



Depth of Field

Three things affect depth of field:

1. Aperture/F-Stop
2. Focal Length of Lens
3. Proximity to Subject



F4, 105mm

- ### How to Get Shallow Depth of Field
- Low f-stop (f 5.6, f4, 2.8, etc.)
 - Close to foreground
 - Long lens and zoom in



F11, 24mm

How to Maximize Depth of Field

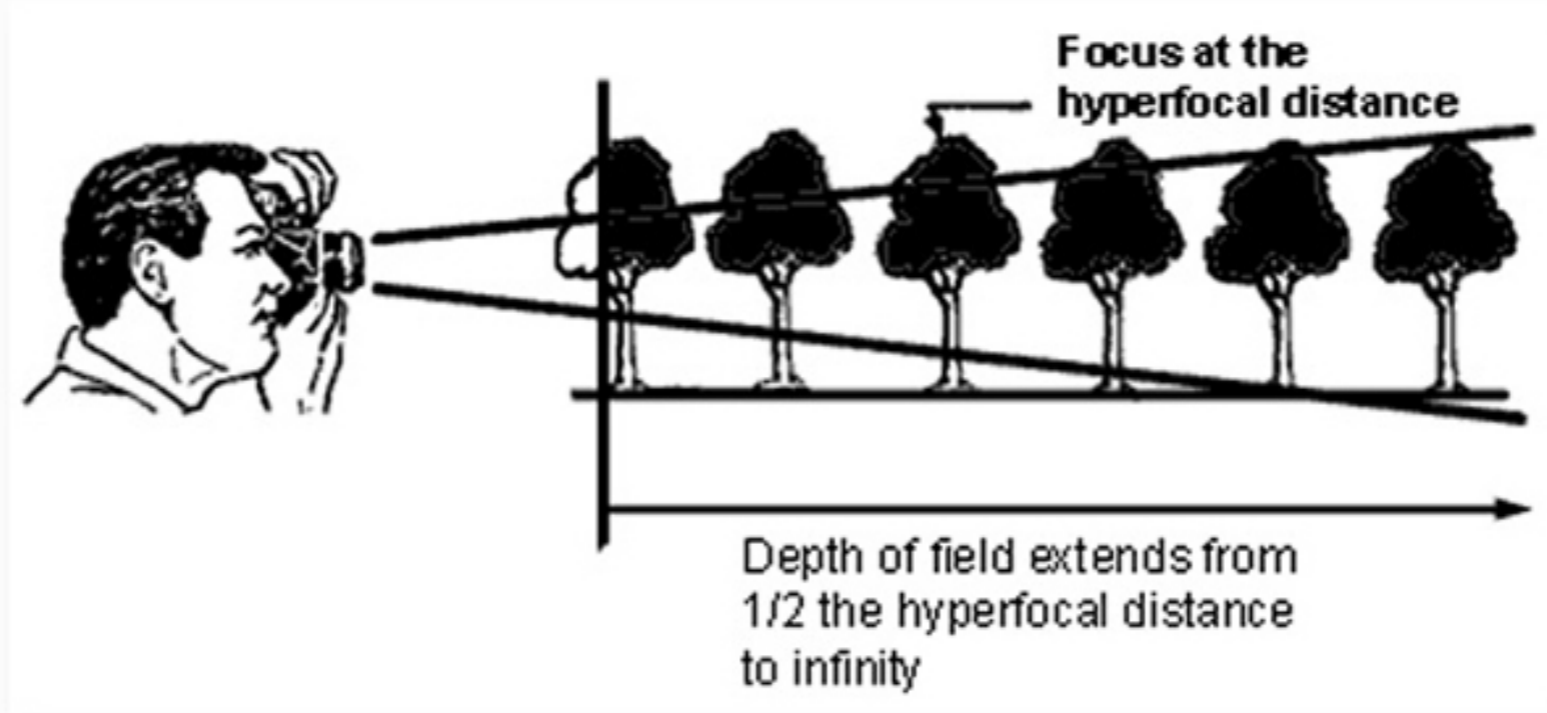
- High f-stop (f8, 11, 16*)
- Wide angle (less than 50mm)
- Not too close to foreground



