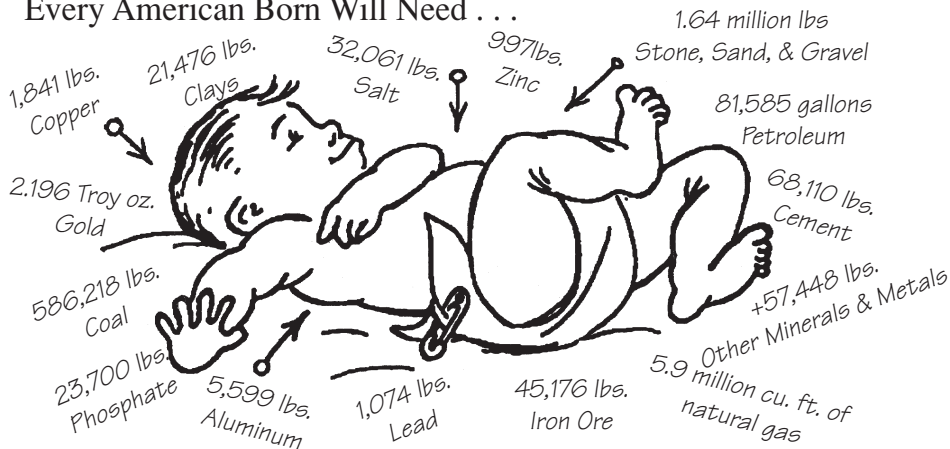


WHY DO WE MINE?

Because people want, and sometimes demand, the products made from minerals, metals, and energy that comes from the Earth.

Everything Is Made Of Something And That Something Comes From Our Natural Resources

Every American Born Will Need . . .

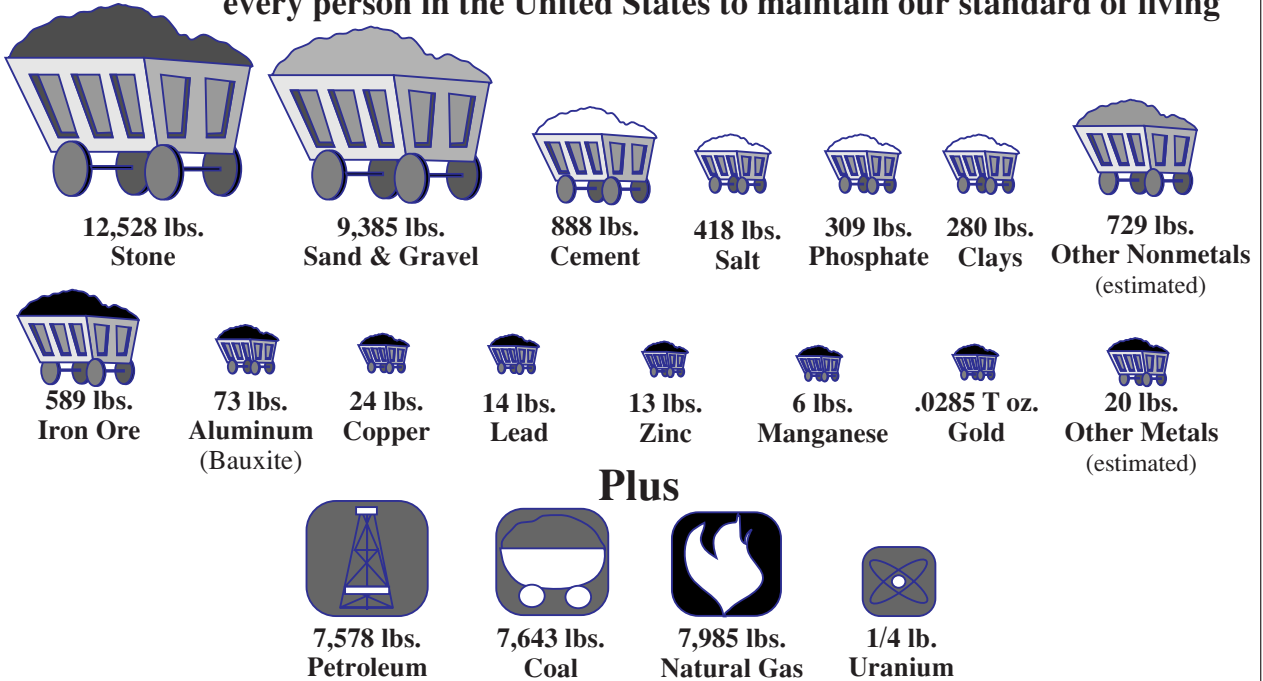


3.7 million pounds of minerals, metals, and fuels in his/her lifetime

When a person wants something, rarely does he think about the source of materials that are necessary to make that product.

