Disassembly of Single Use Camera
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Functional Components
1. Outer shell- hard plastic case that encases other camera components
2. Internal frame- holds internal camera components
3. Lens- focuses external light and transports it onto film
4. Shutter mechanisms- opens and closes the path of light onto film
5. Film- captures image onto roll of photograph paper
6. View Finder- allows user to see what is being photographed
7. Film Transport and Counter Mechanism- rotates film across camera and counts number of picture available to be taken
8. Electronic Flash- temporary light source
9. Energy Cell- AA battery provides electrical energy for flash circuit

Materials
Most of the camera’s components are made of plastic. The plastic is durable and lightweight. Using plastic keeps material costs low and allows parts to be recycled. Metal was also used for springs, parts of the circuit board, and screws. The packaging is made up of plastic lined with metal to protect the camera from the radiation. The outer shell has a sticker that includes instructions and warnings and is made of paper and adhesive.

Assembly and Disassembly
After the camera is removed from the packaging the outer shell was removed. The film and canister were then removed. Next, the top panel which contained the counter dial and the button was removed. The viewfinder was removed. The circuit board was discharged and then removed followed by the shutter and lens. Behind the shutter a piece of plastic was also removed. This piece of plastic was where the shutter rotated. Along with the shutter, multiple plastic parts that open and close the shutter were taken out. The internal frame was left.

Reused Parts
1. Internal frame
2. Circuit Board- Circuit board is reused until no longer functioning.
3. Small parts (dial, gears, springs, button, screws)-

Recycled Parts
1. Outer shell- The outer shell is recycled because of damages such as scratches, chips, and cracks.
2. Lens- The lens may be scratched or damaged from user. It is vital that each camera has an undamaged lens because it plays an important role in taking good pictures.
3. Battery- Battery is recycled.

Redesigned component:
One way that the manufacturers could redesign the disposable camera is by trying to integrate the bottom frame of that camera into the outer shell. This would require less
individual plastic molds, so less energy would be used. Also it would require less assembly in the factory.
Energy Processing

**Battery**
The battery transfers chemical energy into electrical energy

**Capacitor**
Once the flash charge button is pressed, the electricity flows to the capacitor, charging it.

**Flash Bulb**
When the camera button is pressed, the shutter mechanism activates the flash circuit, sending the energy from the capacitor to the flash bulb.
Material Processing

**Wind mechanism**
The wind-up mechanism advances the film in the camera, allowing the next picture to be taken.

**Frame Counting**
The holes in the advancing film rotate gears that count the pictures already taken, displayed on a dial.
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Energy Processing

Light
- Lens: Focuses light
- Viewfinder: Image projected on film plane
- Film: Light sensitive, chemically stores image
- Image Stored

Mechanical
- Cock Shutter: Winding the camera spring loads the shutter mechanism
- Advance Film: Winding the camera moves the frames of film forward
- Open Shutter: When the button is pressed, the spring loaded system releases, rapidly opening and closing the shutter

Electrical
- Trigger Shutter Open: When the camera button is pressed, spring loaded components quickly open the shutter.
- Trigger Flash: Once the shutter is opened, the mechanism connects two leads, triggering the flash circuit.
- Turn on Flash Charging: When the flash charge button is pressed, electricity surged from the battery to the capacitor, charging it.
- Flash Ready Signal: When the capacitor is fully charged and the flash circuit is ready, an LED light appears indicating that the camera is ready.