F5.6, 1/500th sec., 400mm Lens

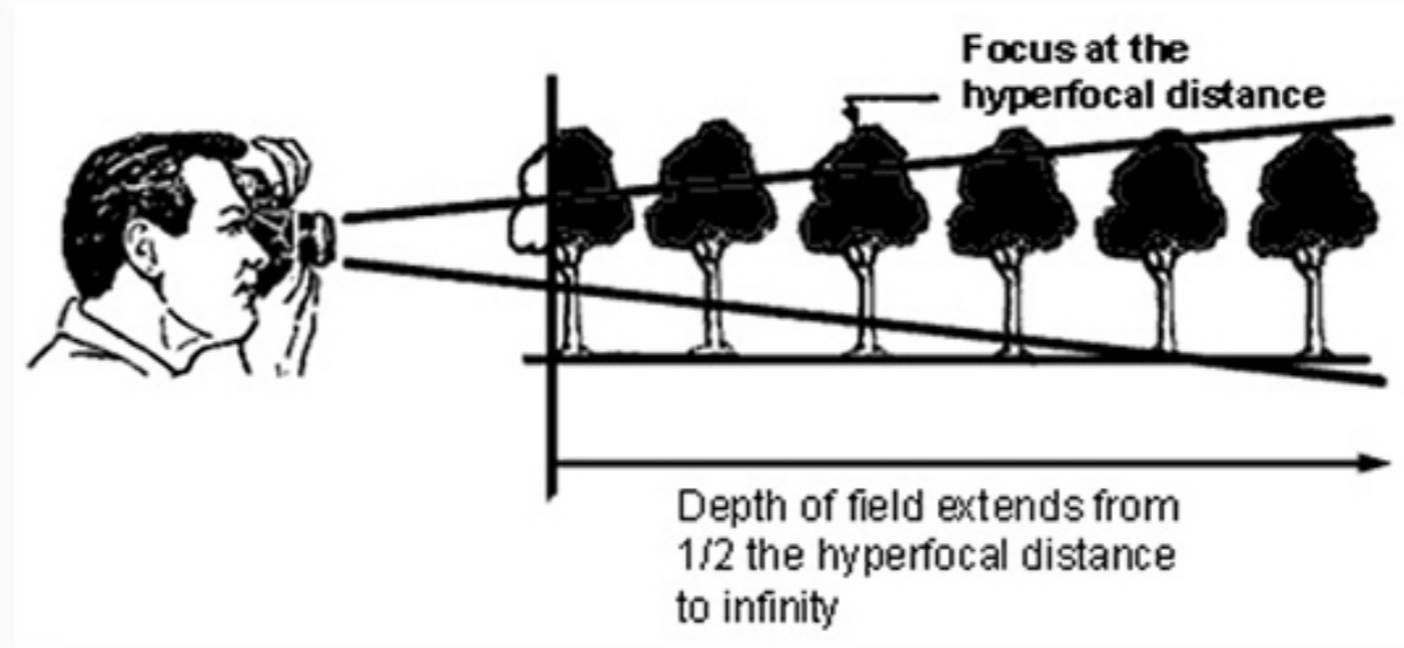


F8. 1/125 sec., 20mm Lens



Hyperfocal Distance: the focus point that gives you maximum depth of field. Everything from halfway between you and the point and infinity is acceptably sharp.

(Focusing 1/3 into scene works sometimes)



Hyperfocal Distance Apps like Depth of Field Master and PhotoPills calculate distance for you based on camera model, focal length of lens and aperture.

Hyperfocal Distance Examples

Camera:	Canon 5DII
Focal Length of Lens:	24mm
Aperture:	F11
Hyperfocal Distance:	5.65 ft.

Camera:	Canon 5DII
Focal Length of Lens:	100mm
Aperture:	F11
Hyperfocal Distance:	97 ft.

Camera:	Canon 5DII
Focal Length of Lens:	100mm
Aperture:	F16
Hyperfocal Distance:	68.7 ft.

