Rachel, Chris, Claire, and Tom

Once we took apart the disposable camera, we were able to identify the different parts. First we have the Lens. This focuses light on the film. Following the lens, we have the shutter mechanism which allows light through the lens, for a brief amount of time, just long enough for the film to record the light. This leads us to the film. When the film is exposed to light, chemicals in the film react to create an image based on the light that entered through the lens. The viewfinder allows the photographer to aim the camera in order to take more accurate photos. The next component is the film transport and counter mechanism. This is used by turning a wheel, which controls the movement of film into the film canister. Once the picture is taken and recorded on film, turning the film moves the new film behind the lens and moves the old film into the film transport. The electronic flash provides light to increase picture quality when there is not already enough light in the environment to take the photo. The flash is powered by the energy cell. Next is the housing and frame. The two of these components, keep the other apparatuses in place and prevents them from interfering with other functions. This also protects the apparatuses from water, light, dirt, and other elements.

After getting the chance to take apart the Kodak single use camera, we were able to see how the product works. First we took the two covers off the overall product. Once we did that, we were able to see the film and the electrical board. At this point we needed to take the battery out and deactivate the electric shock that could occur. As soon as this was done, we were able to continue to take more of the parts apart. These parts would include the lens, shutter, film, film transport, viewfinder, energy cell, shutter mechanism, counter device, and internal and external shells. The little black knob is turned to activate the white counter. Once the white counter is turned to the next number, the shutter mechanism is set up to take the picture. A white spring like system is raised when the counter is turned. That way when you press down on the button to take the picture, the spring is high enough that the two hit and activate the picture. This is what causes the click you hear when you press down on the button. To move the film over and restart the process, you can turn the bigger black knob. This black knob is against the film transport. When the knob is turned, the film is moved from one side of the film system to the other. This sets the system up again. We also were able to discover that the flash comes from the battery. To activate the flash, click on the black button on the front cover of the product.

Next we thought about the materials, assembly, and disassembly. Before one even gets to the camera, the first part of disassembly is opening the package. The package is made out of a combination of plastic and foil. The plastic is typical packaging to protect the camera, while the foil blocks x-rays during the transportation of the camera. The package is made to easily be ripped open for convenience. The main “shell” of the camera has two main parts, both plastic. They can be plied open with a small screwdriver to reveal all the internal pieces. Most of the mechanical components, like spools and buttons, are also plastic, which is durable and easy to form into irregular shapes. The most obvious part after opening the shell is the film. On the front end, there is a circuit board made out of silicon. The lens of the camera is made out of clear plastic, and the lens casing is the same plastic as the rest of the camera. The shutter mechanism includes a plastic button and a metal spring, as well as a bulb to flash light. There is an automatic picture counter wheel made out of plastic. The viewfinder is a clear plastic so that the viewer can see the picture being taken. Overall, the main material used in the camera was plastic. Plastic can be recycled by being melted down and reformed, but in this case the durability of plastic allows for the
reuse of the whole camera. However, plastic is so durable that it cannot be properly disposed of without staying in the environment for decades. The best thing to do is to reuse the camera for as long as possible due to the materials.

That being said, when the film is full, and the camera is done, we can recycle many of the parts. Kodak has designed their cameras to be returned to the manufacturing facility up to as many as 10 times to be recycled, repackaged, and reused. The cameras are designed so that 77-90% of the product can be remanufactured. Parts that can be reused include internal parts that are in good working condition. These parts include some batteries, capacitors, and metals used in the cameras. However, two parts cannot be reused. This would be the Film (since it is developed), along with the AA battery used to power some of the cameras functions. Some companies are looking to develop batteries that can be recycled. Once the plastic components, including the front and back cover, are used a number of times the plastic can be melted down and used for new parts and cameras. Since 1990, Kodak has recycled 1.5 billion disposable cameras.
Pictured Above: Overall picture of all the parts

Pictured Above: Outside shell casing

Pictured Above: Film Roll, and Film Transport
Pictured Above: All mechanism parts (including the shutter mechanism, counter device, and several knobs)

Pictured Above: are the parts that go into the actual picture taking process. These parts would include the lens, shutter, viewfinder, energy cell, battery, and more.
Pictured Above:
View Finder

Pictured Above:
Electronic Flash

Pictured Above:
Battery Cell

Pictured Above:
Shutter parts

Pictured Above:
Lens

Pictured Above:
Film Transport
Rachel, Chris, Claire, and Tom

Works Cited

http://www.kodak.com/eknec/PageQuerier.jhtml?pq-path=4213&pqlocale=it_US

www.marietta.edu (http://www.marietta.edu/~mcshaffd/macro/fcam.html)

www.guidetofilmphotography.com

www.dtips-central.com/cameralenses