



# Macro Photography

Exploring new and innovative ideas  
and techniques in Macro Photography

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## Macro Photography:

Seeing the unseen world.

Capturing details in objects that are not be visible

The image projected on the film plane is of the same size or larger, than the size of the subject.

Covers a range of magnification from life size (1x magnification or 1:1) to 40 times life size (40x magnification or 40:1).

However 10x is the practical limit using 35mm equipment that is readily available in the market.

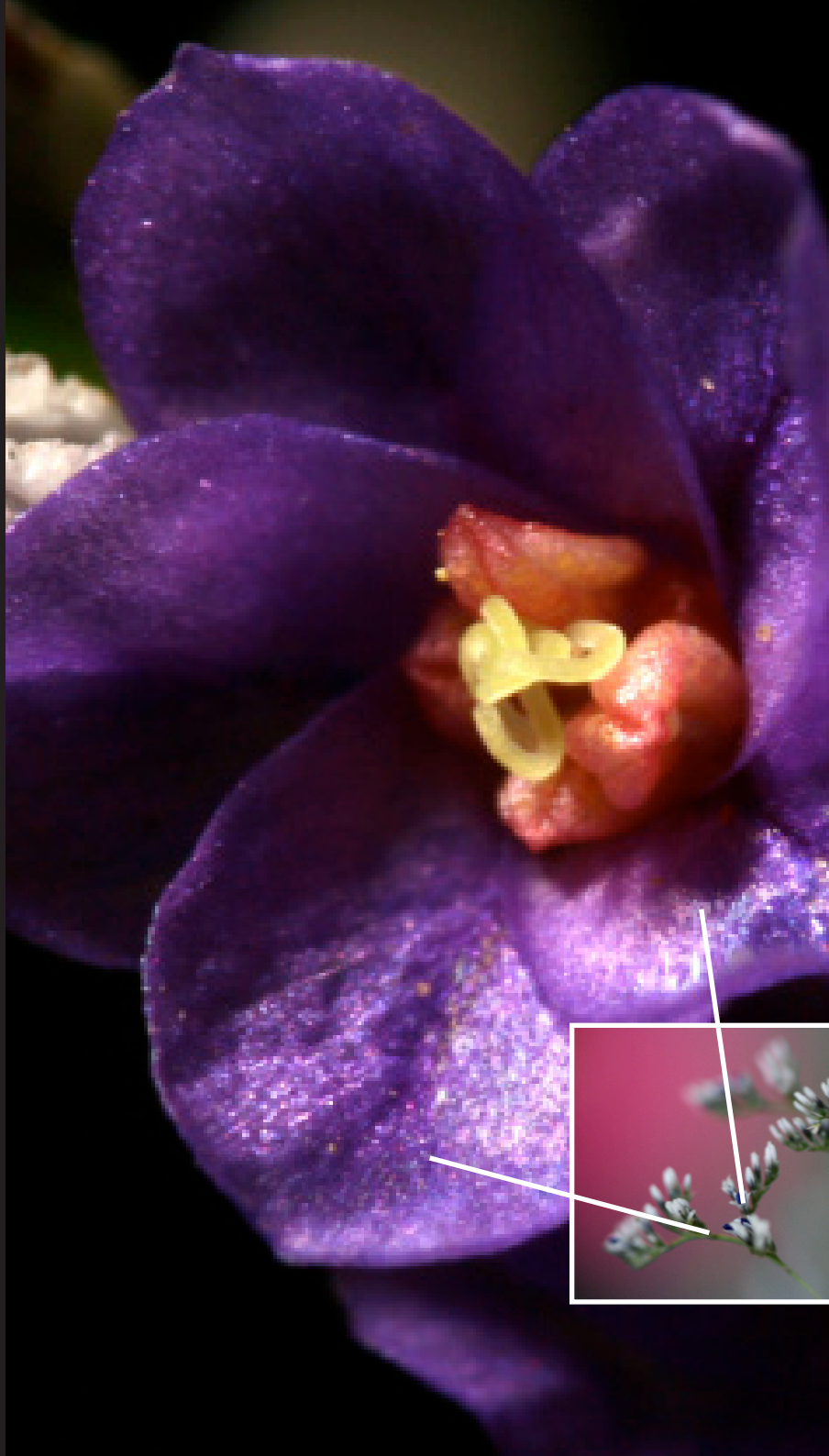
Macro Photography is a branch of close up photography.

