

CAPTURING THE IMAGE

Requirements: Usually a camera, with a:-

- **Light sensitive medium:** film or digital sensor.
- **An aperture** through which light passes.
- **A shutter** to control length of the exposure.

THE IMAGE

□ Is formed when:

□ A sufficient exposure of light falls on the film/sensor. The sensitivity of the film/sensor can be varied. This is expressed as "film speed", ISO No.).

THE IMAGE

- 1.) The aperture of the lens can be adjusted to control the amount of light falling on the film/sensor (f. number).

THE IMAGE

- ❑ 2.) The shutter speed also controls the amount of light passing through to the film or sensor. A fast “shutter speed” allows a moving subject to be “stopped” and appear as a sharp image.
- ❑ A slow “shutter speed” can be used to produce deliberate movement as this image shows.



THE IMAGE

- Therefore the **IMAGE** can be created and controlled by:
- The film speed/sensor 'speed' used.
- The aperture of the lens allowing an amount of light to pass through. It also affects how much of the image, front to back, is in focus (**Depth of Field**).
- The shutter speed is expressed as a portion of a second (e.g. 1/50). Blurred images are likely when slow shutter speeds are used with a handheld camera.

DEPTH OF FIELD

By using a large aperture (small f No.) only a small part of the image will be in focus. This shallow **depth of field** can be used to isolate the subject, e.g., a flower, from the background.



DEPTH OF FIELD

- ❑ By using small aperture (large f No.), we have a large **depth of field**.
- ❑ This is a good choice for a landscape or seascape), where we want all the image in focus, from front to back



THE IMAGE

- The required image can be achieved by the particular combination of:
 - Film/sensor speed (ISO number),
 - Aperture size (f number), and
 - Shutter speed (in seconds).

THE IMAGE

- ❑ Modern cameras are sophisticated and can be set to **Automatic / Programmed Exposure** and we simply press the shutter (point and shoot).
- ❑ However, the results may sometimes be disappointing.
- ❑ Using an alternative setting, such as **Aperture Priority**, gives us more control and may allow us to achieve more pleasing results.

THE IMAGE

- We may get a more satisfying image by:
- 1.) Using “**aperture priority**” (A., Av.), to obtain the desired “**depth of field**”, where this is important to the image, or
- 2.) Using “**Shutter priority**” (S., Tv.), to ensure the most appropriate “**shutter speed**” is used.

THE EXPOSURE

- The exposure of the film/sensor to light is made-up of both the chosen “aperture” and “shutter speed”. See:
- Typical “aperture sizes”.
- Typical “shutter speeds”, and
- Their interaction to form the right exposure.