



A Century of Glacier Change

Image Pairs

DIRECTIONS ▶ Print the following pages, cut apart the glacier images, and laminate for classroom use. For your reference, the information about each photo pair is below. Please refer to activity directions on UCAR Center for Science Education's website for more information about classroom implementation of this activity (scied.ucar.edu/activity/glaciers-then-and-now).

Glacier Image Information

PAIR	YEAR	PHOTOGRAPHER	SOURCE	PAGE*
1: Muir Glacier Lat: 59.0783 Long: -136.3606	1941	William O. Field	American Geographical Society	2 (top)
	2004	Bruce F. Molina	USGS	2 (bottom)
2: Carroll Glacier Lat: 59.0842 Long: -136.6449	1906	Charles Will Wright	USGS	3 (top)
	2003	Bruce F. Molina	USGS	3 (bottom)
3: Holgate Glacier Lat: 59.8711 Long: -149.9186	1909	Ulysses S. Grant	USGS	4 (top)
	2004	Bruce F. Molina	USGS	4 (bottom)
4: McCarty Glacier Lat: 59.7700 Long: -150.2208	1909	Ulysses S. Grant	USGS	5 (top)
	2004	Bruce F. Molina	USGS	5 (bottom)
5: Muir Glacier Lat: 59.0783 Long: -136.3606	1899	Grove Karl Gilbert	USGS	6 (top)
	2003	Ron Karpilo	National Park Service	6 (bottom)
6: Toboggan Glacier Lat: 61.0217 Long: -148.2769	1909	Sidney Paige	USGS	7 (top)
	2000	Bruce F. Molina	USGS	7 (bottom)
7: Muir Glacier Lat: 59.0783 Long: -136.3606	1976	Bruce F. Molina	USGS	8 (top)
	2003	Bruce F. Molina	USGS	8 (bottom)
8: Penderson Glacier Lat: 59.8928 Long: -149.7805	1909	Ulysses S. Grant	USGS	9 (top)
	2004	Bruce F. Molina	USGS	9 (bottom)

Note: All glacier images are all from Alaska, U.S. and were published by the National Snow and Ice Data Center - World Data Center for Glaciology (www.nsidc.org)

*Page numbers listed above correspond to the numbers on the following pages.

