Types of cameras, parts of the camera

The Basics

Types of cameras

- Film cameras
- Digital cameras

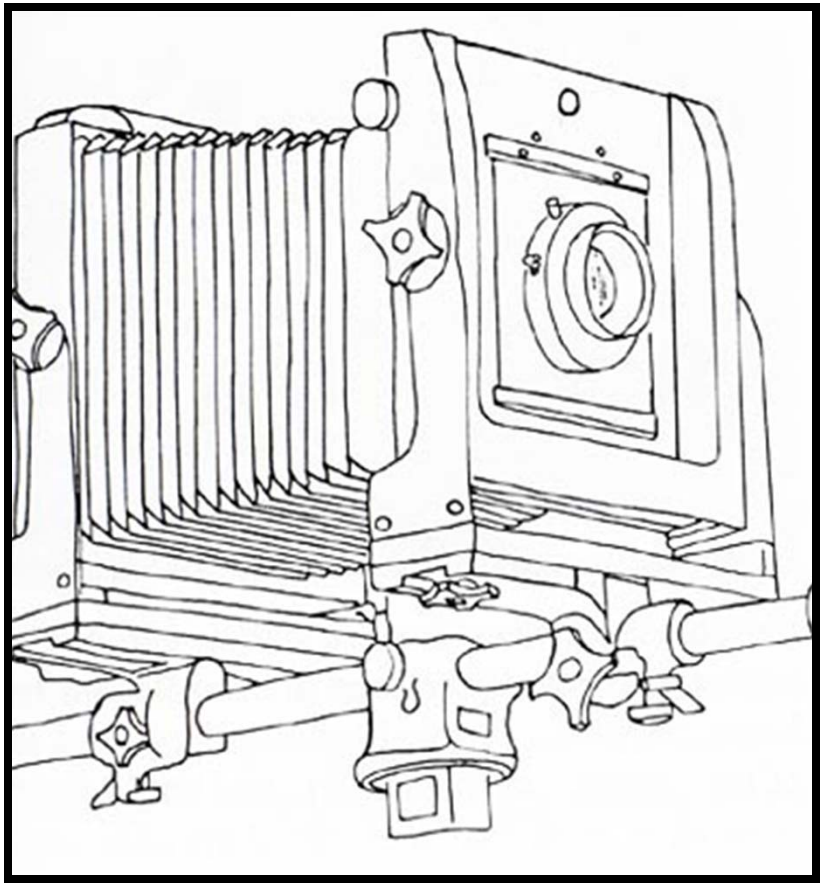
Types of cameras

- 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

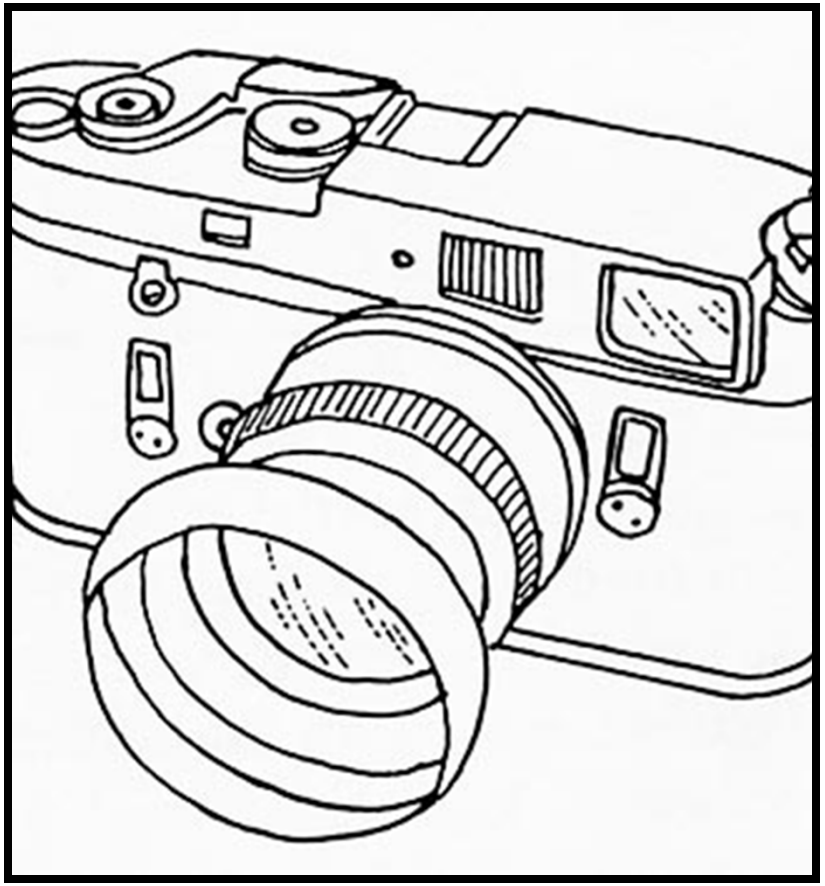
- ADVANTAGES
  - Large film size (4x5, 5,7, 8x10)
  - Sharp detail
  - What you see in the viewfinder is exactly what you will get on the negative.
  - You can change the position of the film and lens relative to each other to correct distortion.
- DISADVANTAGES
  - Bulky and heavy
  - Must use a tripod.
  - 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