Any picture taken from about 12 inches or less from the subject down to half an inch or even closer.

A macro picture is not a huge picture but rather a normal sized picture of a tiny object that has been made to appear large.



Factors affecting  
Macro photography



## Magnification

The enlargement of the image of a subject on the film plane, which may be of the same or larger size than that of the subject.

Magnification is always represented as a 1x, 2x, 5x etc.

Level of magnification can be measured using the following scale:

1:1 (same size as that of the object) to 10:1 and above (being extremely enlarged).

*According to Stan Sholic, Ron Eggers:*

Formula for Magnification =  $\frac{\text{Image size on film plane}}{\text{Actual size of the subject}}$

It is independent of the film format in use.

Differentiates Macro photography from other forms of photography.

Magnification of an object always adds the surprise factor



## Lighting:

*Photography = photos (light) and graphé (representation by means of lines or drawing)*

Going closer to the subject may result in casting a shadow of the camera on the subject.

Resulting in low light condition and under exposure.

Additionally low light makes it difficult to see the subject and focus.

Low light can result in long exposure.

This may be may be undesired if the subject is moving.

To resolve the problem of low lighting in macro photography a ring flash can be used.



## Depth of field:

it is essential to focus on the most important part of the subject.

*It is the zone, measured in terms of near distance and far distance from the camera, where the image appears acceptably sharp.*

*Depth of field depends on various factors for a film or video that may be the type of film, lens used, filters, and lighting.*

The factors that may affect the depth of field are focal length, aperture and distance of the object from film plane.



## Bokeh:

*The Japanese word boke, which means "blur".*

Bokeh is the blur or the out of focus area of an image.

It is the way a lens renders the out of focus areas of highlight in an image.

Bokeh occurs in that area of the scene that lie out of the depth of field.

it occurs in all out of focus areas of the image though it is visible only in the highlights of the image.

Different lenses give different bokeh.



Techniques for doing  
Macro photography



## Reversing a lens:

This technique involves reversing any lens so as to give magnification from 1:1 and above.

The lens is reversed using a 'lens reversing ring' as shown in the image.

This ensures that the rear end of the lens is exposed.

### Advantages:

- Higher magnification ratio.
- Extreme bokeh and very shallow depth of field.
- Cheaper option.

### Disadvantages:

- Extremely shallow depth of field.
- No command on the functions of the camera.
- Difficulty in resetting and changing the aperture.
- Loss of intensity of light reaching the film plane.
- High probability of blurring of the image.



## Canon 100mm f 2.8 Macro lens:

Due to the USM the lens focuses very fast, quietly and very accurately

It is a bit slow when the lens is at the minimum focusing distance from the subject.

The tiniest details in the tiniest subjects will come to life with the lens.

This lens with a small f-stop number results in beautiful bokeh .

It is also a great portrait lens.



