tires can be recycled in most communities. Tires are made of hot rubber, white lead, and sulfur. Synthetic rubber is formed from a combination of two gases, butadiene and styrene. When these two gases are mixed in the presence of soapsuds in a reactor, liquid latex results. The dry rubber in the liquid is coagulated into crumbs, washed, dried, and baled. It is then ready to be shipped to manufacturers to make tires and other rubber-made items.

did you know...

- It takes seven gallons of oil to produce one tire. Five gallons of butadiene and styrene gasoline comprises the substances that tires are made out of, and two gallons of gas are used to generate the energy needed to manufacture the tires.
- Dumping waste tires in non-designated areas is hazardous to our health and to our natural habitat, AND it is against the law.
- An estimated 250 million waste tires are discarded every year.
- If you and your parents perform certain tire maintenance steps such as rotation, inflation, balance, and alignment, you can extend tire life and decrease waste tire generation by 15 percent.
- It is important to recycle your tires because improper disposal/illegal dumping can results in fires that are difficult to extinguish. When tire piles catch fire, the melted rubber generates oil that can pollute surface and groundwater. Furthermore, tire piles tend to collect water creating a perfect breeding space for disease-carrying animals such as mosquitoes, snakes, and rats.

how are they recycled, and what are they made into?

In the USA, reusing or recycling tires keeps them out of landfills. When buying new tires, leave your old ones at the dealer. Many communities have designated recycling drop-off centers where you can safely and responsibly dispose of your tires. The majority of recycled waste tires are used as a source of energy, otherwise known as tire-derived fuel or TDF. When heated in combustion facilities, most notably in cement kilns, pulp and paper mill boilers, and power utility boilers, energy is produced and used as fuel to power these facilities. Waste tires can also be used to make many useful objects. When all non-rubber material is removed from the tires, rubber chips are left over to make crumb-rubber modified asphalt, which is used to pave highways. Waste tires can also be made into doormats, water hoses, shoe soles, door stoppers, playground and athletic surfaces, non-slip products, sheet rubber for manufacturing products, and artificial reefs for marine life habitats.

activity

Unscramble the tire-related words below. Then, unscramble the circled letters to discover the Recycle Guys message below.

1) L E H W E   _ _ _ _ _

2) K I B E   _ _ _ _

3) E C C R Y L E   _ _ _ _ _ _ _

4) L U F E   _ _ _ _

5) L A H P A S T   _ _ _ _ _ _ _

6) D R O A   _ _ _ _

7) B U C R M   B R E R B U   _ _ _ _ _   _ _ _ _ _ _

8) L O I   _ _ _

9) L O N A D G P Y R U   _ _ _ _ _ _ _ _ _ _

10) P R C S A   _ _ _ _ _

11) T E L A F I N   _ _ _ _ _ _ _

Tire Guy says, _ _ _ _ _ _ _   _ _ _ _ _ !

Answers: 1) wheel, 2) bike, 3) recycle, 4) fuel, 50 asphalt, 6) road, 7) crumb rubber, 8) oil, 9) playground, 10) scrap, 11) inflate. Message: Recycle Tires!

for more info...

International Tire & Rubber Association Inc., www.itra.com
Rubber Manufacturers Association, www.rma.org
The Environmental Protection Agency's "Explorers' Club", http://www.epa.gov/kids/
The Earth 911 Handy Kid's Section, http://www.earth911.org/handy

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DEPARTMENT OF ENVIRONMENTAL PROTECTION FLORIDA

Earth 911 www.CLEANUP.org 1-800-CLEANUP