



The ComBUSTER

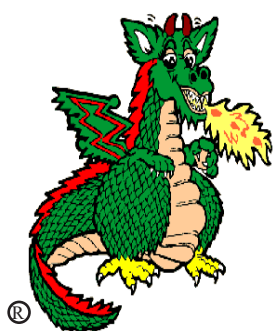


A newsletter for kids!

From the York County Solid Waste Authority

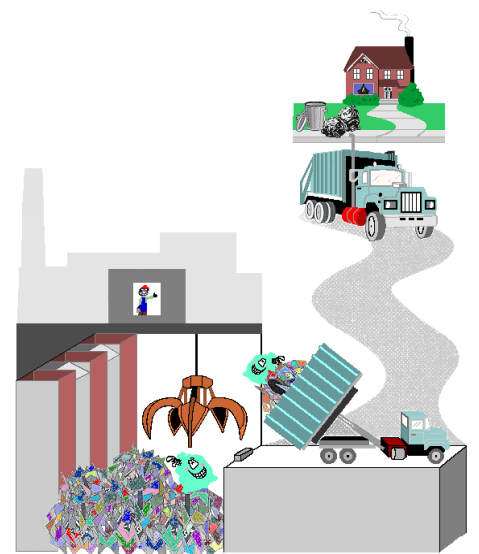
It's Garbage Day!

Everyone loves doing chores, right? Chores like cleaning your room, washing the dishes, taking out the garbage.....ugh, taking out the garbage. Why doesn't anyone ever want to take out the garbage? Do you know what happens to those bags of garbage when they leave the curb? We know the garbage trucks pick up the bags and take them away, but where do those trucks go with the garbage? Do they take the garbage to the dump? Does the garbage go in the ocean? Does it go to a landfill? How about a waste-to-energy plant? If you guessed a waste-to-energy plant, you are right!! York County's household garbage goes to a waste-to-energy plant called the York County Resource Recovery Center. I know what you're thinking.....but what happens to the garbage when it gets to the York County Resource Recovery Center? Follow **Buster the Combustor Dragon®** (our official mascot) below on an "electrifying" journey through the process of waste-to-energy!



Hi! I'm Buster.
Follow me.

Garbage collected in your neighborhood is brought to the Resource Recovery Center. After being weighed, the truck enters the tipping floor where it will dump all of the waste onto the floor. A front-end loader then pushes the garbage into a large storage pit. This pit is 50 feet deep! It stores the garbage until it is needed in one of the combustor units. A large crane moves the garbage from the pit into one of three feed chutes. Follow the green arrow to the next step!



Tipping Floor

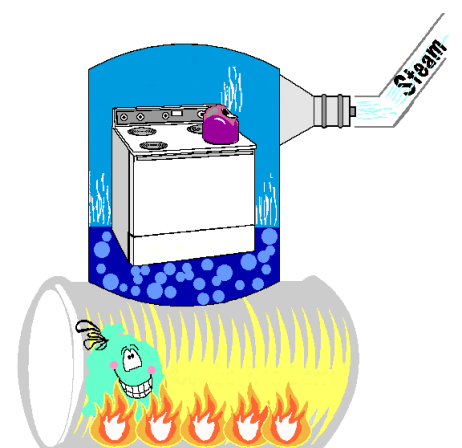
Garbage slides down the feed chute and into one of three combustion barrels where it is burned. The barrel is totally enclosed so no smoke or gases escape. Garbage is processed at a minimum temperature of 1800 degrees Fahrenheit. The barrel rotates at two to three revolutions per hour, just like toasting a marshmallow! This helps turn the garbage so it burns evenly on all sides.



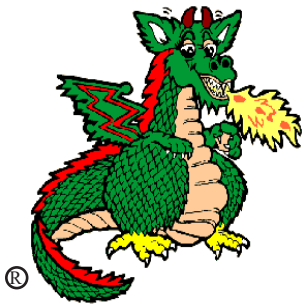
Combustion Barrel



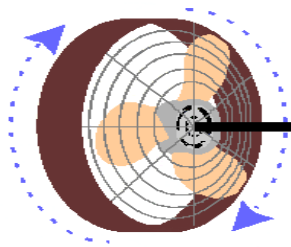
Heat from the combustion barrel is used to "boil" water in a boiler to produce steam. The barrel acts like a stove with a tea kettle full of water on it. Just like when you boil water in a tea kettle, we are producing steam from the water in the boiler just by using the heat from the burning garbage!