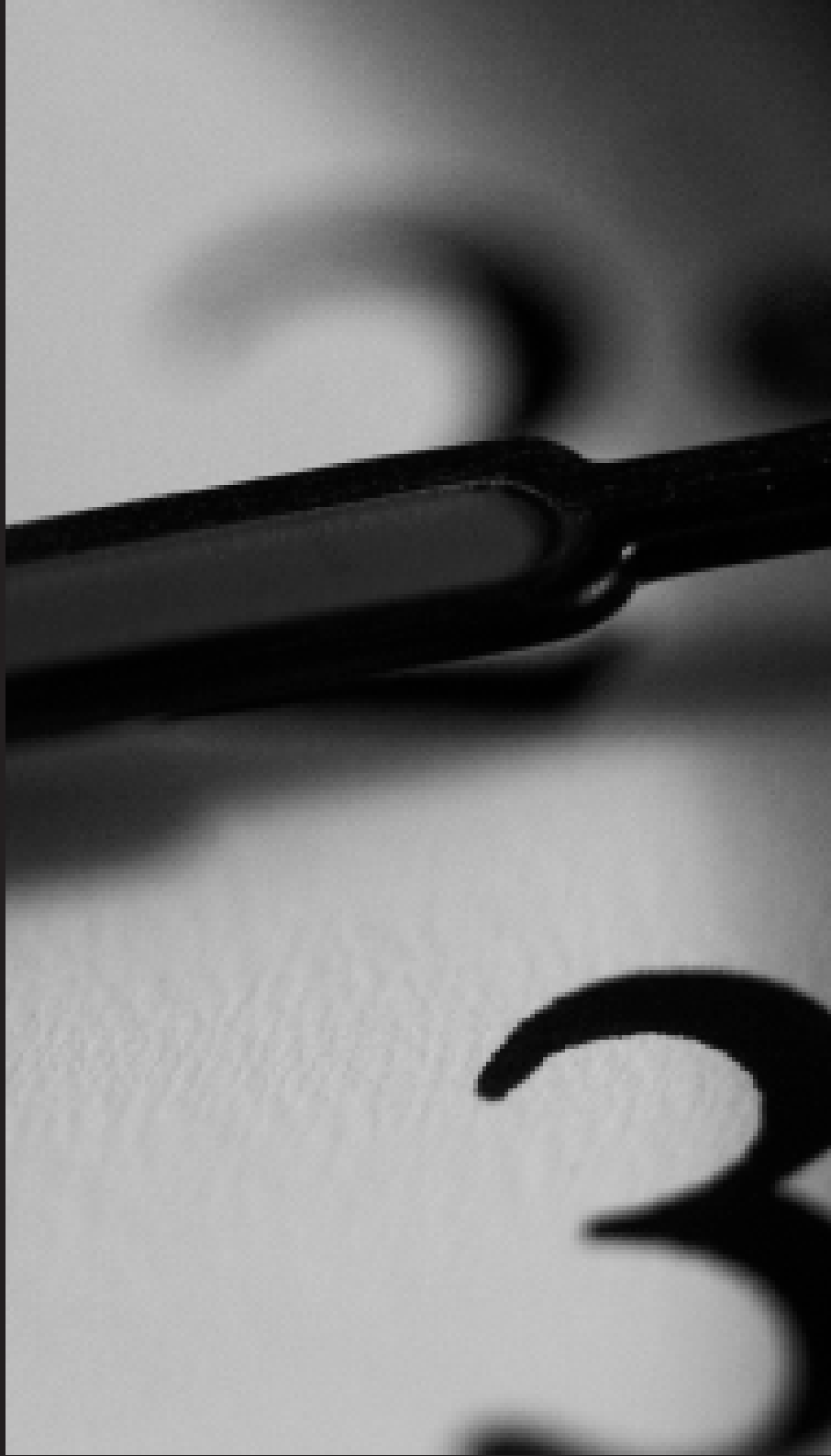
## Macro and Close up filters & a telephoto lens

With these filters the focusing distance decreases to less than an inch and the

clear focusing area is around 40mm of the filter. It appears sharpest only in this range and gets blurred at the edges.

Like a Magnifying glass.





## Time Lapse Photography

Time-lapse photography is a technique which consists of capturing images of a movement at a much slower rate and then playing it back at a faster pace.

Time lapse photography can be easily mistaken for stop motion animation but it has a very distinct and stark difference.

In stop motion animation one has to physically move the subject around.

Where as time lapse is capturing the naturally occurring movement in a given frame.

Time lapse video is a video which has the ability to play like a film and has continuity in the movement.

Sometimes the movement may be abrupt due to larger time difference while shooting the images.



## Combining Macro and Time lapse photography

Macro photography has the capacity to capture the unseen world.

Time lapse photography can contract time to enthrall the viewer.

Combining them can take this project to a whole new level of viewing.

There are movements in the macro world that are subtle and happen around us everyday.

Yet sometimes tend to not notice these movements as they are such a part of our daily life or happen over a long period of time.

Showing these movements will be very exciting for me as well as the viewer to see.



## Final Output:

Video

Exhibition of photographs

Book - 2 concepts



Concepts and final  
string out of the Video

# Concept 1

This is a story board which shows the movements that happen on a macro level around us that we may not notice. This a video which has three loops of events which start from the same frame and come back to it. It has immense possibilities of macro photography time lapse.

