Ozone levels graphing Activity

Table 1 Annual average ozone readings (Dobson Units)

Year	Average ozone reading	Year	Average ozone reading	Year	Average ozone reading	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.

Ozone Graph Questions Name _____

Per. _____

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 ?

8. What are CFC's? In your own words explain in detail how CFCs damage the ozone layer.

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?