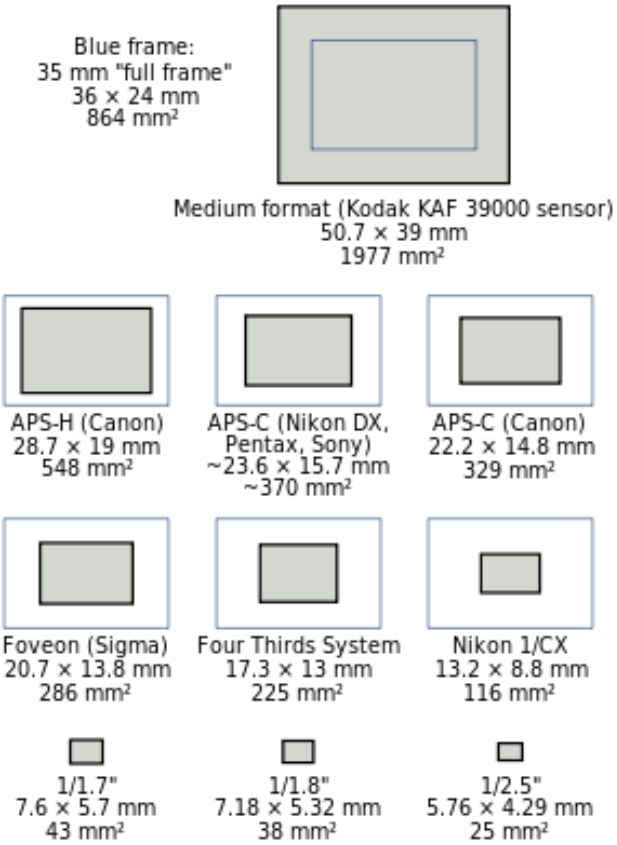
GCSE Photography

Unit One—Sensor Sizes

In film photography negative size ultimately determine the quality of a photograph. Other things being equal, a larger negative produces better results than a smaller negative because it does not require the same degree of enlargement to make a print of a given size.



As the most popular film cameras in the last half of the twentieth century onwards, took 35mm film, with a size of 36mm by 24mm, this is regarded in digital cameras as being 'full-frame'.

In digital photography the image sensor format is the shape and size of the image sensor.

The image sensor format of a digital camera determines the angle of view of a particular lens when used with a particular camera. In particular, image sensors in digital SLR cameras tend to be smaller than the 24 mm × 36 mm image area of full-frame, 35mm cameras, and therefore lead to a narrower angle of view.

Lenses produced for 35mm film cameras may mount well on the digital bodies, but the larger image circle of the 35 mm system lens may allow unwanted light into the camera body. Conversely lens designed for smaller size sensors (compared to 35 mm film format) results in cropping of the image. This latter effect is known as field of view crop. The format size ratio (relative to the 35 mm film format) is known as the field of view crop factor, crop factor, lens factor, focal length conversion factor, focal length multiplier or lens multiplier.

Smaller sensor sizes do not mean fewer pixels, as it is possible to reduce the size of sensor pixels considerably. However, like film, the smaller the sensor, the greater the degree of magnification needed to achieve the print, or image on a screen.

Despite considerable, and ongoing, advances in technology, size does count, with most commercial photographers still favouring 'full-frame' digital SLRs over smaller sized sensors.