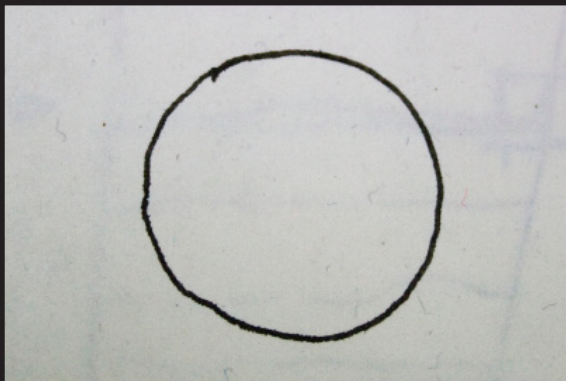


We always look at the larger picture, not noticing the smaller movements happening around us.



Zoom in to the table clock on the table to show the movement of the hands of the clock.

A scene of a table with a lot of objects that have



Blurring this image out to form a bokeh pattern which will slowly transform or dissolve into the next image / video shot.

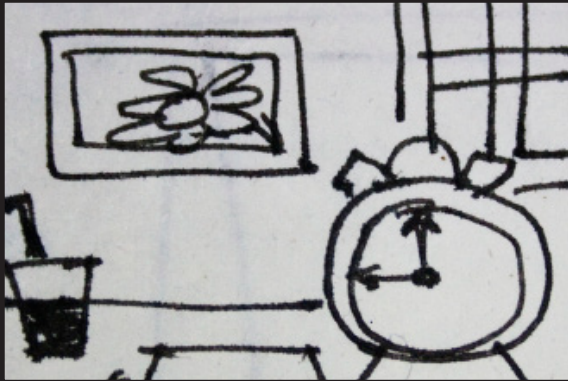


Blurred to a focused image of a plant from the back of which the sun rises.

This shot will have the flower in focus and the sun



Zoom into the same flower. It is closed at first and then slowly blooms. Also this shot could begin with focusing on the dew of the plant which evaporates and the flower which will bloom.



The last shot of the previous frame would then remain as it is and the camera will zoom out of the frame from the first shot of the table top.



From here the camera zooms into another part of the scene ie window in the background and to the plant in the window. It still zooms into a macro level where I can show growth or movement in



Next shot is of a stone on the ground. Then to show evaporation of water from the surface of the rock or the play of shadows on it.



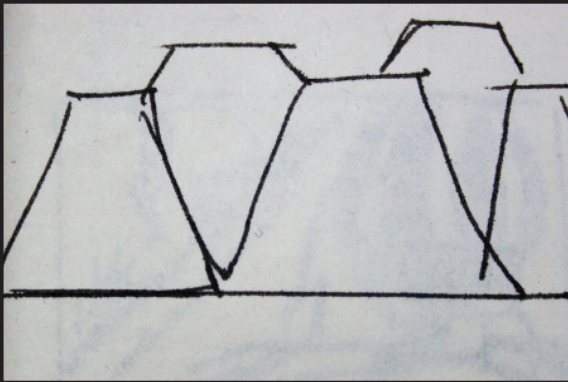
Suddenly a broom appears and sweeps the rock away. This shows the movement in dust and how particles move.



Zooming out shot of the person sweeping the ground.



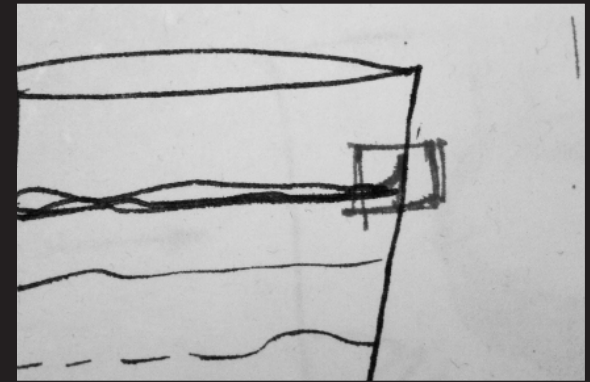
The person stops sweeping and walks into the door in the background



