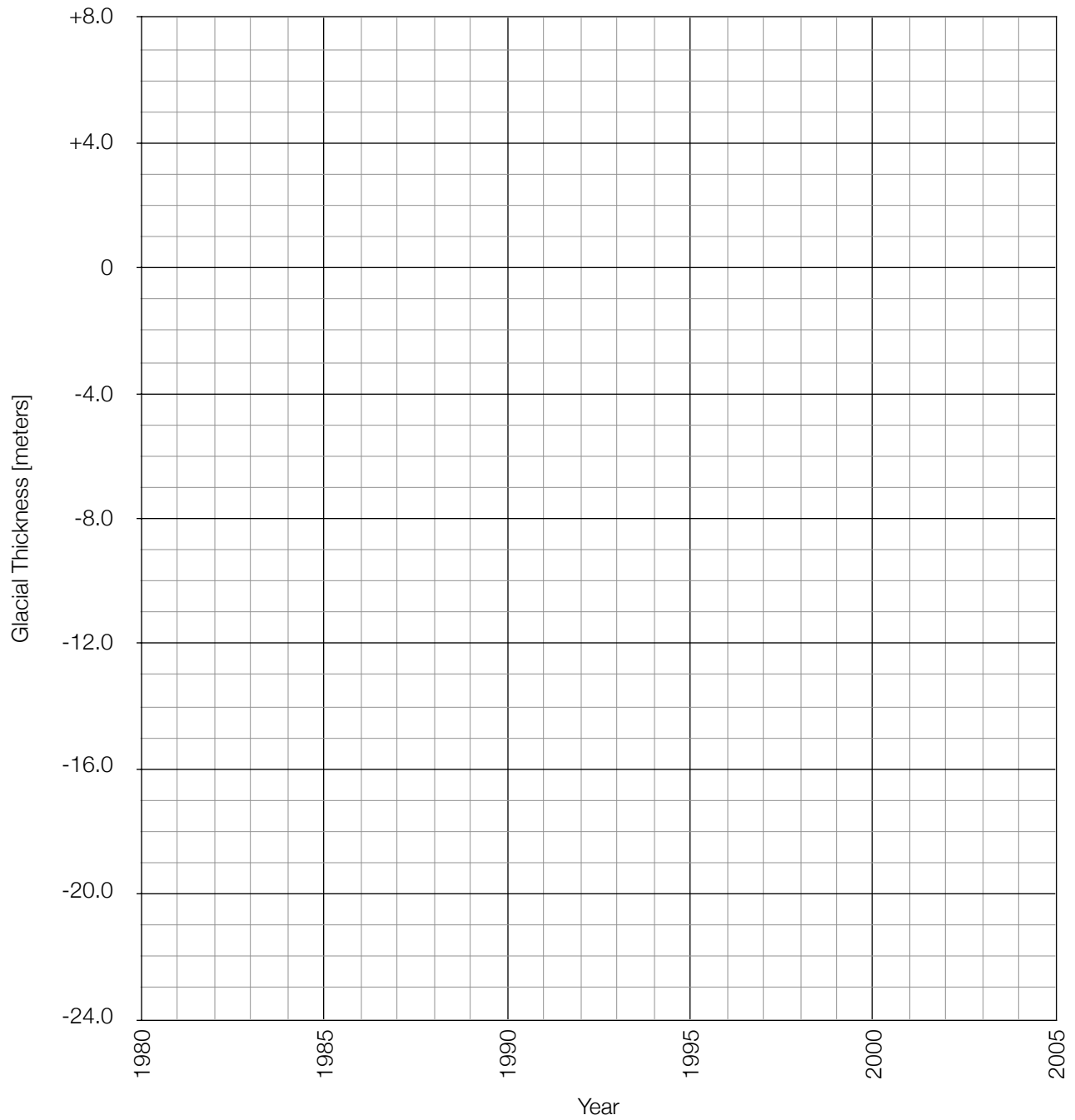
Using the data table below create a double line graph that will show the changes in glacier thickness, in meters, for both glaciers over the 40 year record from 1980 to 2005. Be sure to make a key for the graph using a different color line for each glacier.

Year	Gulkana Glacier Thickness
1980	-3.5
1981	-3.5
1982	-3.5
1983	-3.5
1984	-3
1985	-3
1986	-3
1987	-3.5
1988	-4
1989	-4
1990	-4.5
1991	-4.5
1992	-4.5
1993	-6.5
1994	-7.5
1995	-8
1996	-8.5
1997	-10
1998	-11
1999	-12.5
2000	-12.5
2001	-13
2002	-13
2003	-13
2004	-16
2005	-17

Year	Wolverine Glacier Thickness
1980	-4.5
1981	-2.5
1982	-3
1983	-2.5
1984	-3
1985	-3
1986	-3
1987	-1.5
1988	0
1989	-1.5
1990	-4.5
1991	-5
1992	-6
1993	-6.5
1994	-6.5
1995	-7
1996	-7.5
1997	-10
1998	-10
1999	-11
2000	-11.5
2001	-12
2002	-11.5
2003	-12
2004	-12
2005	-14.5

Lab Activity: Glaciers

GLACIAL THICKNESS



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DISCUSSION QUESTIONS:

1. Based on the data, what has happened to the glaciers over the 25 year period?
2. Based on the data, what has happened to the rate at which glaciers are melting?
3. What could be an explanation for the data collected on the Gulkana and Wolverine glaciers?
4. Where can continental glacier be found today?
5. Describe the shape of a glacial valley?

CONCLUSION: What are some of the depositional features that are associated with glaciers?