Rangefinder/viewfinder

- 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.

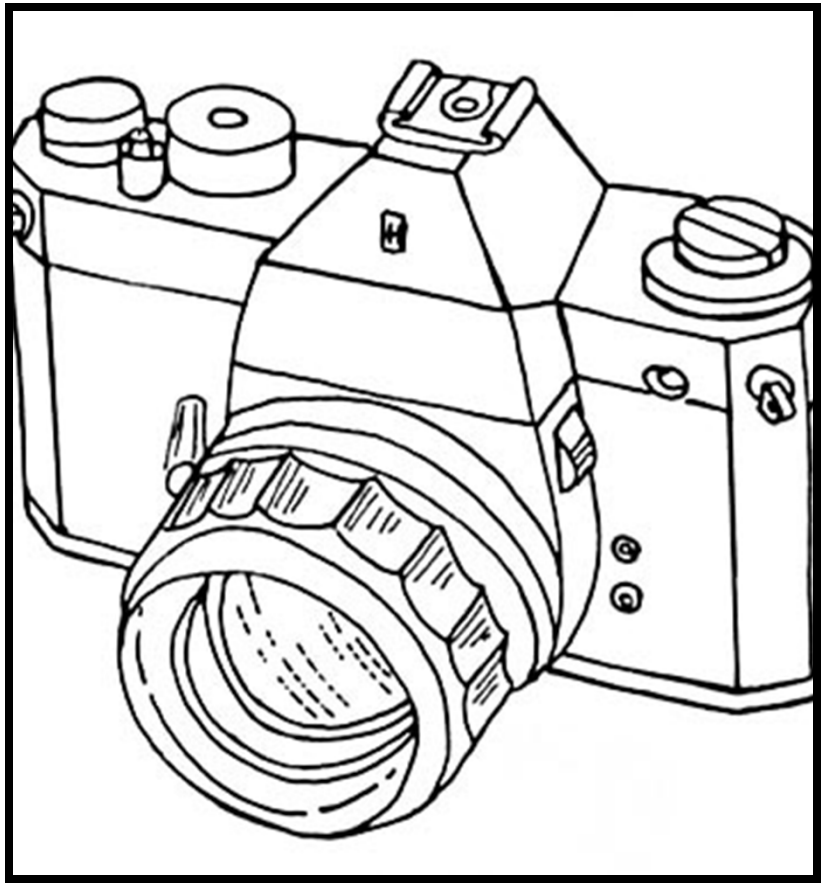


Rangefinder

- 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.

