

## MACRO / CLOSE UP PHOTOGRAPHY

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Macro learning module

26<sup>th</sup> September 2017

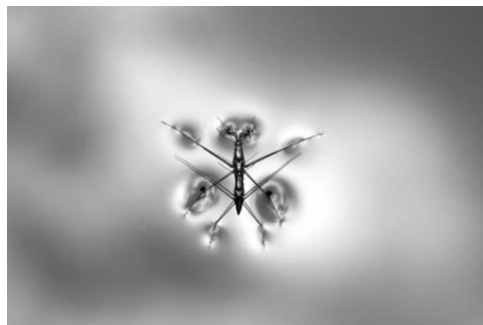
### MACRO PHOTOGRAPHY - DEFINITION

- Extreme close up photography
  - Usually of very small subjects and living organisms like insects
  - The size of the subject in the photograph is greater than life size
  - A macro photograph is one in which the size of the subject is life size or greater
  - Can also include close-up photography of whole object
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EXAMPLES



EXAMPLES CONTD.



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## MACRO PROVIDES DYNAMIC IMAGES BUT...

- Depth of field
- Focus
- Still subject matter
- Technically challenging
- Software assistance

## DEPTH OF FIELD

### Depth of Field Calculator

<b>Camera, film format, or circle of confusion</b>		<b>Subject distance</b>	<b>24 cm</b>
Canon 5D (Mark II, Mark III)		<b>Depth of field</b>	
<b>Focal length (mm)</b>	65	<b>Near limit</b>	<b>23.9 cm</b>
<b>Selected f-stop</b>	f/2.8	<b>Far limit</b>	<b>24.1 cm</b>
<b>Subject distance</b>	24   cm	<b>Total</b>	<b>0.17 cm</b>
Calculate		<b>In front of subject</b>	<b>0.08 cm (50%)</b>
		<b>Behind subject</b>	<b>0.08 cm (50%)</b>
		<b>Hyperfocal distance</b>	<b>4985.7 cm</b>
		<b>Circle of confusion</b>	<b>0.03 mm</b>

## DEPTH OF FIELD CONTD.

### Depth of Field Calculator

<b>Camera, film format, or circle of confusion</b>		<b>Subject distance</b>	<b>48 cm</b>
Canon 5D (Mark II, Mark III)		<b>Depth of field</b>	
<b>Focal length (mm)</b>	180	<b>Near limit</b>	47.8 cm
<b>Selected f-stop</b>	f/16	<b>Far limit</b>	48.2 cm
<b>Subject distance</b>	48 cm	<b>Total</b>	0.43 cm
Calculate		<b>In front of subject</b>	0.21 cm (50%)
		<b>Behind subject</b>	0.21 cm (50%)
		<b>Hyperfocal distance</b>	6768 cm
		<b>Circle of confusion</b>	0.03 mm

## DEPTH OF FIELD CONTD.

### Depth of Field Calculator

<b>Camera, film format, or circle of confusion</b>		<b>Subject distance</b>	<b>48 cm</b>
Canon 5D (Mark II, Mark III)		<b>Depth of field</b>	
<b>Focal length (mm)</b>	50	<b>Near limit</b>	44.3 cm
<b>Selected f-stop</b>	f/16	<b>Far limit</b>	52.3 cm
<b>Subject distance</b>	48 cm	<b>Total</b>	7.98 cm
Calculate		<b>In front of subject</b>	3.66 cm (46%)
		<b>Behind subject</b>	4.32 cm (54%)
		<b>Hyperfocal distance</b>	525.8 cm
		<b>Circle of confusion</b>	0.03 mm

## DEPTH OF FIELD CONTD.

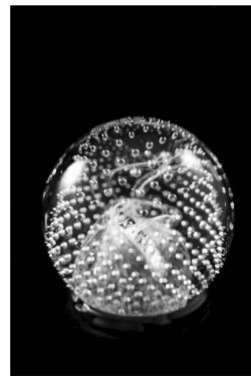
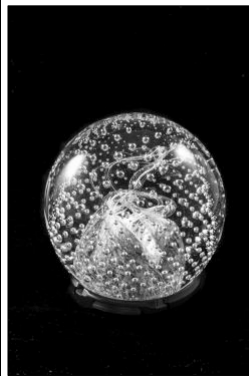
- [Free DOF Calculator on-line](#)

## EXAMPLES



50mm lens f 2.8

50mm lens f 16 + 100mm extension tube f 16



## CREATIVE USE OF DEPTH OF FIELD



## EQUIPMENT RANGE



Extension tubes – available for approximately £30



EQUIPMENT RANGE CONTD.



Bellows – available for approximately £40-50

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EQUIPMENT RANGE CONTD.



Lighting – Canon Ring Flash Unit £375

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EQUIPMENT RANGE CONTD.



Lighting – LED Ring Light £25-30

EQUIPMENT RANGE CONTD.



Lighting – Small portable studio £25-30

## SOFTWARE SOLUTIONS

- Helicon Focus
- Elements+ add-on to Photoshop Elements
- Remote control software
- Tethered & Wireless

## SAMPLE IMAGES

