Camera Lifecycle

The camera is packaged in a plastic covering coated with metal. The metal is to insure that any x-rays are reflected to protect the film. The insides of the camera are inside a plastic casing. This casing is made from opaque material to make sure that light cannot get into the casing and expose the film, thus making it unable to capture images. The shell can be taken apart using a screwdriver. Once, the camera is open, the film is exposed. After the button is pressed at the top of the camera, the film is exposed to the image that is captured through the lenses. After this picture is taken, the film gear is turned which moves the exposed film away from the lens and allows a new one to take its place. The flash in the camera is generated by the battery pack in the shell. However, prior to taking the rest of the camera apart, our group had to remove the electricity associated with the capacitor. After we did that a spark of electricity was generated. This signaled the disabling of the capacitor. Once the camera is in use, the charges on the battery provide the capacitor with enough volts of energy to flash. After the picture using flash is taken the capacitor loses its charge. The film is contained in a film container. As the film is exposed to light, the exposure generates chemical change on the films surface, copying the image. Then, the film roller pulls the film to the opposite side of the camera back into the canister to make sure that the frame is not exposed to another image.

The components of the camera that are made out of plastic are the actuating button, the actuating arm, lens holder, film advance lock, frame counter, sprocket, film advance gear, lenses, viewfinder, the back and front cover. These items would get melted down and reused again in another disposable camera. The film cartridge that provides a way for capturing images would get discarded after the first and only use because he film has now been exposed to light and will never work again. The circuit board and components of the camera that contribute to the flash are made out of copper, plastic and fiberglass. Therefore, the circuit board can be reused and placed into another camera, however it cannot be recycled because the fiber glass cannot be separated from the plastic and copper. This makes it hard to fully melt down and use again. The springs and shutter of the camera are made out of steel and those can also be melted down and remade again to be placed in a new camera. Both lenses that are used to focus the light on the film would be reused as well as the viewfinder that allows the image to be seen since they are both made out of clear plastic.

If we were to redesign one part of this camera, we would change the surface of the circuit board. Currently, the circuit has a green fiber glass coating on it that would be extremely hard to separate from the copper/plastic that the circuit board is made of. Instead, we can make this circuit board out of a different material such that is can be easily recycled and melted again.
Body Components

Circuit
Lens Parts

Not Reusable
Single Use Camera

Electrical
- Battery
- Circuit Board
- Flash
- Charging
- Discharging

Manual
- Wind film
- Turn on Flash
- Press Trigger

Physical
- Lens
- Shutter
- Allows Light In
- Projects Image on Film

Sources

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