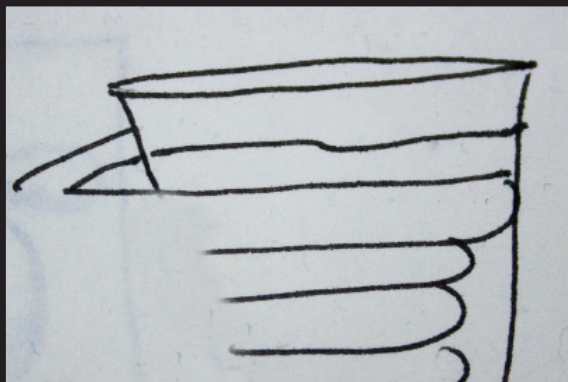
Cut shot to glasses place on a table from where one of glasses will be picked up.



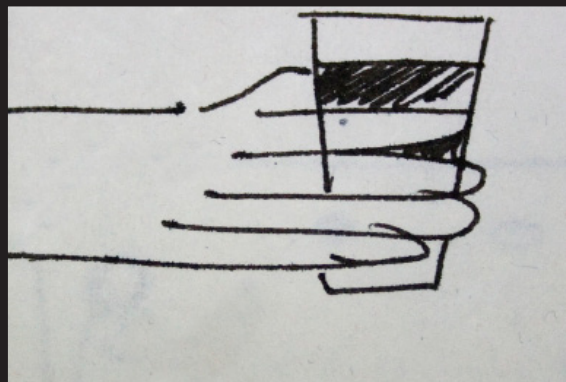
Cut to the running water from a tap to show the movement in shape of the flowing water.



Cut to the water filling the glass.



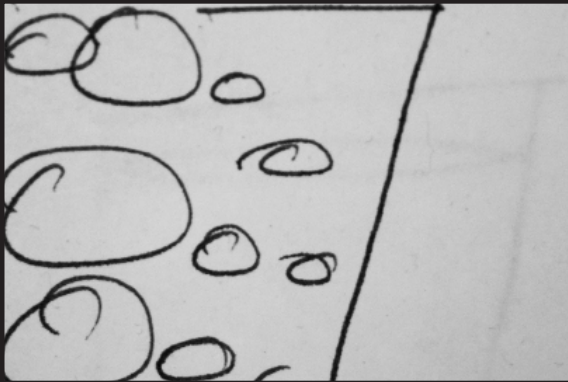
A hand picks up the glass



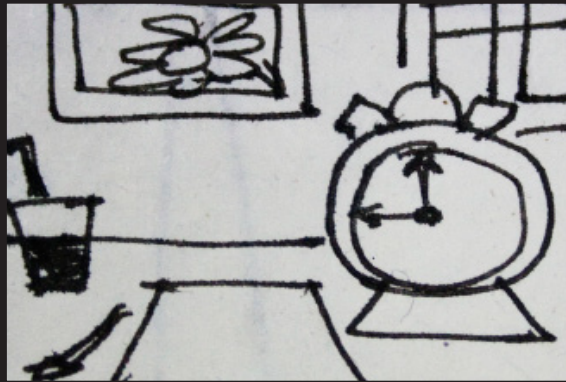
Carries the glass forward



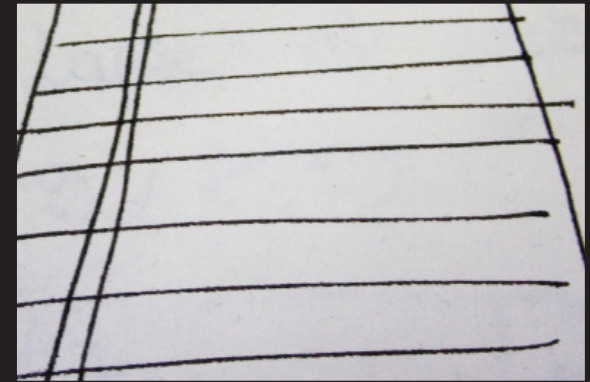
Rests the glass on a table or some surface