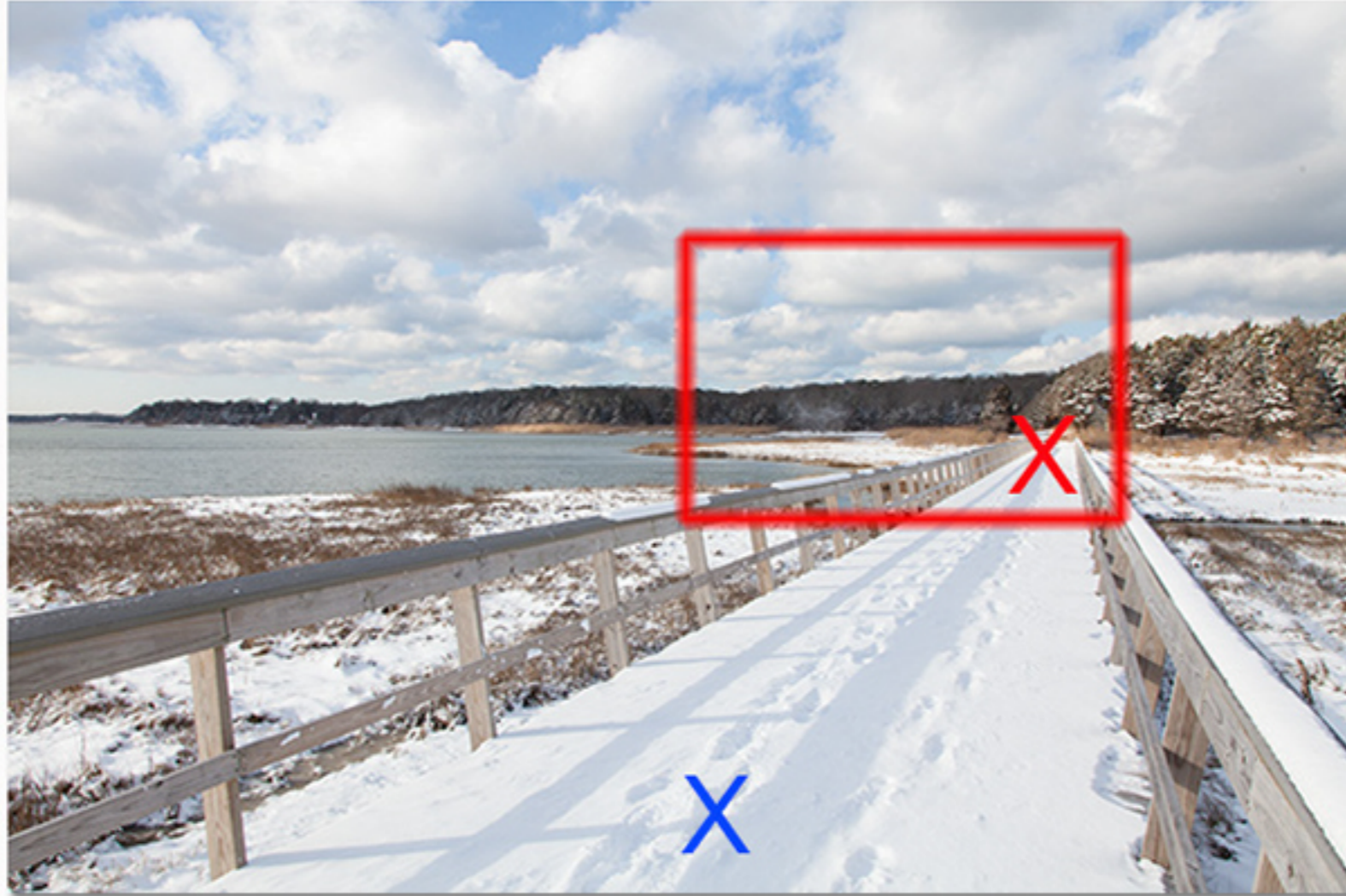
How to maximize Depth of Field



Canon 5DII
F11
24mm
Hyperfocal Distance: 5.65 ft

Canon 5DII
F11
100mm
Hyperfocal Distance: 97 ft

How to maximize Depth of Field



Canon 5DII
F11
24mm
Hyperfocal Distance: 5.65 ft

Canon 5DII
F11
100mm
Hyperfocal Distance: 97 ft

Focus Stacking to Maximize DOF

Shoot multiple images of same scene
(use a tripod)

