How it works: The camera housing is joined by a plastic clipping method. This saves the company from using other fasteners to secure the outer case. The materials for the camera are mainly constructed from plastic. To begin with, the camera is composed of gears and springs. You turn the exposed gear until you hear it click, that click is the spring being set, which is attached to the shutter. Then when you push the button it causes the spring to react, which instantaneously open the shutter for a very short period of time. Simultaneously as this is happening the flash is triggered by the electrical circuit board it is connected to, and draws power from the battery. Then as the shutter is open for a split second the image that is in front of the lens (which allows the image to enter the camera) is projected onto the film which has a special chemical that then stores the image on the film. The film is then turned and the used film is stored, while the new film is set into place. The film is then later processed and turned into pictures.

The reassembly of the camera was challenging for us. This is because there were one or two parts that we did not know how to assemble. And all of the parts need to be assembled correctly for the camera to work. However, I believe the assembly would be relatively easy for someone who knows how to assemble the camera, because there are only a few parts that need assembled. Lastly, the disassembly was rather easy, just open the latches, remove the outer housing, and then remove the inner functional parts.

After the film is dropped the majority of the camera is recycled/reused. The plastic housing of the camera, the battery, the film container, the lenses, the electrical circuit and shutter can be reused or recycled to manufacture a new camera. These parts are made of plastic, so they are durable, and reused multiple times until their quality diminishes, and they eventually become
unusable. At this point they can be recycled, and used in other manufacturing processes. The film however cannot be reused, and is properly discarded after being used. Kodak has today recycled 1.5 billion cameras.
Hand turns rotating gear

Sets Flash
- Draws power from battery
  - Power goes through electrical circuit board
    - Flash goes off

Sets Picture Button
- Releases locking mechanism on spring
  - Shutter is released and opens
    - Image is exposed through lens
      - Image is stored with special chemical on film

Rotates Film Roll
- Rotates used film into storage, sets new film behind lens

Camera

Functional Flow Chart
The camera’s lens is present in all aspects of the life cycle. The "ten year" expectation is mostly based on the typical product life cycle of most lens manufacturers over the last couple of decades. In that time, the camera’s lens move through all life cycle aspects, starting with manufacturing and ending with recycling it and using it again in manufacturing.

The type of lens used in manufacturing the Single Use Camera is called the fixed-focus lens. It’s called fixed-focus lens because the focus is not adjustable. It is acceptable for capturing images of humans and objects larger than a meter. A disadvantage regarding this lens is that it is usually not stable for fast-moving objects which requires short exposure time. The advantage of this design is that it can be produced cheaply since it is made of molded plastic.

These fixed-focus lenses require no input from the operator, they are suitable for use in cameras designed to be inexpensive, and to operate without electrical power. These are usually wide-angle lenses with fixed aperture, and cameras with these lenses generally use a viewfinder for composition.

The lens is manufactured by grounding the plastic into pellets and then remold them into the lens. To reach the specifications for its shape, a lens goes through a sequence of processes in which it is ground by polishing particles in water. The polishing particles become smaller in each step as the lens is refined. Curve generation and subsequent grinding vary in speed depending on the frailty, softness, and oxidation properties of the optical materials. After grinding and polishing, the elements are centered so that the outer edge of the lens is perfect in circumference relative to the centerline or optical axis of the lens.

A disposable camera lens can easily be recycled for new products. Most popularly camera lens can be reused as a cell phone macro lens. By attaching a wire to lens it can be easily
positioned on a phone for use. Camera lens can also be sold to companies for recycling. Companies like Gazelle, eBay, amazon, Canon, Used Camera Buyer, B & H Photo Video, Adorama, and more will buy camera lens to recycle and reuse. These companies give consumers and easy and beneficial way to get rid of their useless camera lens. Camera lens have also been reused to create decorations and art pieces. There have even been instances of camera lens being used as jewelry.

Disposable camera lens are usually made out of glass or plastic. Throughout history developments have been made in lens coating technology and use of unique earth glass. Different lens have different concavity. Curve generation is dependent on the quality of the glass or plastic. Different concavities are also used to produce different images. While convex lens are thicker at the middle, concave lens are thinner at the middle. When rays of light pass through a convex lens, the rays are brought closer together. When rays of light pass through a concave lens, the rays spread out. Lens are made a certain why to achieve a specific image.

A possible redesign for the disposable camera would be to make the lens automatically adjustable. Disposable cameras have a fixed-focus lens. Redesigning this would improve the quality of the pictures the disposable camera produces. When the camera has a non-adjustable focus the lens relies on a sufficient depth of field to create clear images.
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