Disassembly of a Single Use Camera

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A. The Lens - Finds objects of interest, small circular and plastic.
   Shutter mechanism - closing and opening of a light path for the focal point to interact with light rays
   Film - records the image
   Viewfinder - function of view selection
   Film transport and counter mechanism - readies the image sensor
   Electronic flash - supplemental light
   Energy Cell - source of electrical power
   Housing/Shell - arrangement of components and functions

B. How parts are arranged: The lens is in the middle of the camera and the flash is on top as well as where you look into the film is placed on the right and the energy cell is placed on the left side of the camera. Everything is placed so that the camera will work in a systematic fashion.
   How the camera works: First the lens form an image by bending the light rays at a particular angle. Then the shutter mechanism allows for the opening and closing of a light path for the focal point to interact with the light rays. The film then performs the act of image sensing or recording the image to later be printed. Those are the three major components going into making a camera work but there are other functional components. The view finder serves as the function of view selection. The film transport and counter mechanism ready the image sensor. The flash provides extra light. The energy cell functions as a source of power for the flash.

C. Materials used: The covers are made of polystyrene. The actuating button, lens holder, camshaft are made of ABS plastic. The circuit board is made of copper and aluminum. Lenses and viewfinder is made of clear ABS plastic. The springs are made of 1040 steel. It is packaged in first a cardboard box and then a protective film wrapper. Both if these items for packaging will be discarded in a landfill. The battery inside is an alkaline AA 1.5V.
   Assembly and disassembly: The assembly of the camera is rather simple. Everything snaps into place with each other or the shells except for three small screws that kept the plastic intact.
D. **Pictures:**

- Shutter spring
- Actuating button
- Shutter mechanism
- Circuit board
E. **What is reused:** the circuit board is removed from the one camera and put into another. The lens also gets reused and put into another camera.

**What is recycled:** We concluded that all material made of the plastic, such as the back cover, the cam shaft, the film gear, the film advance lock, the front cover, the lenses holder, and the actual button all get melted down and reused. The springs and shutter as well will be melted down and reused.
Suggested redesign: One thing we found difficult in the assembly and disassembly of the camera was the fact that there were screws in order to hold the plastic together. The screws were very small and hard to get off. It makes for a very inefficient building process and tedious. One suggest we make is that Kodak makes a camera that does not need to be built with screws. Parts and components should be able to snap into place and this way they can be reused more and take a shorter amount of time to build saving the Kodak company money.

Source: