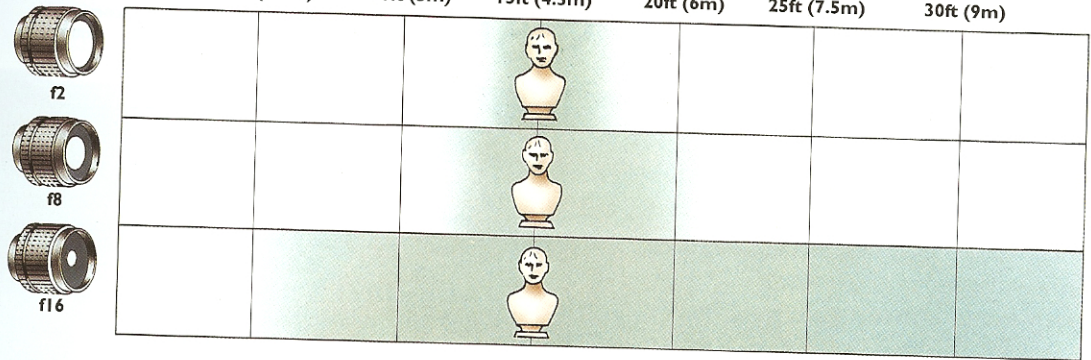


EFFECTS ON DEPTH OF FIELD

Changing aperture size

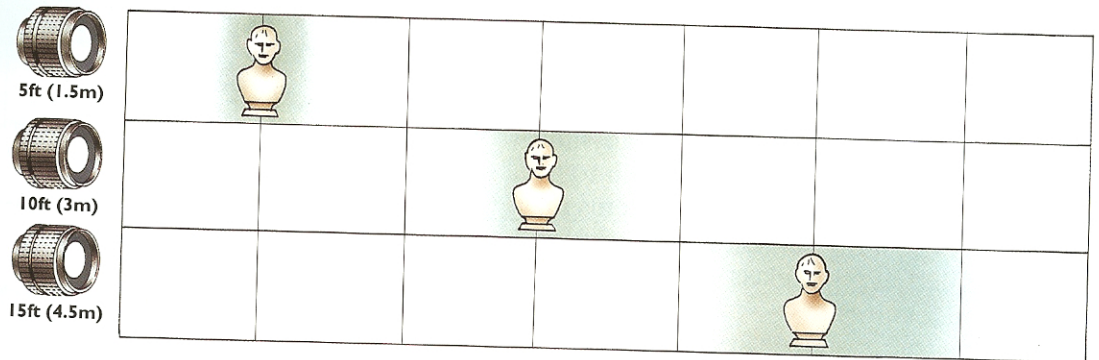
With the same focal length lens focused at the same distance, this diagram shows how depth of field can be altered by adjusting the aperture size. Depth of field usually extends in front of the subject by one-third and by two-thirds behind.

The smaller the aperture the greater the depth of field. An aperture of f2 gives a much smaller depth of field than one of f16.



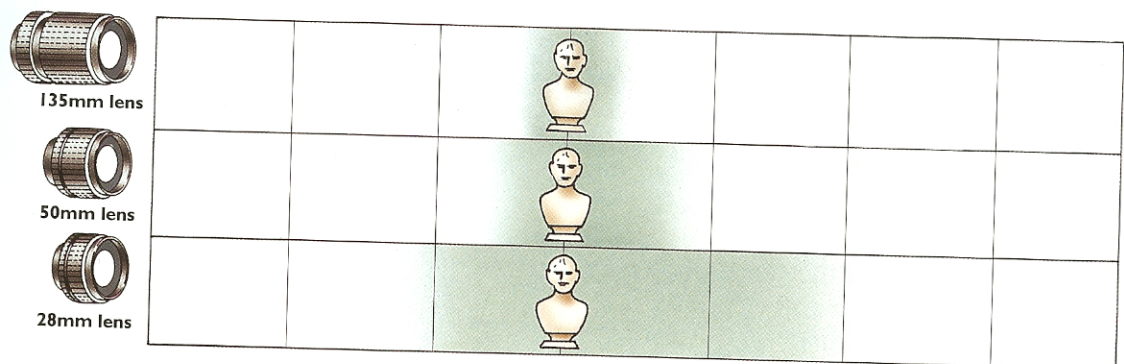
Subject-to-camera distance

This diagram shows how depth of field is partly dependent on the distance of the subject from the camera, even when an identical focal length and aperture setting are used. The closer the subject is to the camera, the narrower the depth of field. Focusing the lens on 15ft (4.5m) yields a greater depth of field than focusing on 5ft (1.5m).

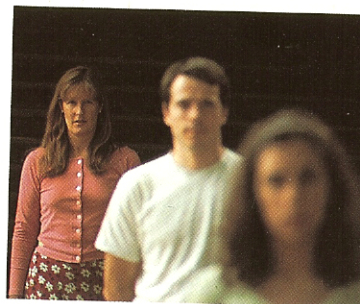
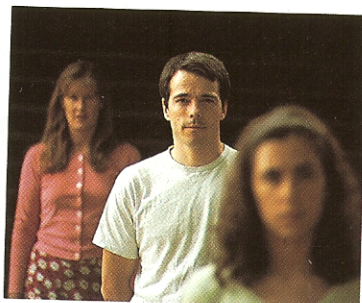


Changing lenses

With the subject at the same distance from the camera and with the same aperture size, depth of field can be altered using lenses of different focal lengths. The shortest lens results in the greatest depth of field. Focal length can be so significant a factor with extreme (8-15mm) wide-angle lenses that they do not need to be focused, since depth of field at every aperture setting is sharp.



SELECTIVE FOCUSING



This series of photographs shows three subjects positioned 3ft (1m) apart, with the closest 5ft (1.5m) from the camera. A 35mm SLR with an 80mm lens was used throughout, and an aperture of f2.8 for the first three shots. First, the lens is focused on the near figure; depth of field is shallow.

The difference here is that the camera is focused on the middle figure. Depth of field is such that the first figure is now blurred, but because depth of field increases as the point of focus moves farther away, the rear figure is slightly sharper even though the camera setting has not changed.

With the focus shifted to the figure farthest away, depth of field has not only increased to the point where the middle figure is less blurred but also extended beyond the point of true focus to include the rear wall. The first figure, however, is now very blurred.

To bring all three subjects into sharp focus, from foreground to background, a smaller aperture size is set. For this final image, the aperture is changed from f2.8 to f22, with the middle figure as the main focusing point.