Single lens reflex

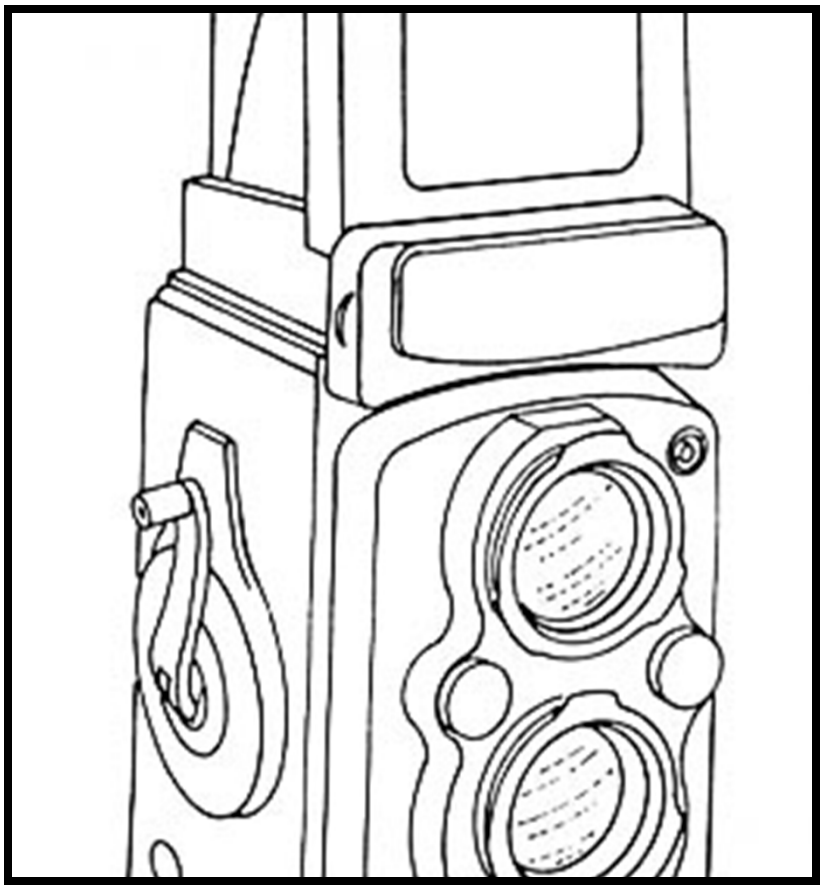
- An SLR has a mirror and pentaprism that allow you to use the lens for viewing and focusing.
- Most are 35mm, but some are medium format.



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.

