

# The Last Doubling

## Some additional information

### Al Bartlett info:

<http://www.albartlett.org/index.html>

### World Wheat data:

<http://www.ers.usda.gov/data-products/wheat-data.aspx>

### Population Clock:

<http://www.census.gov/popclock>

### Fertility rate by country:

<https://www.cia.gov/library/publications/the-world-factbook/rankorder/2127rank.html>

[http://en.wikipedia.org/wiki/List\\_of\\_sovereign\\_states\\_and\\_dependent\\_territories\\_by\\_fertility\\_rate](http://en.wikipedia.org/wiki/List_of_sovereign_states_and_dependent_territories_by_fertility_rate)

### Population growth

<http://data.worldbank.org/indicator/SP.POP.GROW>

[http://en.wikipedia.org/wiki/Population\\_growth](http://en.wikipedia.org/wiki/Population_growth)

### U.S. Energy Information Administration

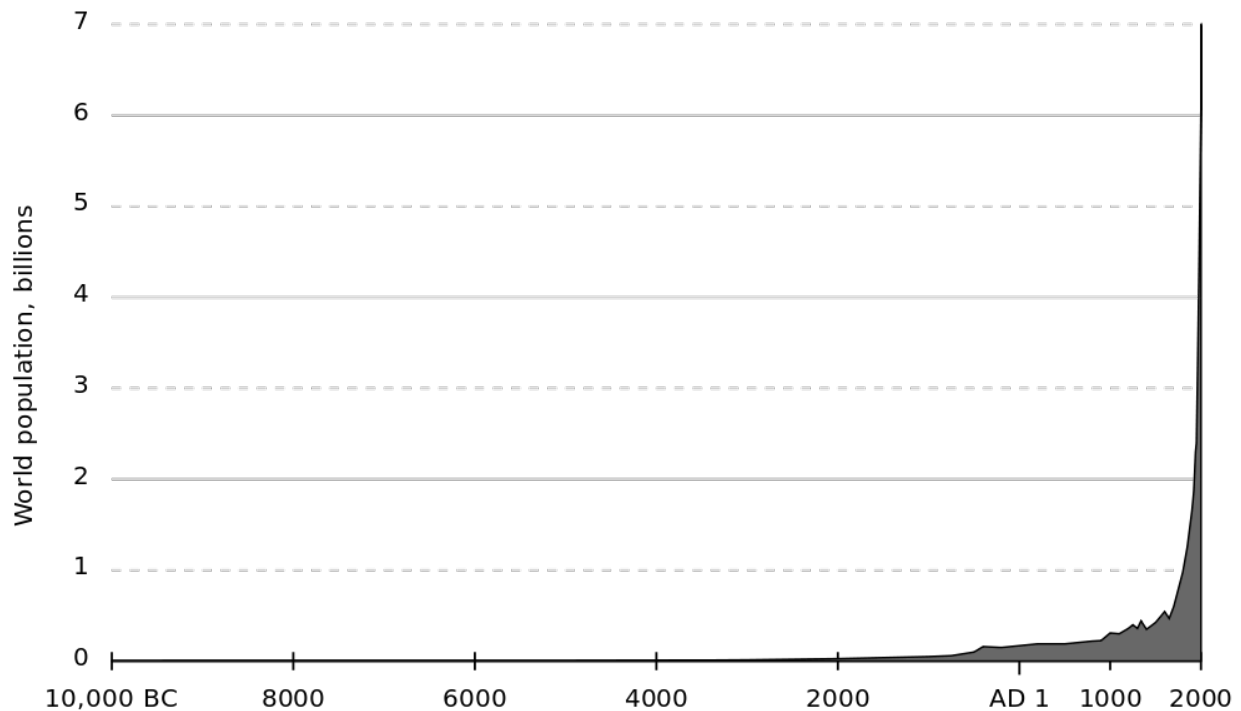
<http://www.eia.gov>

### Peak oil

[http://en.wikipedia.org/wiki/Peak\\_oil](http://en.wikipedia.org/wiki/Peak_oil)

### Earth Systems Research Laboratory (CO<sub>2</sub> data)

<http://www.esrl.noaa.gov/gmd/>



# How many time can YOU fold a sheet of paper?

Folds	Layers	Thickness
0	1	0.004 in
1	2	0.008 in
2	4	0.016 in
3	8	0.032 in
4	16	0.064 in
5	32	0.128 in
6	64	0.256 in
7	128	0.512 in
8	256	1.024 in
9	512	2.048 in
10	1,024	4.096 in
11	2,048	8.192 in
12	4,096	1.4 ft
13	8,192	2.7 ft
14	16,384	5.5 ft
15	32,768	10.9 ft
16	65,536	21.8 ft
17	131,072	43.7 ft
18	262,144	87.4 ft
19	524,288	174.8 ft
20	1,048,576	349.5 ft
21	2,097,152	699.1 ft
22	4,194,304	1,398.1 ft
23	8,388,608	2,796.2 ft
24	16,777,216	1.1 mi
25	33,554,432	2.1 mi
26	67,108,864	4.2 mi
27	134,217,728	8.5 mi
28	268,435,456	17 mi
29	536,870,912	34 mi
30	1,073,741,824	68 mi
31	2,147,483,648	136 mi
32	4,294,967,296	271 mi
33	8,589,934,592	542 mi
34	17,179,869,184	1,085 mi
35	34,359,738,368	2,169 mi
36	68,719,476,736	4,338 mi
37	137,438,953,472	8,677 mi
38	274,877,906,944	17,353 mi
39	549,755,813,888	34,707 mi
40	1,099,511,627,776	69,414 mi
41	2,199,023,255,552	138,827 mi
42	4,398,046,511,104	277,654 mi