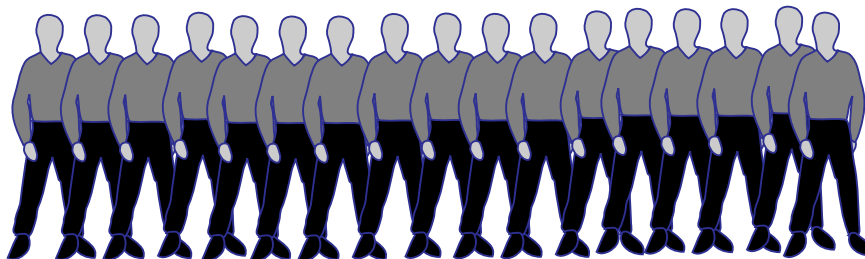
Everything you want or buy that is tangible has to be made of something, and that something is materials from our natural resources. Most of it is made from minerals, metals and petrochemicals.

Every year, more than 48,148 pounds of new minerals must be provided for every person in the United States to maintain our standard of living



To Generate

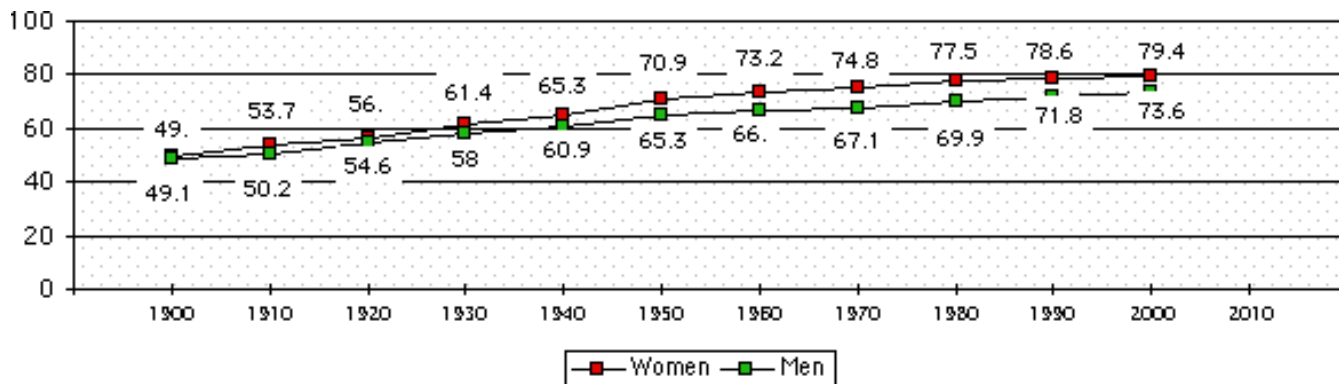
the energy equivalent to 300 persons working around the clock for each U.S. citizen



Based on 2000 consumption and population

Life expectancy for males and females

People born today can expect to live nearly 50% longer than people born at the turn of the century.



Survey Your Students—What do they think they must have, or can do without.

For the average, middle-class American child born in the 1990s, here's the personal toll of common products they will consume during his or her lifetime:

- Drive 700,000 miles in a dozen cars, using more than 28,000 gallons of gasoline.
- Read and throw away 27,500 newspapers, a rate of seven trees a year.
- Add 110,250 pounds of trash to the nation's garbage heap.
- Wear and throw away 115 pairs of shoes.

Source: Life's Big Instruction Book

Must Have

In polling 1,000 Americans, an MIT study found these *essential inventions* that people said they could not do without.

Automobile	63%
Light bulb	54%
Telephone	42%
Television	22%
Aspirin	19%
Microwave oven	13%
Hair-dryer	8%
Personal computer	8%

There are more than 130,000,000 passenger cars in the United States

More than 212 million motor vehicles (of all types) travel our roads.

More than 8 million new cars are made every year for use in the U.S.



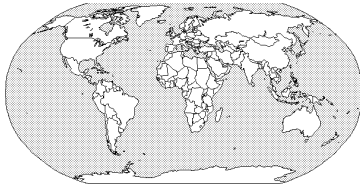
The average weight of an automobile is 2,600 to 3,000 pounds. It is made by combining at least 39 different minerals and metals, each performing a special function when used in combination with the other.

Aluminum and steel figures overlap in such applications as the frame or engine, thus the total weight of all components may exceed 3,000 pounds.

Plastics	250 pounds	Lead	24 pounds
Rubber	140 pounds	Limestone	trace
Aluminum	240 pounds	Magnesium	4.5 pounds
Antimony	trace	Manganese	17 pounds
Asbestos	.66 to 1.2 pounds	Molybdenum	1 pound
Barium	trace	Mica	trace
Cadmium	trace	Nickel	9 pounds
Carbon	50 pounds	Niobium	<.5 pounds
Cobalt	trace	Nitrogen	trace
Copper	42 pounds	Palladium	trace
Chromium	15 pounds	Platinum	.05 to .1 troy ounce
Fluorspar	trace	Phosphorus	< 1 pound
Gallium	trace	Potash	trace
Gold	trace	Sand	89 pounds
Graphite	trace	Silicon	41 pounds
Halite	trace	Strontium	trace
Iron & Steel	2124 pounds	Sulfur	2 pounds
(cast iron	435 pounds)	Tin	trace
(steel*	1,382 pounds)	Titanium	trace
(HSLA** steel	263 pounds)	Tungsten	trace
(Stainless steel	45 pounds)	Vanadium	< 1 pound
		Zinc	22 pounds
		Zirconium	trace