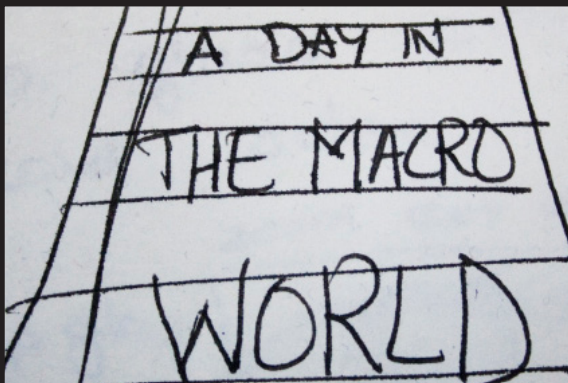
Condensation happens on the surface of the glass.



Zooming out shot  
This scene matches the first scene of the video.



Zoom in to the paper on the table.

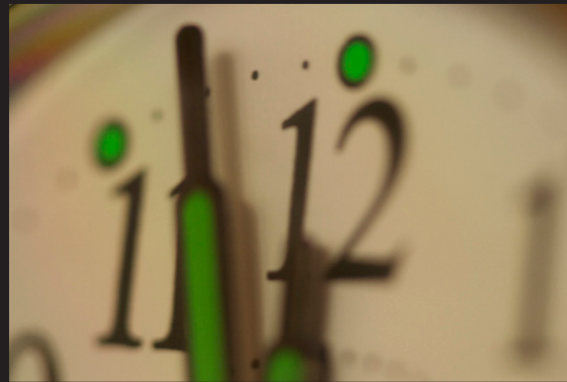


Words get written on the paper. This is the title of the video. Credits will appear after this.

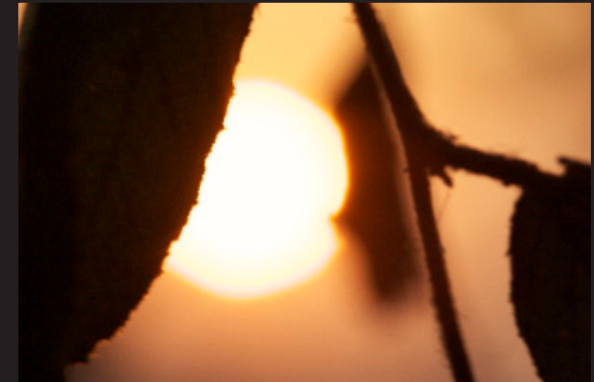
End of video.

## Concept 2

Stringing together a series of Time lapse videos with the music that will be used. Each time lapse video has a particular rhythm to it and this rhythm will be matched to the pace and beats of the musical piece to create a pleasing video.



Ticking of a clock



Sunrise



Blooming of a flower



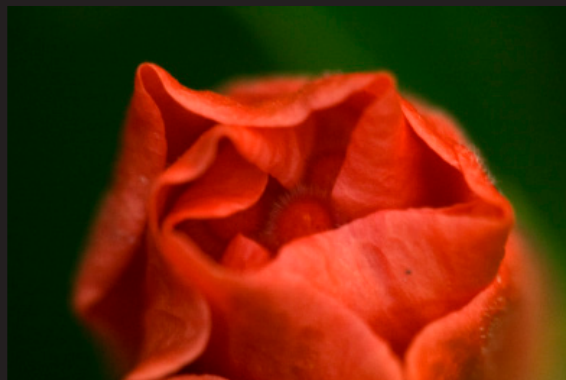
Blooming of a flower



Formation of droplets on a surface.



Pouring of water



Blooming of a flower



Flames of a burner



Melting of ice



Formation of a bubble



Melting of ice



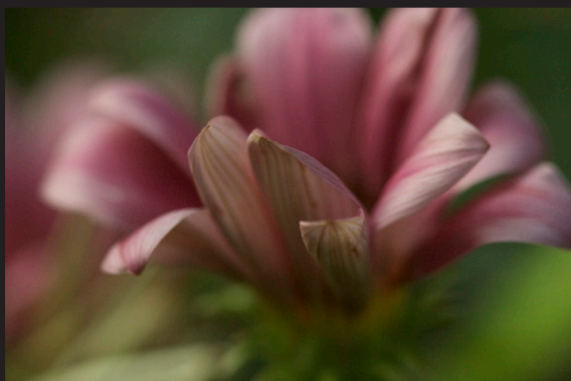
Blinking, darting opening etc. of an eye



