## Ozone levels graphing Activity

**Table 1 Annual average ozone readings (Dobson Units)** 

Year	Average ozone reading						
1956	318	1972	306	1986	157	2002	157
1957	312	1973	292	1987	123	2003	108
1958	333	1974	301	1988	171	2004	123
1959	309	1975	298	1989	127	2005	113
1960	318	1976	300	1990	124	2006	98
1961	312	1977	302	1991	119	2007	116
1962	327	1978	301	1992	114	2008	114
1963	319			1993	112	2009	107
1964	320			1994	92	2010	128
1965	295	1979	225	1995	105	2011	106
1966	304	1980	203	1996	108	2012	139
1967	310	1981	209	1997	108	2013	132
1968	302	1982	185	1998	98	2014	128
1969	286	1983	172	1999	102	2015	117
1970	307	1984	163	2000	98	2016	124
1971	314	1985	146	2001	100		

Table 2 Monthly ozone readings for selected years (Dobson Units)

Year	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1957	301	284	320	394	347	332	301	280	256	312
1967	no data	no data	313	357	333	318	285	289	279	310
1977	290	239	251	332	360	310	305	282	253	302
1987	254	182	150	188	287	286	264	271	265	235
1997	185	152	147	206	270	284	275	277	256	233
2007	172	155	149	181	260	278	265	245	242	216
2017										

## **Procedure**

- 1. Construct a graph of ozone reading versus year from Table 1 (with ozone reading on the vertical axis and Time year on the horizontal axis, start at 1979).
- 2. Draw a graph of ozone reading versus month for each year from Table 2 (with ozone reading on the vertical axis and month on the horizontal axis). Use a different color for each year.

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Name	
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1. What is a Dobson Unit?

2. How is it measured?

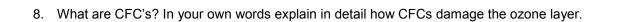
3. What does your first graph tell you about what has happened to the thickness of the ozone layer during the period 1979 to 2000?

4. What does your first graph tell you about what has happened to the thickness of the ozone layer during the period 2000 to today?

5. From your second graph, what changes do you observe in recent years (1992 and 1996) compared with 1957 and 1967?

6. What does the graph tell you about the timing each year of the Antarctic ozone hole?

7. Why does it occur during that time of the year?



9. List some of the things we could do to decrease the damage to the ozone layer.

10. Why is the ozone layer important to our health?