Focus each shot on a different point in scene

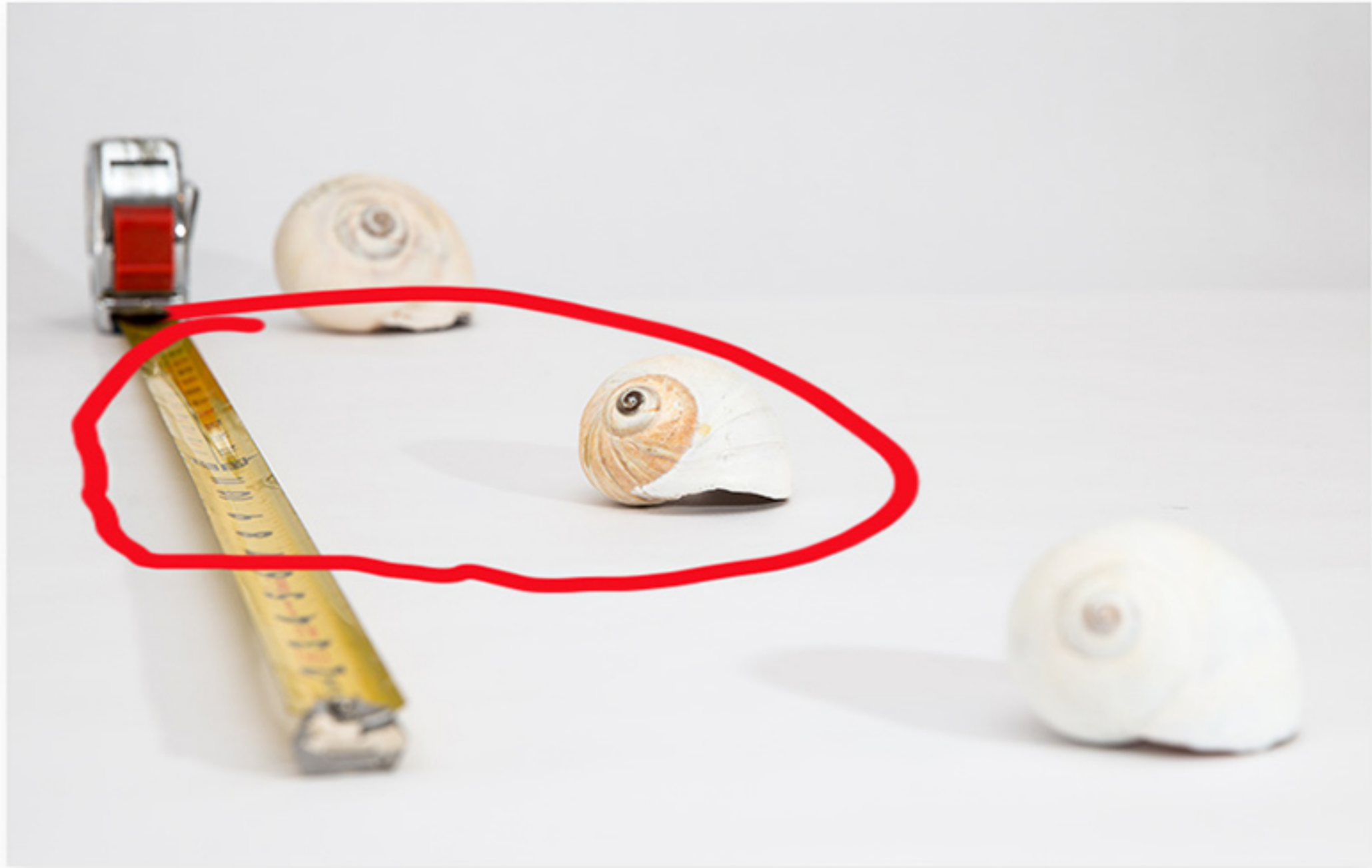
Blend images in Photoshop or Elements

Focus Stacking to Maximize DOF



Shoot multiple images of same scene,
focusing at different points in the scene

Focus Stacking to Maximize DOF



Shoot multiple images of same scene,
focusing at different points in the scene

Focus Stacking to Maximize DOF



Shoot multiple images of same scene,
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Focus Stacking to Maximize DOF



Blend images in Photoshop

What happens
if you don't focus
on the hyperfocal point?