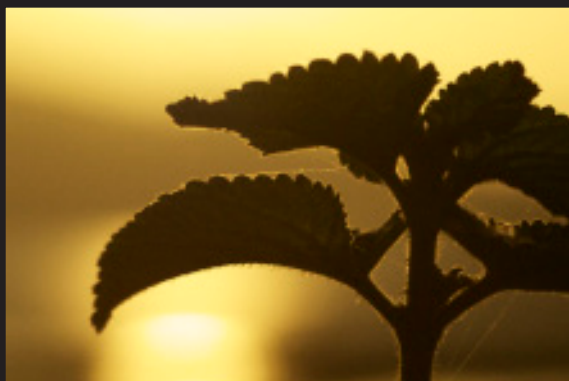
Movement of a fish



Playing a musical instrument.



Closing of a flower at sunset



Sunset



Burning of a candle



## Music used in the video

The music that I am searching for can have the following characteristics:

- Fast
- Catchy
- Energising
- Folk
- Instrumental
- Climactic.
- Gypsy music
- Peppy
- Beats changing regularly

Examples of music with these characteristics:

**August Rhapsody from August Rush.**

Bucás - Tiruleque:

Xota Bakalada - Tiruleque:

Thème de combat: Julien PETITJEAN - Jean qui rêve

Spring: Schwarzweiss - Untiteled



andobhv dhcjhvsjv  
jh dhcjhvsjv  
hcfjss dhv dhcjhvc  
jnhjne jksjgkj oalj  
jefksj knsfnf ksjjda



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jh dhcjhvsjv  
hcfjss dhv dhcjhvc  
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jefksj knsfnf ksjjda

Slide the photograph out to view.  
There will be information on the gateway envelope

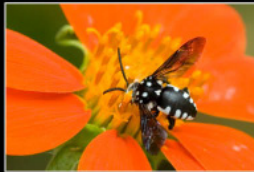
## The Book

### Concept 1

Sliding book - This book is designed in such a way that it does not need to be opened.

The book has a slider mechanism with which one can pull out the images out to view them individually.

There are layers of information for the person viewing.



## Concept 2

This concept was mainly designed in such a way so as to focus on the main images and also give similar images space.

This book has the major image on the left hand side of the book and the secondary images on the right hand side.

The images have been sorted with on basis of the kind, colour etc.

This book is more like a portfolio of my work in the past months.