Twin lens reflex



- 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

Summary

- 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

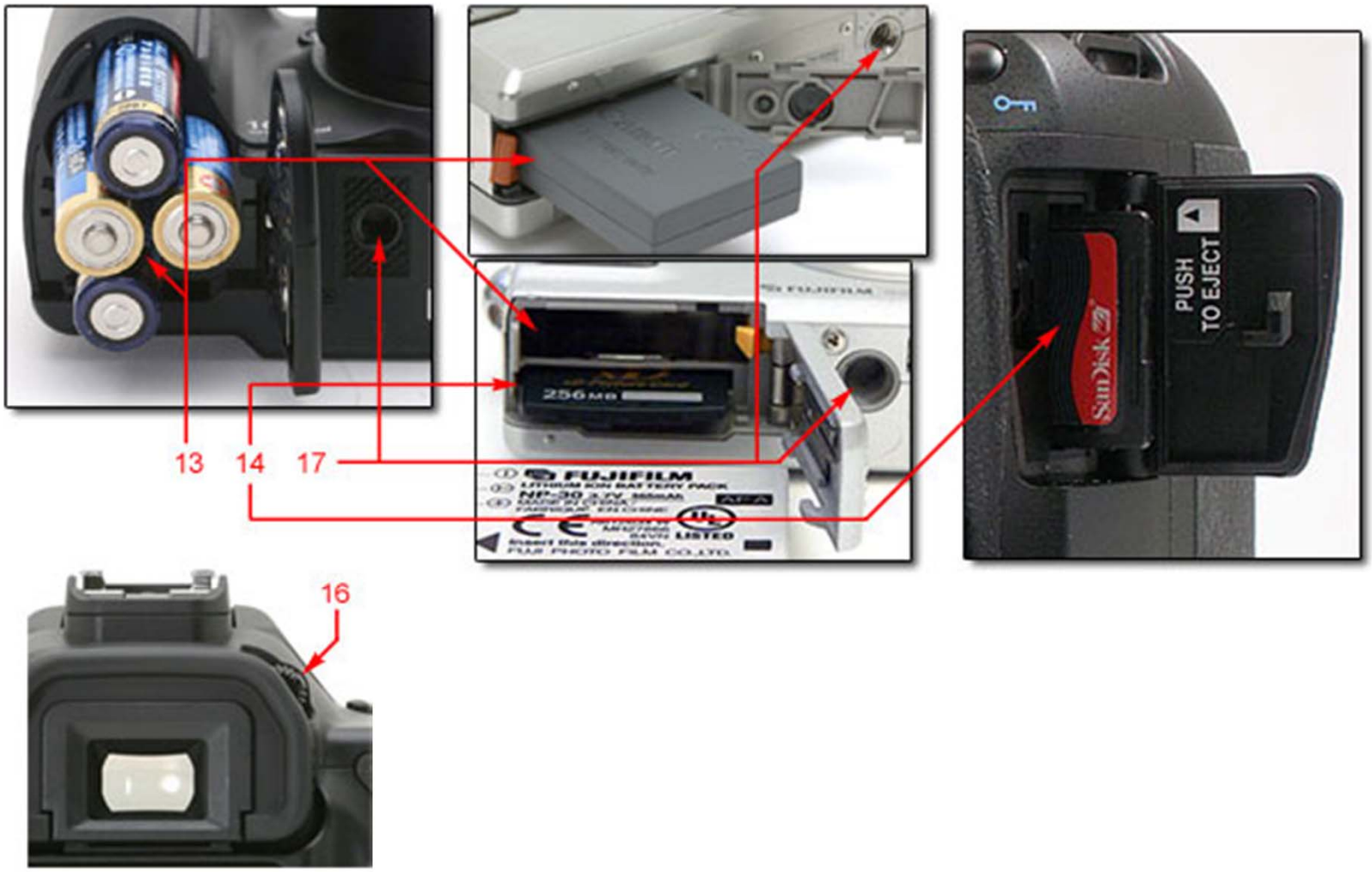
Parts of the camera

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.

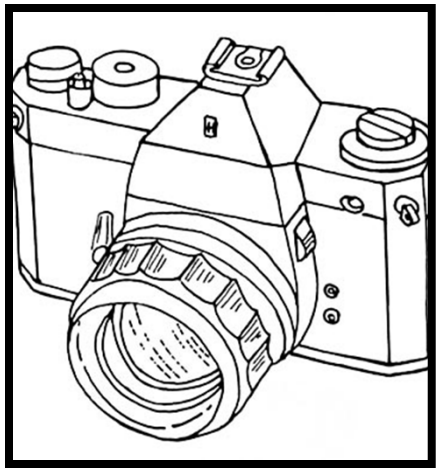
Parts of the camera

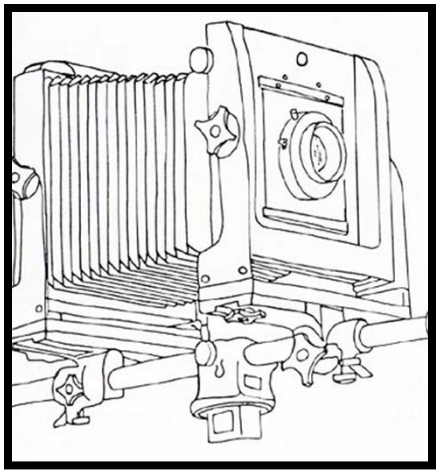
- ***11. Power Switch*** – Turns the camera on or off.
- ***12. Zoom Control*** - Usually marked with W and T, which stands for "Wide" and "Tele"; used to control the camera's lenses to zoom-in or zoom-out. For DSLR cameras, the zoom is usually controlled by a zoom ring in the lens.
- ***13. Battery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

