

*Class #4*

# DIGITAL MEDIA FOUNDATIONS

# *Class #4*

## **Design Production: Resolution, Compression & Image File Formats**



# Today's agenda

**Design Production: Resolution, Compression  
& Image File Formats**

**Homework Reviews**

**Homework: Design Assignment - Poster  
Design - Move to design!**

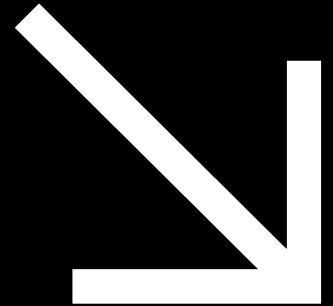
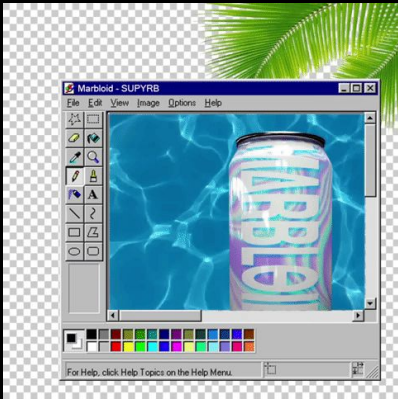
**Next Class: Color Theory**

# Design Production: Resolution, Compression & Image File Formats



*Let's Discuss:*

# What is Resolution?



# *Definition (Let's read!):*

In digital photography, resolution is the level of detail contained in an image. More specifically, it refers to the number of pixels that exist within that image. The higher the resolution, and the richer the pixel count, the more detail and definition you will see.



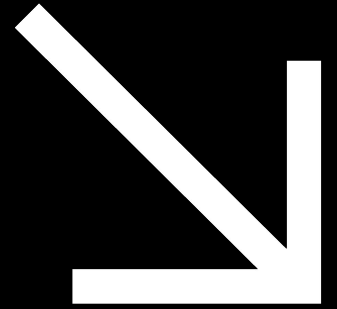
**300dpi**

**72dpi**

**10dpi**

*Let's Discuss:*

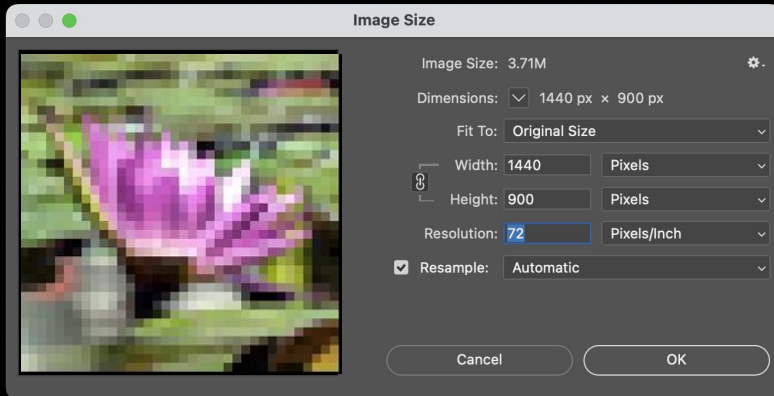
**What the difference  
between **Screen Resolution**  
& **Print Resolution****





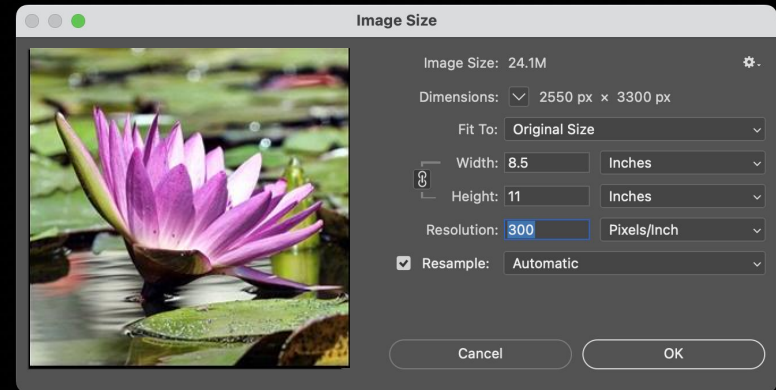
# Screen Resolution

- PPI (**pixels** per inch)
- Recommended minimum **72 DPI**
- File types: JPG, PDF, GIF, PNG
- File size: **Light**
- Colors: RGB

