

Understanding Depth of Field

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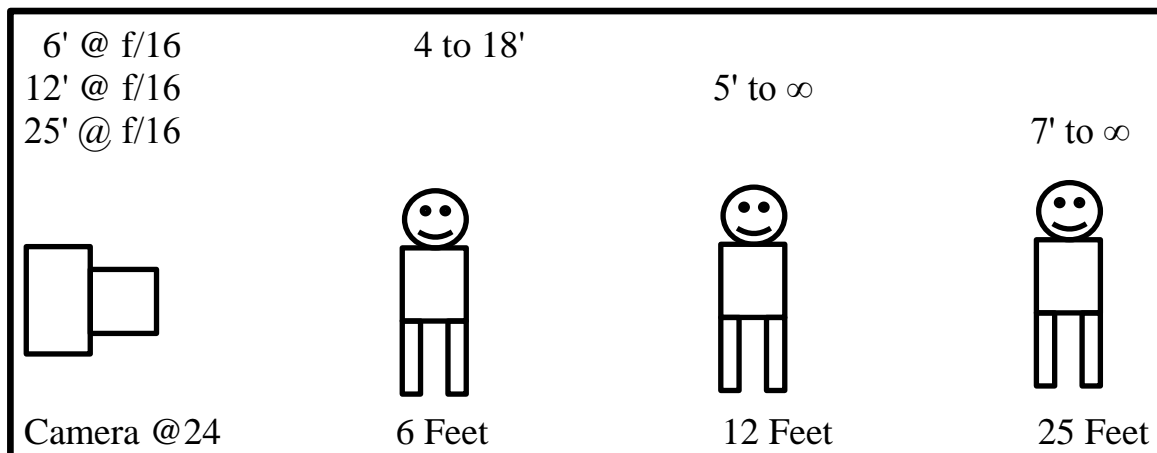
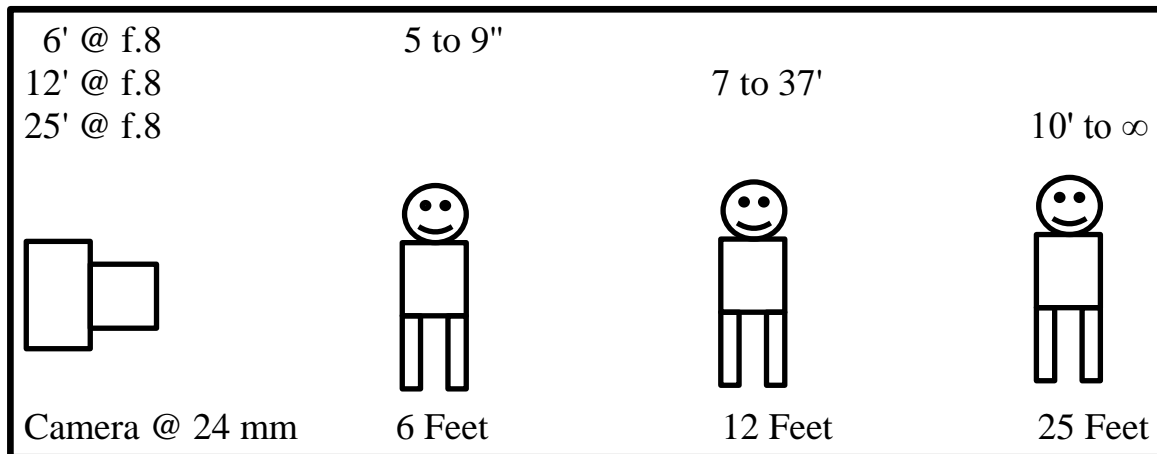
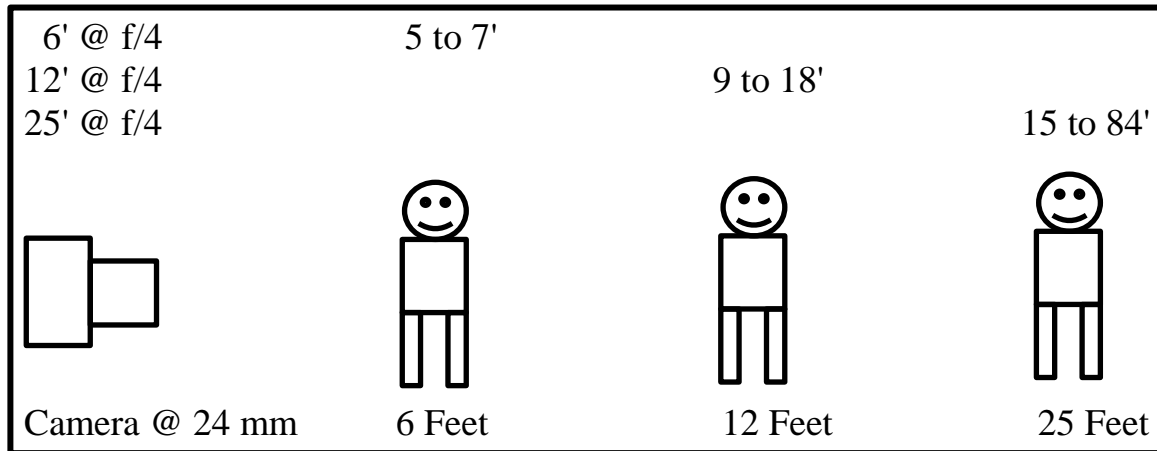
The easy way to understand depth of field is to play around with <http://www.dofmaster.com/dofjs.html> and <http://dofsimulator.net/en/>. Using the **VWDOF** calculator, I ran the numbers for the 16 - 80 mm lens on a Nikon APS-C camera at three focal lengths and four distances.

