Types of cameras, parts of the camera

The Basics
Types of cameras

- Film cameras
- Digital cameras
Types of cameras

- Film cameras
  - View camera
  - Rangefinder/viewfinder camera
    - Point and shoot or compact cameras
  - Single lens reflex camera (SLR)
  - Twin lens reflex camera (TLR)
  - Specialty cameras
Types of cameras

- Digital cameras
  - Rangefinder/viewfinder camera
    - Point and shoot or compact cameras
  - Single lens reflex camera (SLR)
    - DSLR is the term for digital SLR cameras
    - Specialty cameras
View camera

- Built like an accordion, with a lens in the front, a viewing screen in the back, and flexible bellows in between.
View camera

- ADVANTAGES
  - Large film size (4x5, 5x7, 8x10)
  - Sharp detail
  - What you see in the viewfinder is exactly what you will get on the negative.
  - You can change the position of the film and lens relative to each other to correct distortion.

- DISADVANTAGES
  - Bulky and heavy
  - Must use a tripod.
  - Image on the viewing screen is not bright so you have put a focusing cloth over your head and the back of the camera.
  - The image appears reversed and upside down on the viewing screen.
  - Rapid shooting is difficult.
View camera

- Used for:
  - Commercial studio photography
  - Landscapes
  - Architectural photography
A compact, lightweight, camera that allows you to view the scene through a small window.

- Viewfinder cameras include inexpensive point-and-shoot cameras.
- Rangefinders have a coupled rangefinder that allows manual focus.
Rangefinder

- **ADVANTAGES**
  - Compact, lightweight, and fast handling.
  - Quieter than an SLR
  - Bright viewfinder image allows easy focusing.

- **DISADVANTAGES**
  - Parallax error - Because the viewfinder is in a different position than the lens, you cannot see exactly what the lens sees. The closer the subject the more evident the parallax.
An SLR has a mirror and pentaprism that allow you to use the lens for viewing and focusing.

Most are 35mm, but some are medium format.
Single lens reflex

**ADVANTAGES**
- Eliminates parallax - what you see is what you will get.
- Easy to focus.
- Usually has a built-in light meter.

**DISADVANTAGES**
- Heavier and larger than a rangefinder.
- Relatively complex with many parts that may need repair.
- The mirror movement makes the camera loud and causes vibration.
- Momentary black-out at the time of exposure.
A TLR has a fixed mirror that reflects the scene upward onto a viewing screen.
There is one lens to expose the film and another to view the image.
Twin lens reflex

- **ADVANTAGES**
  - Fixed mirror allows quiet operation.
  - Simple, rugged construction.
  - The viewing screen placement on top allows you to easily photograph from the ground or other awkward angles.
  - Medium-format film.

- **DISAVANTAGES**
  - Parallax
  - It is difficult to follow moving objects because the image on the screen is reversed left to right.
  - It is a larger camera that can be somewhat cumbersome.
  - Difficult to use at eye level.
Specialty camera

Used for a specific purpose
- Underwater cameras
- Panoramic cameras
- Polaroid Cameras
You should be able to name the four types of cameras.
You can give some examples of specialty cameras and their uses.
Digital SLR and viewfinder

Parts of the camera
The camera

- All cameras are basically the same
  - A box with a piece of “film” in one end
  - A hole in the other end
  - The hole is there so that light can enter the box, strike the light-sensitive surface of the film and make a picture
The camera

- All cameras are basically the same
  - Light-tight body
  - Lens
  - Shutter
  - Film
Parts of the camera

Label and define the parts on your diagram.
Parts of the camera
Parts of the camera
Parts of the camera
Parts of the camera

1. **Body** - Made of high grade plastic or metal; holds all parts together; provides protection to the delicate internal parts of the camera.

2. **Lens** - Lens Assembly is several layers of lenses of varying properties providing zoom, focusing, and distortion correction. The most important part of the camera.

3. **Shutter Release Button** - This is the "trigger" of the camera.

4. **Mode Dial** - Contains several symbols (differs by model), allows you to select a shooting mode, automatic or manual or one of the pre-defined settings.

5. **Viewfinder** – Small window that shows the image the camera's imaging sensor sees.
Parts of the camera

6. **Aperture Ring** – Found on older SLR cameras; it is used to select an aperture opening. In modern lenses, the aperture is controlled electronically through the body.

7. **Focusing Ring** - found around the lens of SLR and DSLR cameras; turn to manually focus the lens.

8. **LCD Display** - In some compact cameras this acts as the viewfinder; small at the back of the camera used for framing or reviewing pictures

9. **Flash** - Built-in on the body of most compact and some DSLR cameras; can be fixed or flip type; provides an instantaneous burst of bright light to illuminate a poorly lit scene.

10. **Control Buttons** - Usually includes a set of directional keys and a few other buttons to activate certain functions and menus, this is used to let users interact with the camera's computer system.
- **11. Power Switch** – Turns the camera on or off.

- **12. Zoom Control** - Usually marked with W and T, which stands for "Wide" and "Tele"; used to control the camera's lenses to zoom-in or zoom-out. For DSLR cameras, the zoom is usually controlled by a zoom ring in the lens.

- **13. Battery Compartment** - Holds the batteries; vary in size and shape by camera type/brand

- **14. Memory Card Slot** - where memory cards are inserted

- **15. Flash Mount (Hot-Shoe)** - Standard holder with contact plates for optional flash accessory.

- **16. Diopter** - varies the focal length of the lens in the viewfinder to allow people wearing eyeglasses to see clearly through it even without the eyeglasses.

- **17. Tripod Mount** - where your standard tripod or monopod is attached for added stability
Parts of the camera
Parts of the camera
Types of cameras
How to hold a camera
It’s so simple even a baby can do it!