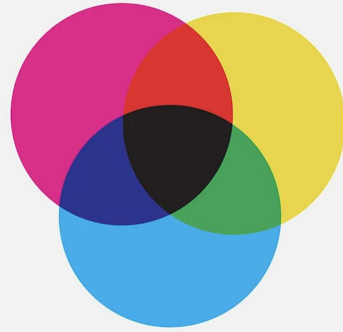
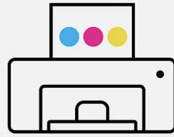


# Print Resolution

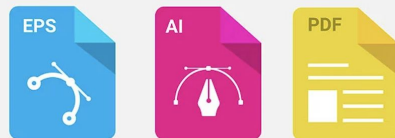
- DPI (**dots** per inch)
- Recommended minimum **300 DPI**
- File types: AI, PSD, EPS, JPG, PDF, TIF
- File size: **Heavy**
- Colors: CMYK



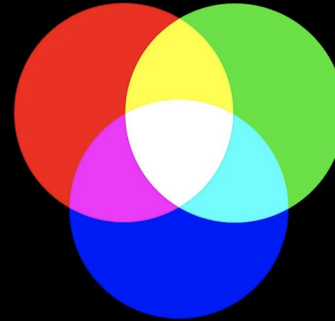
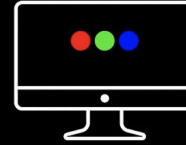
FOR PRINT  
**CMYK**



FILE FORMATS



FOR SCREENS  
**RGB**

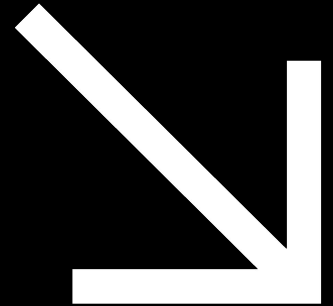


FILE FORMATS



*Let's Discuss:*

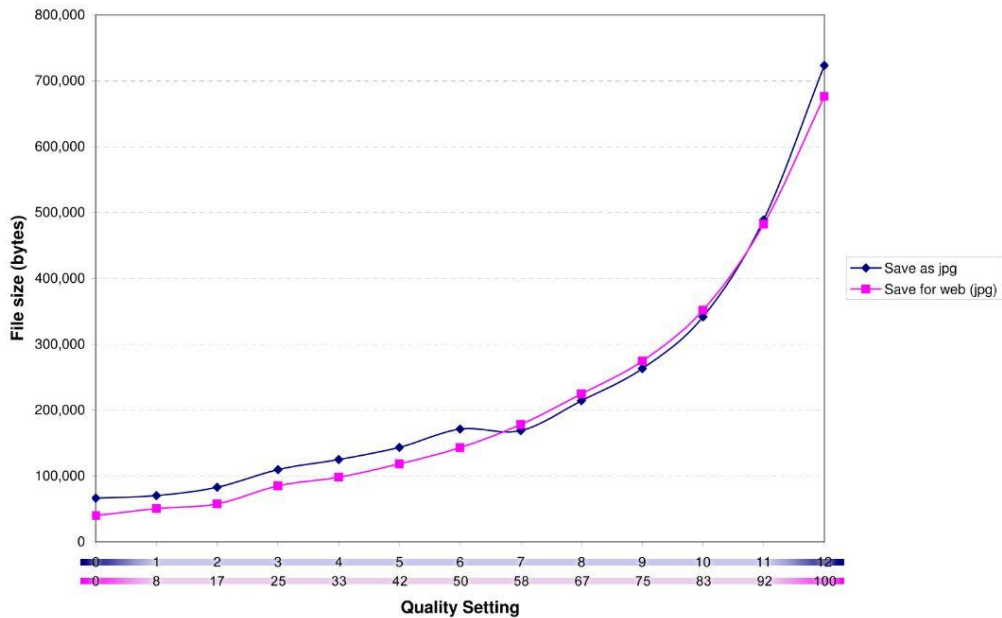
# What is Image/Video Compression?