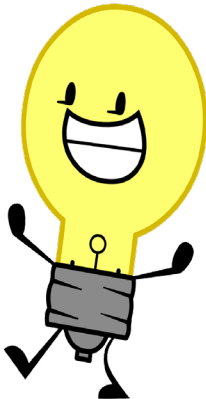
TURN THE PAGE TO SEE WHAT HAPPENS NEXT.....



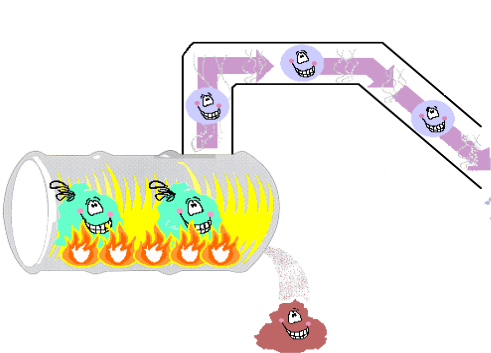
Steam from the boiler is used to operate a turbine. The pressure of the steam turns the turbine fan. The fan is connected to a metal shaft. As the fan turns, it causes the metal shaft to rotate. As the shaft rotates, it meets a magnetic field in the generator and creates an electrical force (called a volt) which creates electricity.



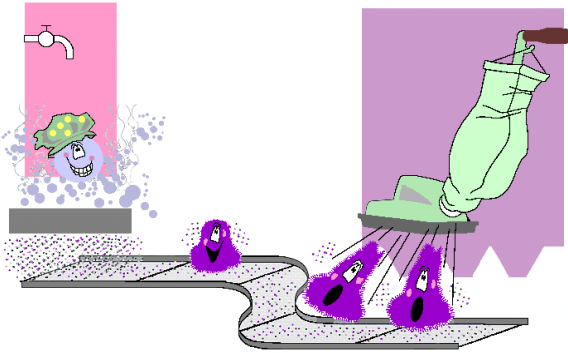
Turbine system



When garbage (or anything) burns, gases are created. These gases (or "pollution") must be cleaned up before being released to the air. First, gases are sent to a "scrubber" where they are sprayed with liquid limestone to neutralize them. As the gases are neutralized, dust forms in the scrubber. The dust is removed in the "baghouse" which operates like a giant vacuum cleaner to capture the dust and clean up the air.

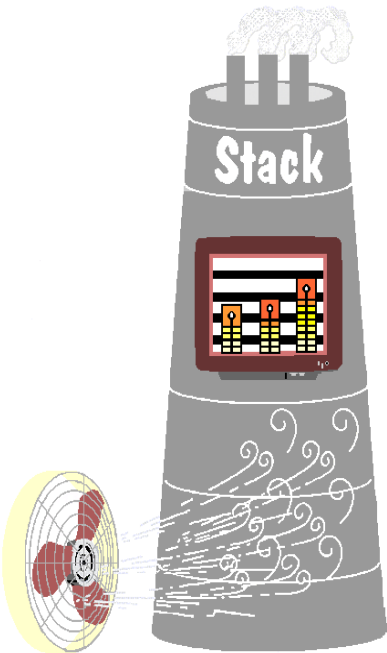


Scrubber

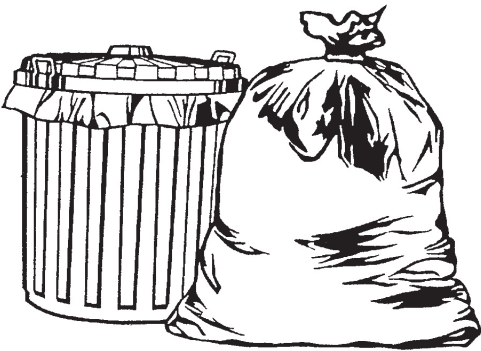


Baghouse

A big fan pulls the clean air up and out the stack. A special computer in the stack continuously checks the air stream 24 hours a day to make sure the facility meets all the requirements of strict air pollution regulations. Do you have to follow rules at school? We have to follow rules here too!



WHAT A FUN JOURNEY TO SEE WHAT HAPPENS TO YOUR GARBAGE! DID YOU EVER THINK YOUR GARBAGE WOULD LEAVE YOUR HOUSE AND BE RECYCLED INTO ELECTRICITY? COOL!



