

NAME _____ DATE _____

Since 1958, scientists have measured the amount of CO₂ in the Earth's atmosphere from a site on the Mauna Loa volcano in Hawaii. This site is one of the best locations in the world for measuring CO₂ because there are no plants or human activities nearby to influence the measurements. Any volcanic venting of gas may be excluded from the record. The Mauna Loa data are a precise record of the concentration of atmospheric CO₂ in the region.

Using the data in the table, graph the concentrations of CO₂ for May and October from 1958 to 2020. Using a different color, graph the annual average for each year.

	May	Oct	Annual Average		May	Oct	Annual Average
1958	317.50	312.44	--	1990	357.16	351.18	354.19
1959	318.29	313.26	315.98	1991	359.33	352.21	355.59
1960	320.03	313.84	316.91	1992	359.66	353.31	356.37
1961	320.58	315.38	317.64	1993	360.28	353.99	357.04
1962	321.01	315.42	318.45	1994	361.68	355.99	358.89
1963	322.24	315.99	318.99	1995	363.79	357.76	360.88
1964	322.24	316.79	--	1996	365.41	359.60	362.64
1965	322.16	317.30	320.04	1997	366.79	360.77	363.76
1966	324.01	318.10	321.38	1998	369.30	364.23	366.63
1967	325.00	319.31	322.16	1999	371.00	365.13	368.31
1968	325.57	320.25	323.05	2000	371.82	366.73	369.48
1969	327.34	321.78	324.63	2001	374.02	368.09	371.02
1970	328.07	323.16	325.68	2002	375.55	370.25	373.10
1971	328.92	323.57	326.32	2003	378.35	373.01	375.64
1972	330.07	325.06	327.45	2004	380.63	374.24	377.38
1973	332.48	327.18	329.68	2005	382.28	376.88	379.67
1974	333.09	327.37	330.25	2006	384.95	379.06	381.84
1975	333.96	328.34	331.15	2007	386.39	380.81	383.55
1976	334.87	328.94	332.15	2008	388.45	382.73	385.34
1977	336.74	331.16	333.90	2009	390.18	384.38	384.35
1978	338.01	332.55	335.51	2010	392.94	387.18	389.78
1979	339.47	333.86	336.85	2011	394.16	389.00	390.45
1980	341.46	336.02	338.69	2012	396.74	391.05	392.46
1981	342.91	336.86	339.93	2013	399.78	393.70	395.19
1982	344.13	337.86	341.13	2014	401.78	396.03	397.12
1983	345.75	339.99	342.78	2015	403.96	398.29	399.41
1984	347.43	341.35	344.42	2016	407.72	401.59	402.85
1985	348.93	342.80	345.90	2017	409.69	403.63	405.00
1986	350.21	344.17	347.15	2018	411.24	406.00	407.38
1987	351.84	346.36	348.93	2019	414.66	408.52	411.43
1988	354.22	348.88	351.48	2020	417.31	411.51	414.24
1989	355.67	349.99	352.91				



Mauna Loa Observatory, NOAA Global Monitoring Division.

Source: National Oceanic and Atmospheric Administration. <https://www.esrl.noaa.gov/gmd/ccgg/trends/data.html>.

CAREER CORNER

CARBON MODELERS work with forest owners to quantify the carbon being stored or sequestered in their forest. Using this information, owners sell “carbon credits” to companies that emit carbon dioxide (and are required to offset their emissions by buying credits) as a way to reduce overall carbon emissions.

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