# *Definition:*

Image compression is a type of data compression applied to digital images, to reduce their cost for storage or transmission.

## Quality vs File Size



Saved as jpg



Saved for web jpg



Saved as jpg




Saved for web jpg







johanne...lash.jpg  
Low-joh...lash.jpg




Low-johannes-plenio-  
RwHv7LgeC7s-unsplash.jpg  
JPEG image - 2 KB

**Information** [Show More](#)

Created	Today, 10:27 AM
Modified	Today, 10:27 AM
Dimensions	120x80

Poor Quality

johanne...lash.jpg  
Low-joh...lash.jpg




johannes-plenio-  
RwHv7LgeC7s-unsplash.jpg  
JPEG image - 5.7 MB

**Information** [Show More](#)

Created	Today, 9:57 AM
Modified	Today, 9:57 AM
Dimensions	4368x2912
Resolution	72x72

Print Quality

Low-joh...lash.jpg  
Print-jo...lash.jpg  
web-95...lash.jpg



web-95-johannes-plenio-  
RwHv7LgeC7s-unsplash.jpg  
JPEG image - 3.4 MB

**Information** [Show More](#)

Created	Today, 10:30 AM
Modified	Today, 10:30 AM
Last opened	Today, 10:30 AM
Dimensions	1920x1280

Web Quality



Tip: Use File > Export > Export As... or right click on a layer for a faster way to export assets

[Learn More](#)

Original Optimized 2-Up 4-Up



Preset: [Unnamed] ▾

JPEG ▾

Very High ▾ Quality: 95 ▾

Progressive Blur: 0 ▾

Optimized Matte: [Color Picker]

Embed Color Profile

Convert to sRGB

Preview: Monitor Color ▾

Metadata: Copyright and Contact Info ▾

Color Table ▾

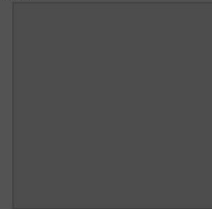


Image Size

W: 1920 px Percent: 43.96 %

H: 1280 px Quality: Bicubic ▾

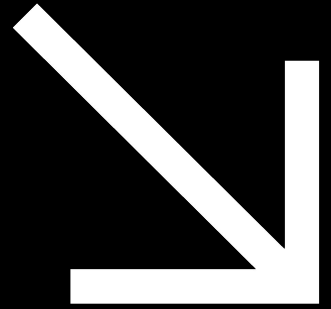
Animation

Looping Options: Forever ▾

1 of 1

*Let's Discuss:*

**Are pixelated or low  
quality images bad?**





*Let's Discuss:*

**Are pixelated or low  
quality images bad?**

**A: Depends on content  
and context!**

PIXEL ART!

PIXEL ART!

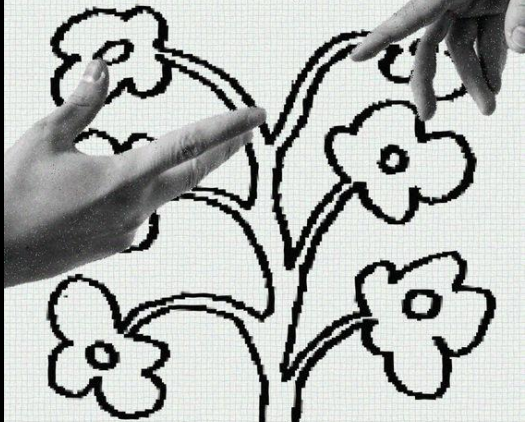
PIXEL ART!