* Conventional steel

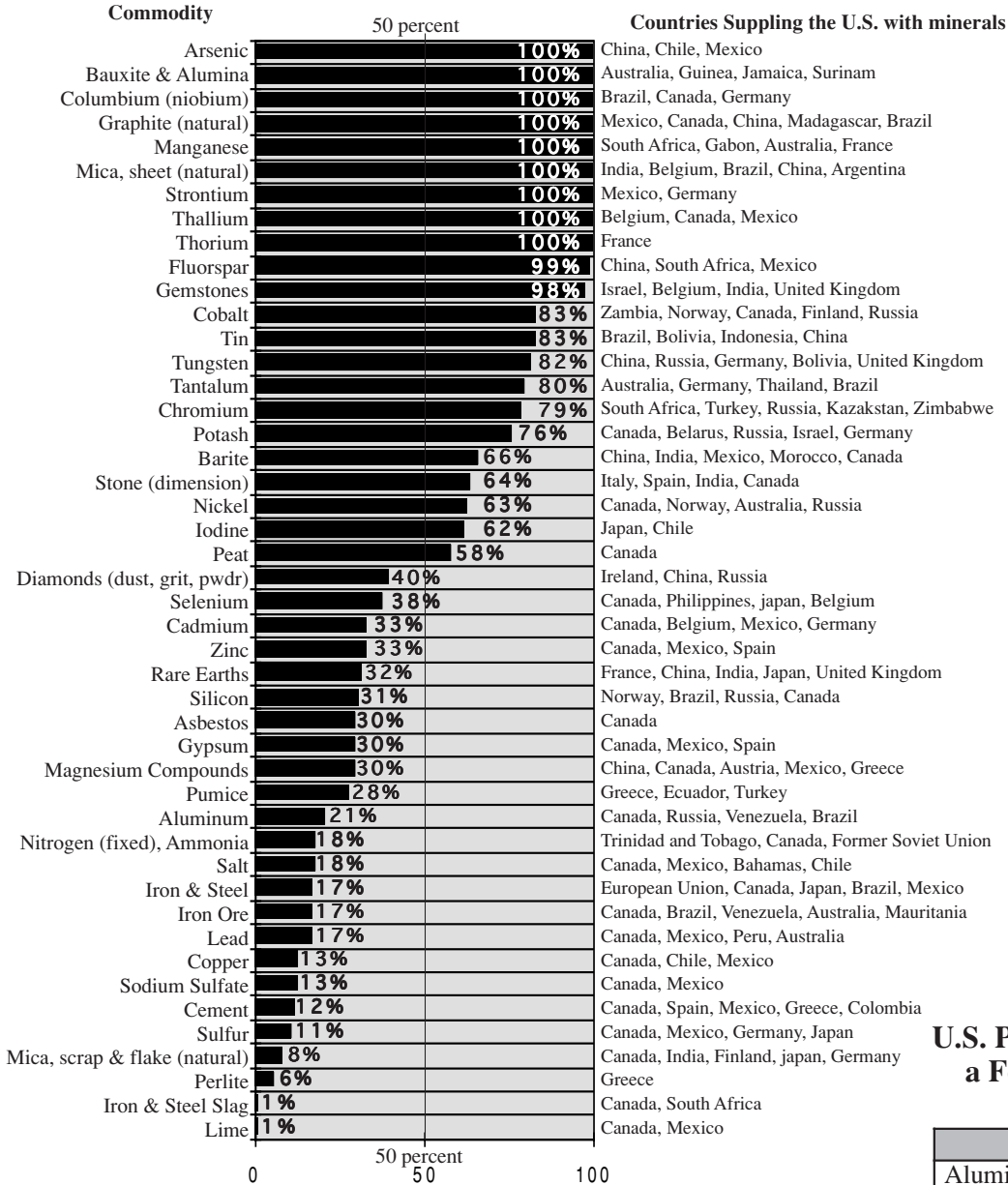
** High Strength Low Alloy



Minerals Imported by the United States

In spite of its size and mineral wealth, the United States is not able to produce all of the minerals it needs to be self-sufficient. To maintain our life-style and provide all of the consumer products and infrastructure we use everyday, various amounts of the following minerals must be imported from foreign countries.

United States Imports of Selected Nonfuel Minerals & Metals



U.S. Per Capita Consumption of a Few Minerals and Metals (In Pounds)

	1776	1999
Aluminum	0	77
Cement	12	895
Clay	100	304
Coal	40	7,662
Copper	1	25
Glass	1	150
Iron Ore	20	553
Lead	2	14
Phosphate	0	340
Potash	1	44
Salt	4	395
Sand, gravel, stone	1,000	21,640
Sulfur	1	111
Zinc	0.5	13

What do you think has created the need for more minerals and metals today than when our country was founded?

Why?