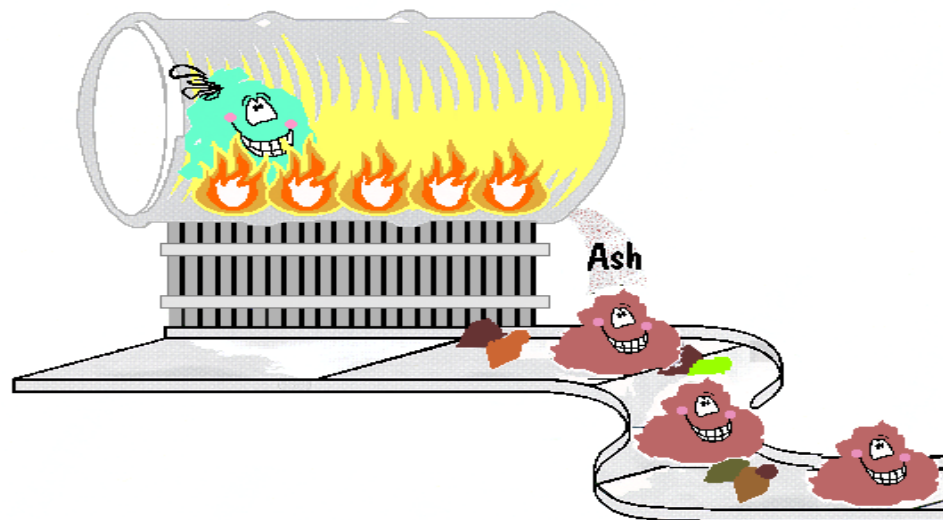
Recycled Into.....



What happens to the ash that is left over from burning the garbage?



All of the ash produced by burning garbage is taken to our new Ash Recycling and Processing Facility. There, the materials that can be recycled or re-used are separated from the ash. The goal is to recycle as much as we can out of the remaining ash and reduce the amount of ash that must be taken to a landfill. Materials such as pieces of metal and sand can be removed and used again to make something new. The remaining ash is managed in a landfill in York County. The Authority is exploring other ash re-use ideas, such as using ash as an ingredient in making cinder blocks. We hope to produce a product made from recycled ash in the future.

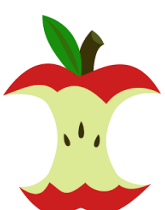


Recycling Rules!!