14 You know what it's like when it feels like you can't anymore energy is low and you suffer from 01

INFINITE

# Tension

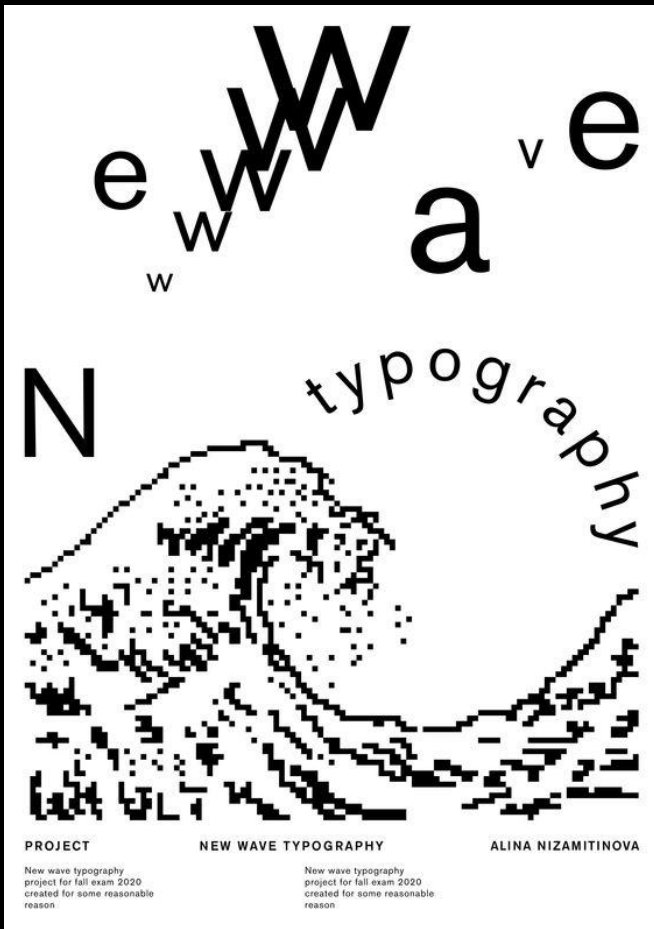
Waiting all day just to feel something stir inside  
Ok but tell me, what do you want?



**CALL 1-800-ZED**  
For *real* body stress release



**MASATO SAMATA  
(DELAWARE)  
EXPO**



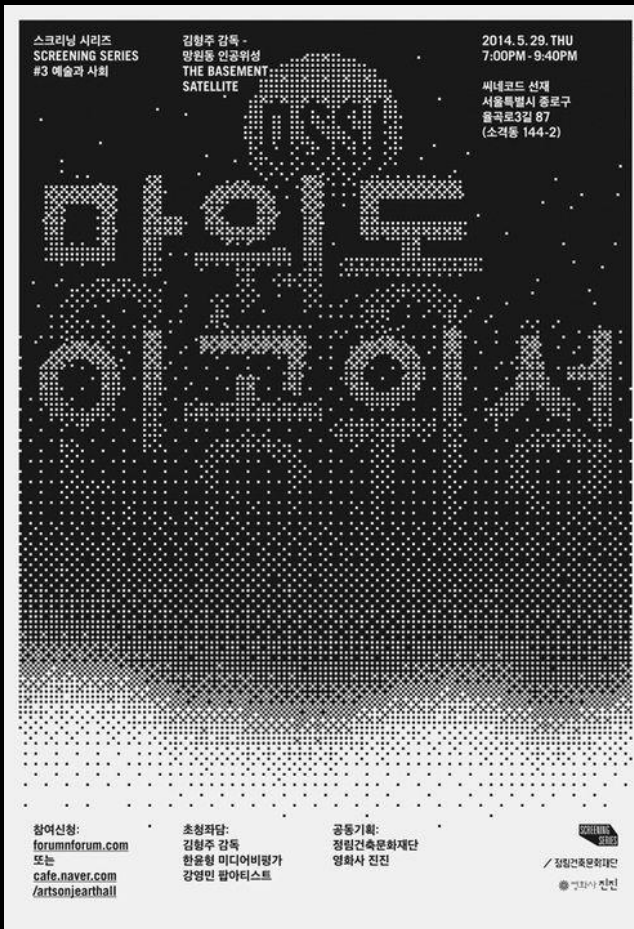
PROJECT

New wave typography  
project for fall exam 2020  
created for some reasonable  
reason.