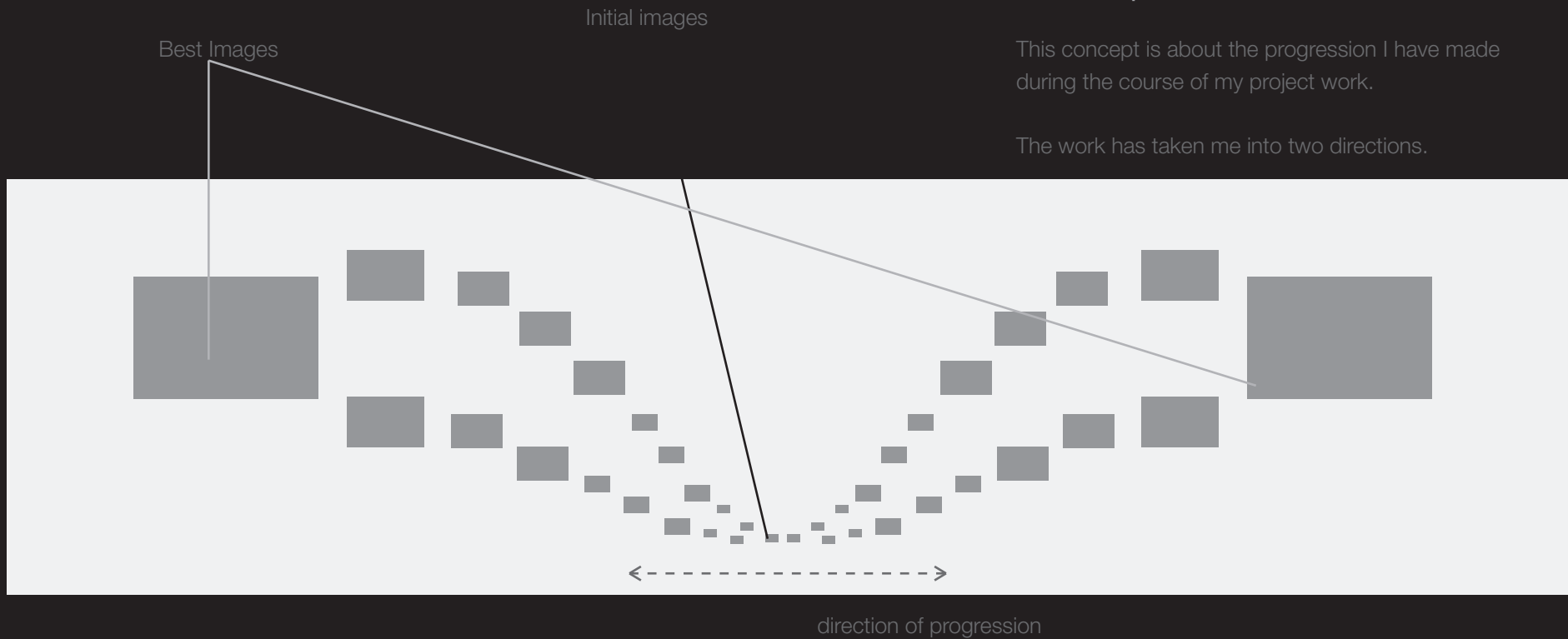


# Exhinition Design

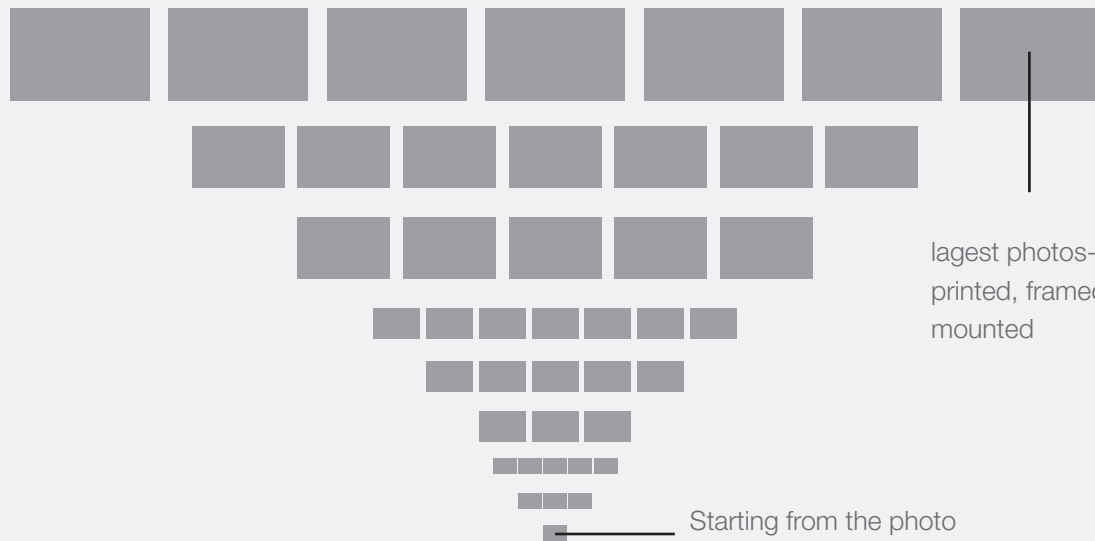
## Concept 1

This concept is about the progression I have made during the course of my project work.

The work has taken me into two directions.



## FOR A WALL EXHIBITION



largest photos-printed, framed, / mounted

Starting from the photo that inspired me.

## Concept 2

To show my photography getting better by the day.

This concept works its way in a down to top kind of a way.

This concept is mainly for the Changing Display Wall at IDC which is a flat wall surface.

One draw back is that there are too many images in one given space.



Thank you!!