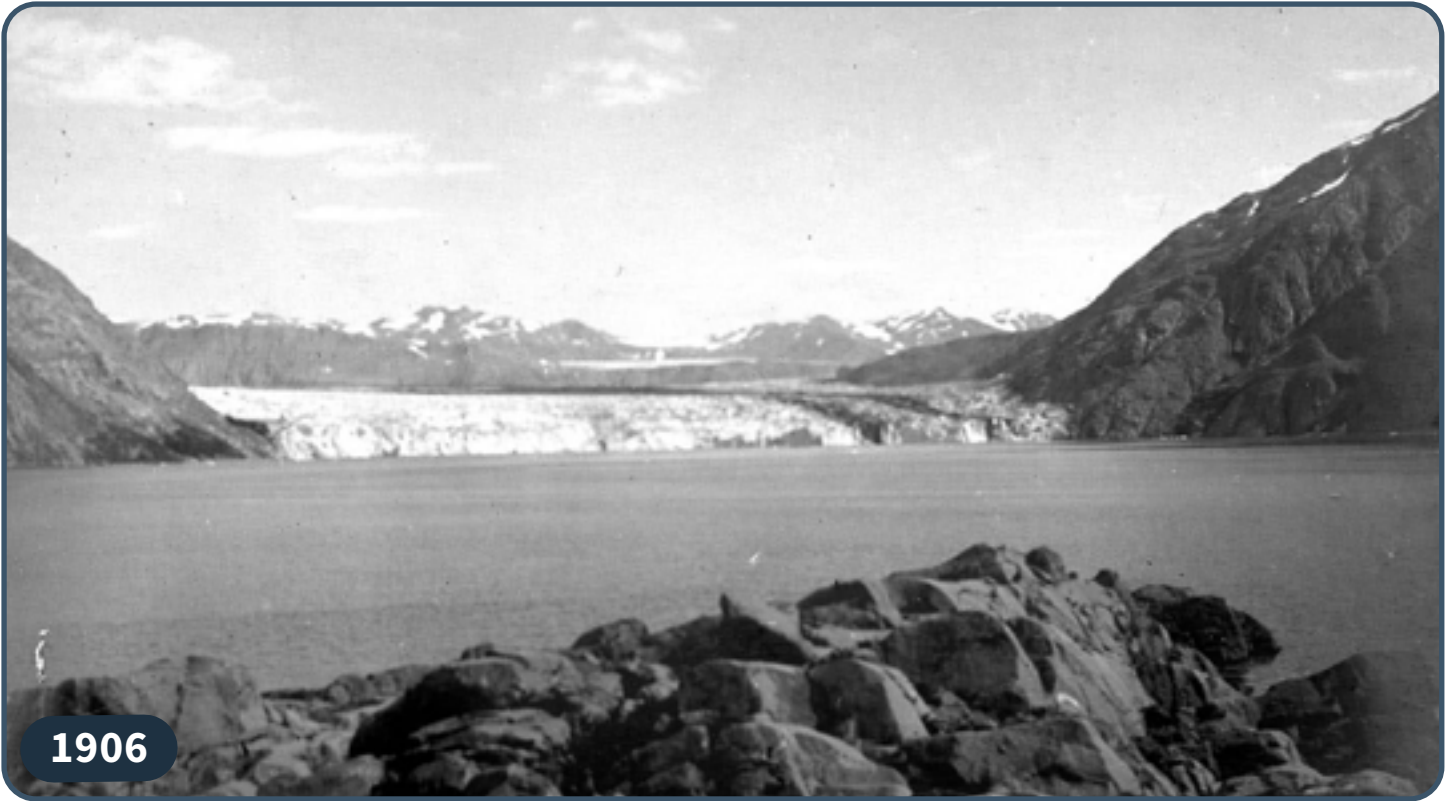


Muir Glacier





Carroll Glacier





Holgate Glacier



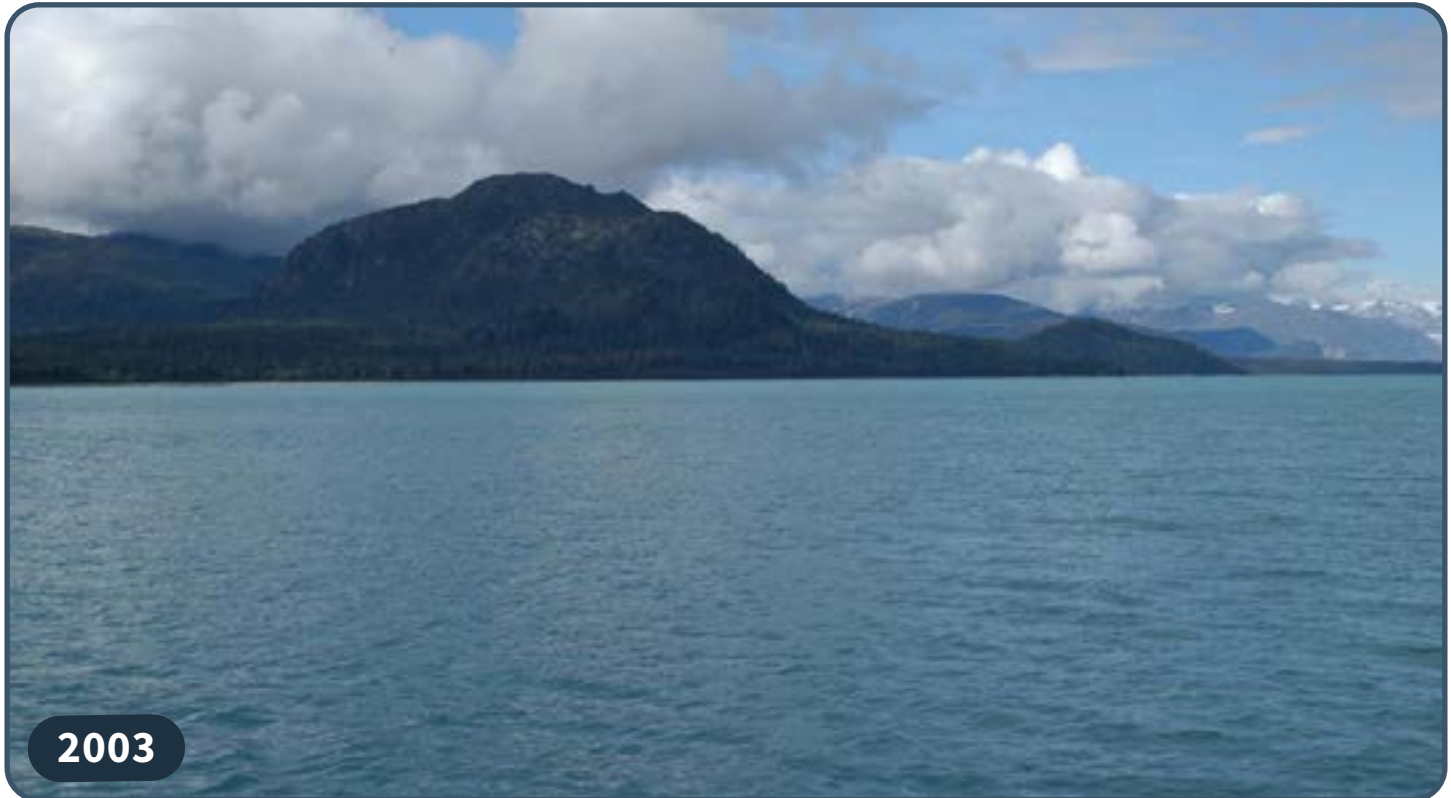


McCarty Glacier





Muir Glacier





Toboggan Glacier





Muir Glacier





Penderson Glacier

