Functional Components

- Packaging: Plastic and metal layered so that the film within the camera couldn’t be disturbed before the customer was able to use the product.
- Casing: Provides protection as well a mold for the layout of the components inside the camera.
- Film: The film stores the images displayed through the shutter of the camera.
- Mechanical components: the winding wheel of the camera is used to prepare the camera to take the picture. Film is pulled into place for an image to be imprinted upon it. Springs ensure that the shutter does not stay open, as well as keep any other components from shifting permanently from their original locations.
- Electronics: Different electrical components are used in the camera to make taking pictures easier. A battery powers two different lights, one showing that the flash is charged as well as the flash itself.
- Lenses: The lenses allow the picture, as well as the person taking the picture to achieve a certain level of magnification.
- Screws: Keep the interior components in place.
Materials

- Plastic: Casing, camera lens, and other moving internal components
- Copper and Lead: Circuitry
- Battery
- Aluminum: Springs and screws
- Solder: Used in wiring
Assembly and Disassembly

1. Disassemble frame
2. Remove film
3. Remove battery and discharge capacitor
4. Dismantle lens assembly
5. Remove circuit board
6. Disassemble shutter assembly
Subsystems

Packaging

Electronics

Plastic Casing

Film
Subsystems

- Assembly Components
- Lenses
- Mechanical Components
Recycled Parts

- Most of the camera is fully recyclable/reusable
- Once the camera is sent back, undamaged parts are reused in new cameras.
- Damaged plastics are melted down and the material is then remade into new components. This process can be done ten times.
- Circuit boards are reused often in the making of new cameras.
- Wiring can be reused in other cameras.
POSSIBLE REDESIGN

- Use a thinner plastic to reduce the amount of plastic used in the making of the camera.
- Make the camera easier to disassemble so that the average person could recycle it themselves. This way, more cameras could be recycled even if they were not sent back to Kodak.
- Use a rechargeable battery so that it could be reused more often than the current battery.
Flow Chart

- Button
  - Charge Flash by holding button
    - The shutter strikes the metal suddenly creating a circuit
      - Shutter
    - Press top button, releasing lever.
      - Button
    - Lights passes through lens, and hits a film. An image is created on the film.
      - Lens
Energy, Material and Signal Processing
Bibliography

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

http://productarchaeology.org/sandbox/documents_all/virginiatech/me2024/handouts/Kodak_Camera_Design_For_Re cyclability.pdf