NEW WAVE TYPOGRAPHY

New wave typography  
project for fall exam 2020  
created for some reasonable  
reason.

ALINA NIZAMITNOVA



스크리닝 시리즈  
SCREENING SERIES  
#3 예술과 사회

김형주 감독 -  
망원동 인공위성  
THE BASEMENT  
SATELLITE

2014. 5. 29. THU  
7:00PM - 9:40PM

비네킨드 신재  
서울특별시 종로구  
율곡로3길 87  
(소격동 144-2)

참여신청:  
[forumforum.com](http://forumforum.com)  
또는  
[cafe.naver.com/artsonjeartball](http://cafe.naver.com/artsonjeartball)

초청자담:  
김형주 감독  
한울형 미디어비평가  
강영민 팝아티스트

공동기획:  
정림건축문화재단  
영화사 전진

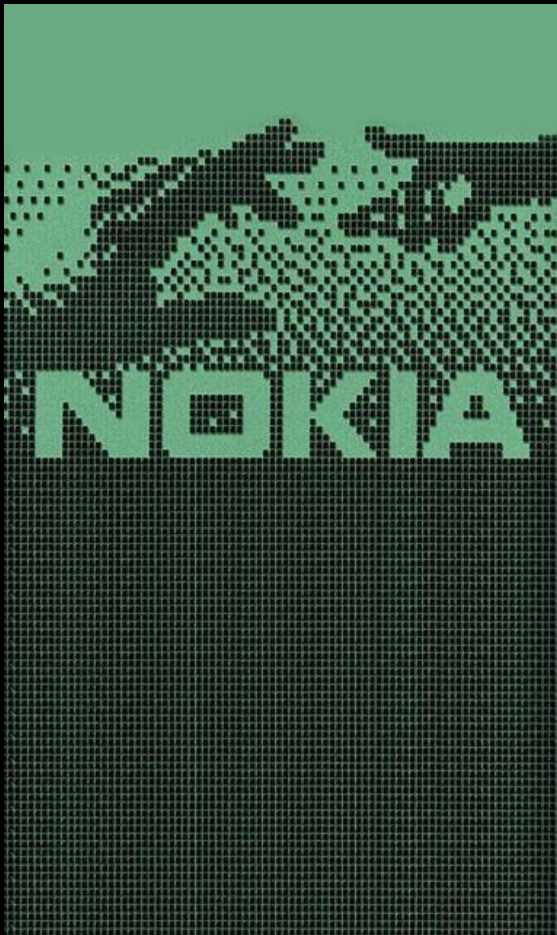


/ 정림건축문화재단

영화사 전진







→ DONDERDAG 8 OKTOBER  
STUDIO VERHEYDEN  
20:00, INLOOP 19:30



stimuleringsfonds  
creative industrie



Ontwerp: Sjoerd van der Meer



→ ENTREE €8,00  
MELD JE VOORAF AAN  
VIA O-P-A.NL

→ GRATIS VOOR OPA/BNO MEMBERS  
& STUDENTEN RIJN IJSSEL  
CREATIEVE INDUSTRIE/HAN IPO

O-P-A.NL



KT&G 상상마당 홍대 갤러리 | 2019. 8. 14. - 9. 22.