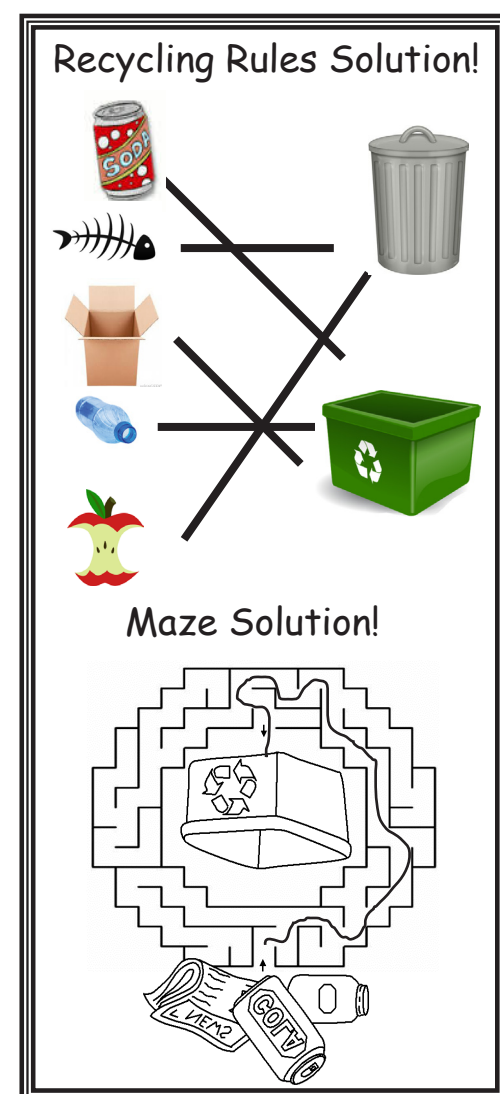
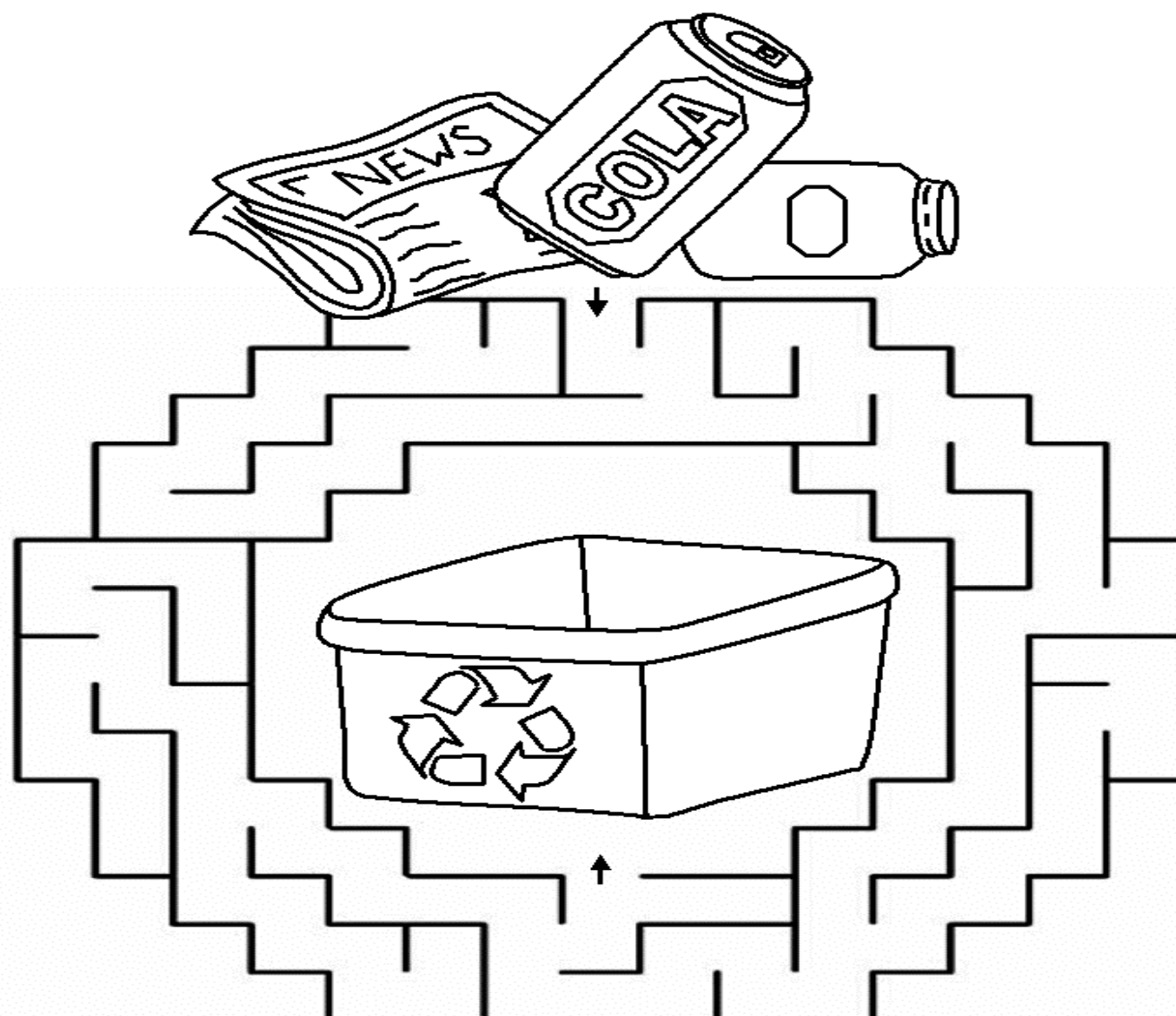


Recycling occurs when a reuseable material is remade into either the same product or a new product. Do you recycle at home? How about at school? It's VERY important to remember to recycle. Recycling helps our environment by reducing the amount of waste in our community and making new things out of materials we already have and preserving natural resources like oil and coal.

Can you match the products below to the place where they belong? Draw a line from the product on the left to the trash can or recycling bin on the right! See the solution on the next page!



Don't be a litterbug!
Put the recyclables in the recycling bin!



Come See Us....OR We Can Come See You!

The York County Solid Waste Authority offers FREE educational programming to school, civic and community groups. We also offer tours of the York County Resource Recovery Center. See first-hand how we turn your garbage into electricity! If you are interested in learning about our FREE programming, log onto our website: www.ycswa.com or call us at (717) 845-1066.

We look forward to seeing you!



A view of the Resource Recovery Center!



www.ycswa.com