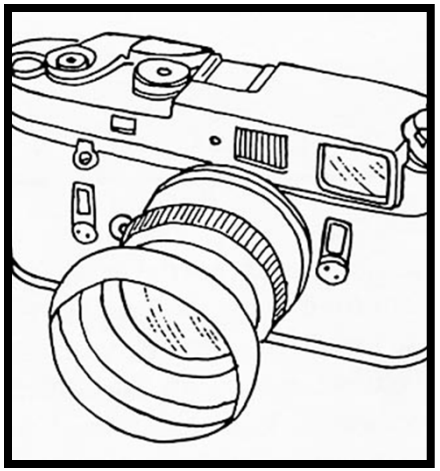
Parts of the camera

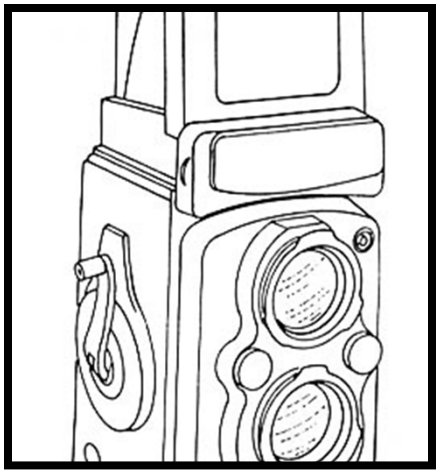
Parts of the camera

Types of cameras

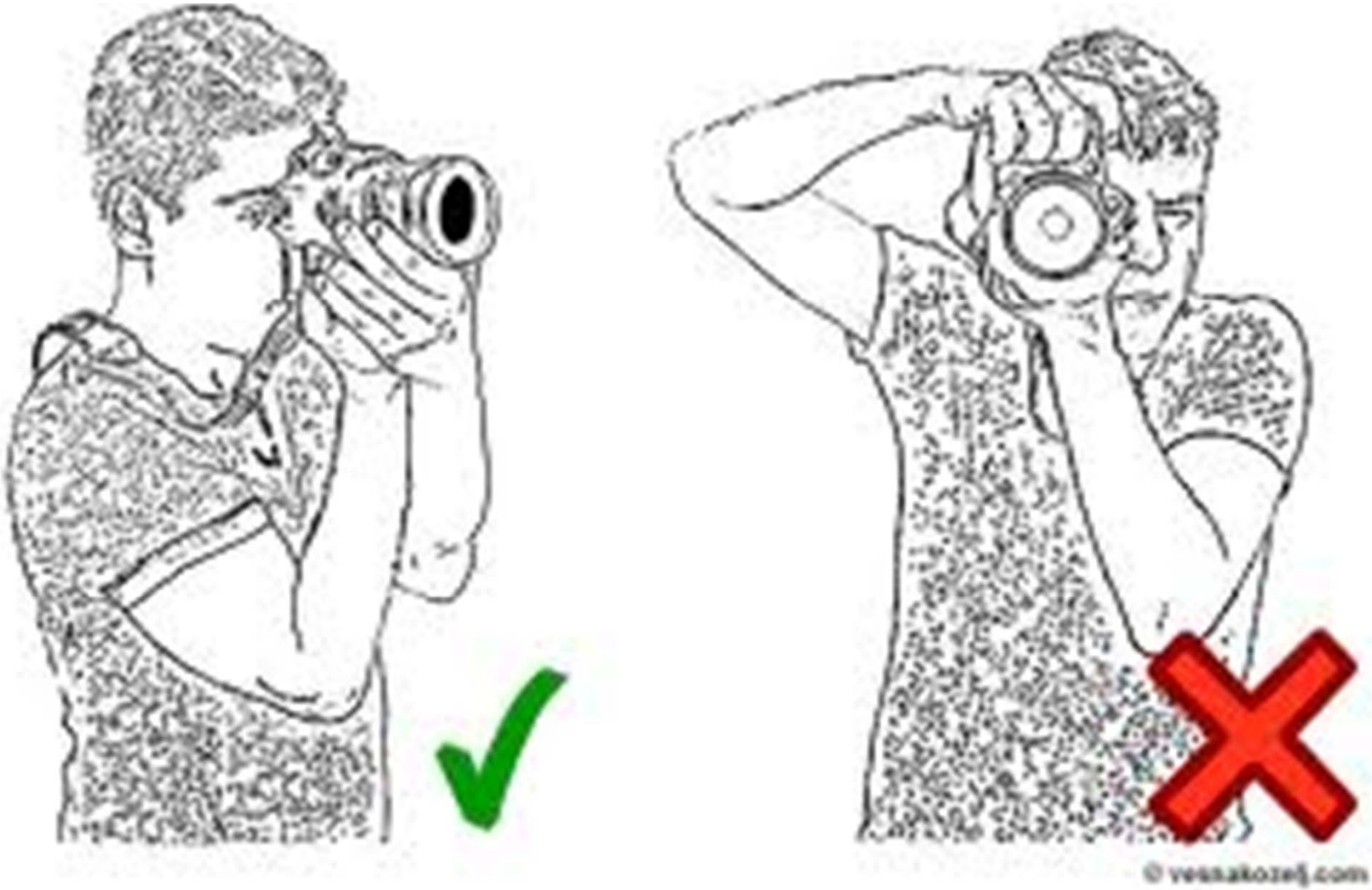








How to hold a camera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It's so simple even a baby can do it!