# PLASTIC LOVE

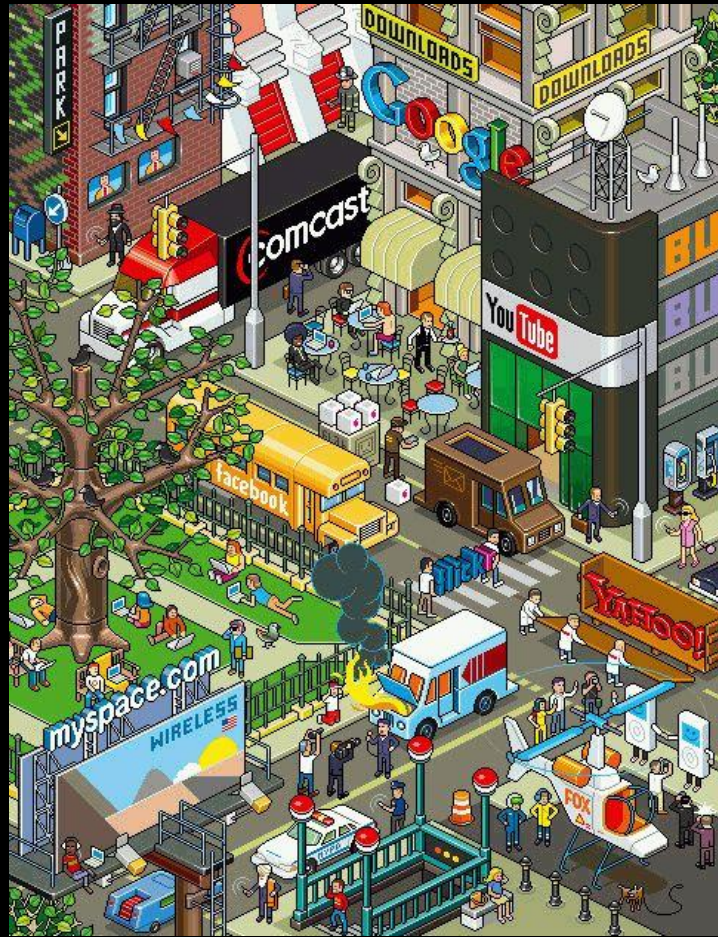
유화수 정혜경 권도연 PRAG-LAB

관람 시간: 11:00-20:00 (수요일 휴무) 문의: 02-330-6229

이전 프로젝트: [플라스틱 사랑 \(PLASTIC LOVE\)](#) (1차, 2차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (3차, 4차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (5차, 6차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (7차, 8차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (9차, 10차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (11차, 12차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (13차, 14차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (15차, 16차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (17차, 18차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (19차, 20차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (21차, 22차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (23차, 24차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (25차, 26차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (27차, 28차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (29차, 30차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (31차, 32차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (33차, 34차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (35차, 36차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (37차, 38차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (39차, 40차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (41차, 42차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (43차, 44차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (45차, 46차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (47차, 48차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (49차, 50차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (51차, 52차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (53차, 54차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (55차, 56차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (57차, 58차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (59차, 60차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (61차, 62차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (63차, 64차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (65차, 66차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (67차, 68차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (69차, 70차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (71차, 72차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (73차, 74차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (75차, 76차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (77차, 78차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (79차, 80차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (81차, 82차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (83차, 84차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (85차, 86차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (87차, 88차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (89차, 90차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (91차, 92차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (93차, 94차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (95차, 96차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (97차, 98차) | [플라스틱 사랑 \(PLASTIC LOVE\)](#) (99차, 100차)

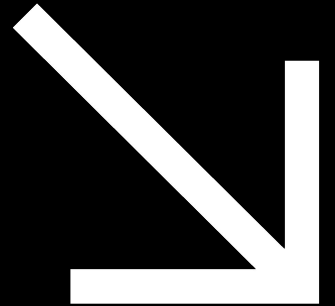
patagonia HONEY WRAPS BOFFY FACTORY





*Let's Discuss:*

# Screen Sizes & Aspect Ratio? (in Pixels)



## Aspect ratios

### 21:9

Ultra-widescreen films used to create a 360-degree effect use the 21:9 aspect ratio.

### 16:9

For online videos, modern TVs, and movie theaters.