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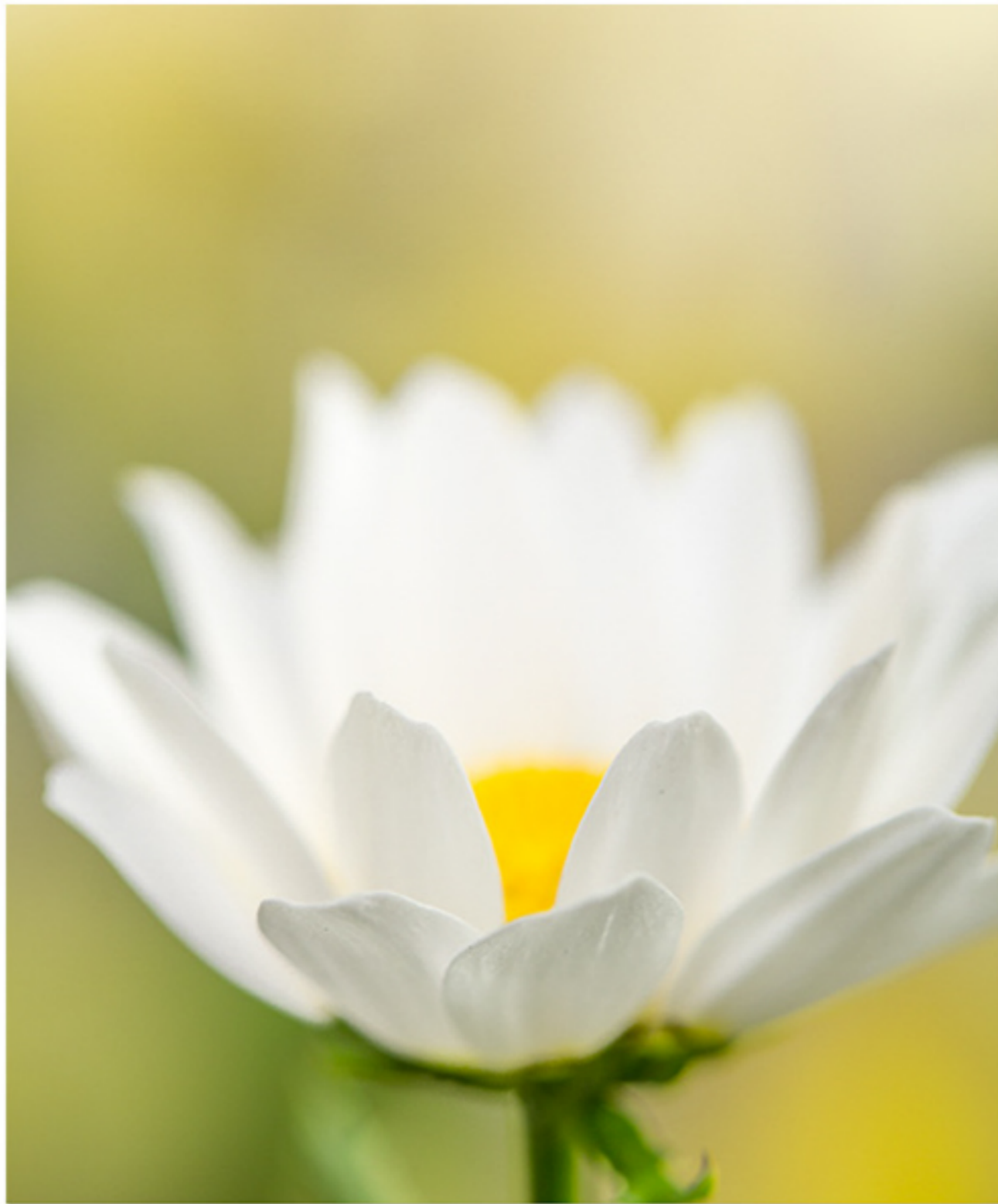
It depends.



A wide angle lens (16-24mm)
will be acceptably sharp
wherever you focus
(more or less)



A telephoto lens is less forgiving.



100mm, F5, 1/230 sec. ISO160

Distance to subject: 3 ft.

DOF range: 7/8"



14mm, F8, 1/350 sec. ISO400

Distance to subject: 3 ft.

DOF range: Infinite



24mm, F11, 1/250 sec., ISO500

Distance to subject: 45 ft.
DOF range: 40 ft to infinity

DOF increases with distance to subject

200mm, F8

Subject Distance	Depth of Field
3 ft	5/16 inches
15 ft	9 7/16 inches
100 ft	37.6 ft

DOF changes with focal length

Aperture at F8, 100 feet to subject

Focal Length	Depth of Field
24mm	Infinite
100mm	311 ft
200mm	37.6 ft

When in doubt
use F8.



“F8 and be there.”

Weegee, the famous photojournalist and street photographer when asked how he got such great photos.