

So now we know that light can enter the dark camera when the shutter makes an opening called an aperture. So what? How does this allow my camera to take a photo? This is where we will start talking about the differences between old-fashioned film cameras and the modern digital camera. In both cameras, the light passes through the lens. The lens is specially shaped so that the light passing through can reflect the image correctly, a bit like a human eye.



*A traditional camera film can usually hold 36 pictures. The film unwinds further each time a picture is taken.*

### Film Cameras

In a film camera, there is a strip of plastic positioned behind the lens. This plastic is called a film. The film is coated with special **chemicals**.<sup>7</sup> The chemicals are very sensitive to light. To protect the film, it is sealed in a light-proof box before and after it is in the camera. When the shutter is pressed, the aperture opens at the front of the lens, and light passes through the lens. The light-sensitive chemicals on the film will react to form an image when the light hits them.

The film will need to be developed before the pictures can be viewed. To develop photos, the film is treated with other chemicals so they can form an actual photograph based on the image captured on the film. Photo film is developed by a **chemist**<sup>8</sup> or **pharmacist**.<sup>10</sup>

### Digital Cameras

A digital camera works differently. Instead of film recording the image, there is a piece of electronic equipment behind the lens. The job of this electronic piece is to capture the light rays coming in and turn them into electronic signals. It does this by acting as a **sensor**.<sup>11</sup> It senses the difference in the light rays and breaks them down into millions of pixels.

What are pixels? If you ever took a close-up look at a picture on a screen, you will have seen that it is made up of thousands of tiny dots. The dots are colored differently, and together they form a complete picture. These dots are known as pixels.



*Today, photos are taken with modern digital cameras.*

- 7 **Chemicals** – substances that can change other items
- 8 **Chemist** – someone who works with chemicals or drugs
- 9 **Pharmacist** – someone who is qualified to prepare and distribute medicines
- 10 **Sensor** – device that notices changes