### 4:3

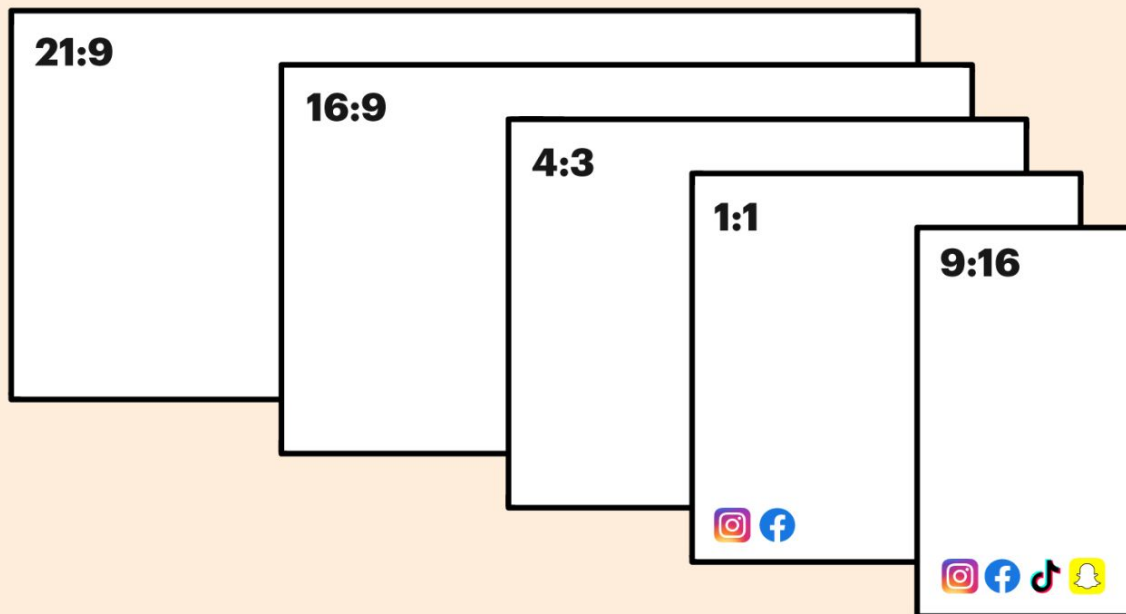
For film and was supported on box TVs and computer monitors until HD came along.

### 1:1

For social media platforms such as Facebook and Instagram.

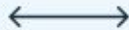
### 9:16

This aspect ratio became popular when you could start shooting video with a smartphone.

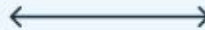
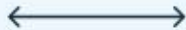


# Width Window Size Classes

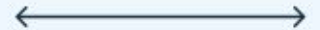
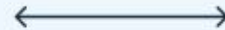
Compact