16 mm, Equal To 24 mm On A Full Frame Camera				
	6 Feet	12 feet	25 feet	50 feet
f2.8	4.9 - 8.2	7.8 - 25.5	11.9 - ∞	15.6 - ∞
f/4.0	4.4 - 9.6	6.8 - 49.3	9.7 - ∞	12.0 - ∞
f/5.6	3.9 - 12.7	5.8 - ∞	7.8 - ∞	9.0 - ∞
f/8	3.4 - 24.3	4.8 - ∞	6.0 - ∞	6.7 - ∞
f/11	3.0 - ∞	3.9 - ∞	4.7 - ∞	5.2 - ∞
f/16	2.4 - ∞	3.0 - ∞	3.4 - ∞	3.7 - ∞

24 mm, Equal To 35 mm On A Full Frame Camera				
	6 Feet	12 feet	25 feet	50 feet
f2.8	5.4 - 6.8	9.7 - 15.7	16.8 - 49.1	25.2 - ∞
f/4.0	5.1 - 7.2	8.9 - 18.1	14.7 - 83.8	20.8 - ∞
f/5.6	4.7 - 8.3	8.2 - 22.6	12.5 - ∞	16.8 - ∞
f/8	4.5 - 9.0	7.2 - 36.5	10.4 - ∞	13.1 - ∞
f/11	4.1 - 11.1	6.2 - 156.0	8.5 - ∞	10.3 - ∞
f/16	3.6 - 18.0	5.1 - ∞	6.6 - ∞	7.6 - ∞

35 mm, Equal To 50 mm On A Full Frame Camera				
	6 Feet	12 feet	25 feet	50 feet
f2.8	5.7 - 6.4	10.8 - 13.5	20.3 - 32.5	34.2 - 93.0
f/4.0	5.6 - 6.5	10.4 - 14.2	18.8 - 37.3	30.1 - 147.0
f/5.6	5.4 - 6.7	9.8 - 15.4	17.1 - 46.4	26.0 - ∞
f/8	5.2 - 7.1	9.1 - 17.5	15.1 - 73.3	21.5 - ∞
f/11	4.9 - 7.6	8.4 - 21.2	13.1 - ∞	17.9 - ∞
f/16	4.6 - 8.7	7.4 - 32.4	10.8 - ∞	13.7 - ∞

Or, if you prefer, a graphic based on the 24 mm focal length:



Everything within the DOF range will be sharp, with sharpness falling off gradually until the image becomes a useless blur. *You can prove this to yourself with the help of three volunteers and a tape measure.*