Medium

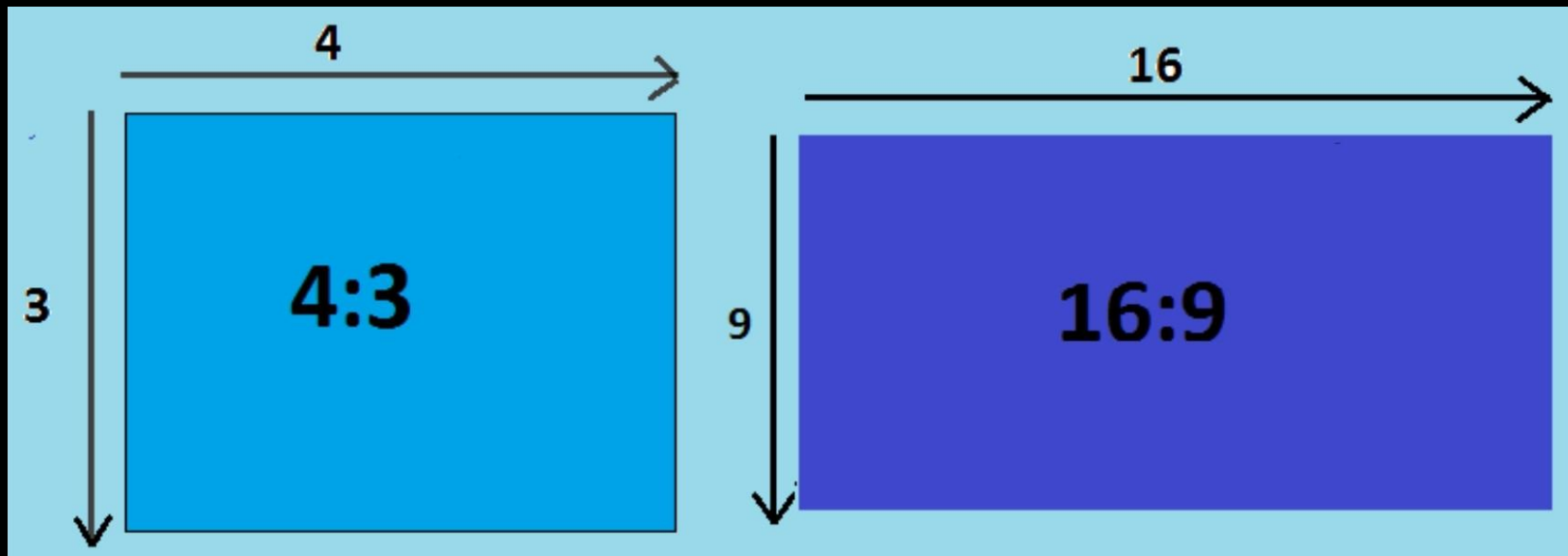


Expanded



600 dp

840 dp





18:9



18.5:9

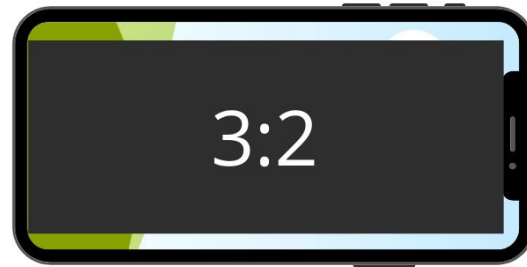
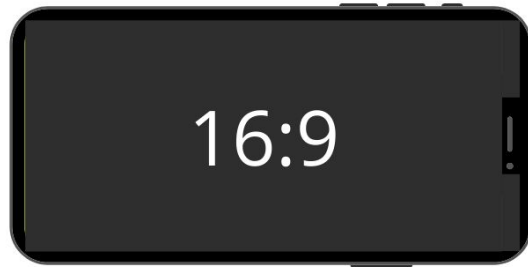
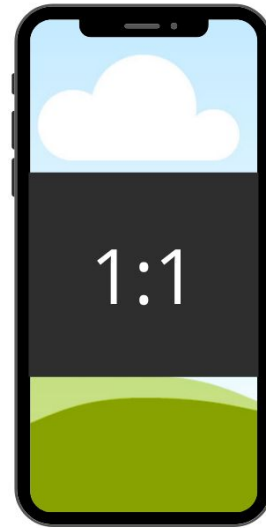


17:9



16:9





**4K Ultra HD**

3840 x 2160px

**2K Quad HD**

2560 x 1440px

**Full HD**

1920 x 1080px

**HD**

1280 x 720px

1366x768

1600x900

1920x1080

1920x1200

2560x1440

2560x1600

4K UHD (3840x2160)

4K (4096x2160)

Point resolution

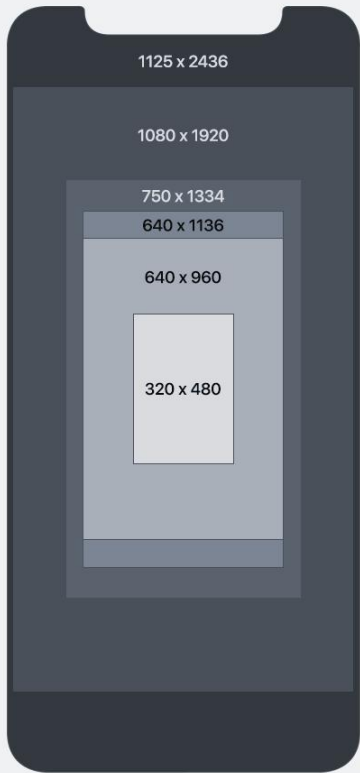


Image resolution



Screen resolution





iPhone X

iPhone 8, 7, 6s, 6 Plus

iPhone 8, 7, 6s, 6

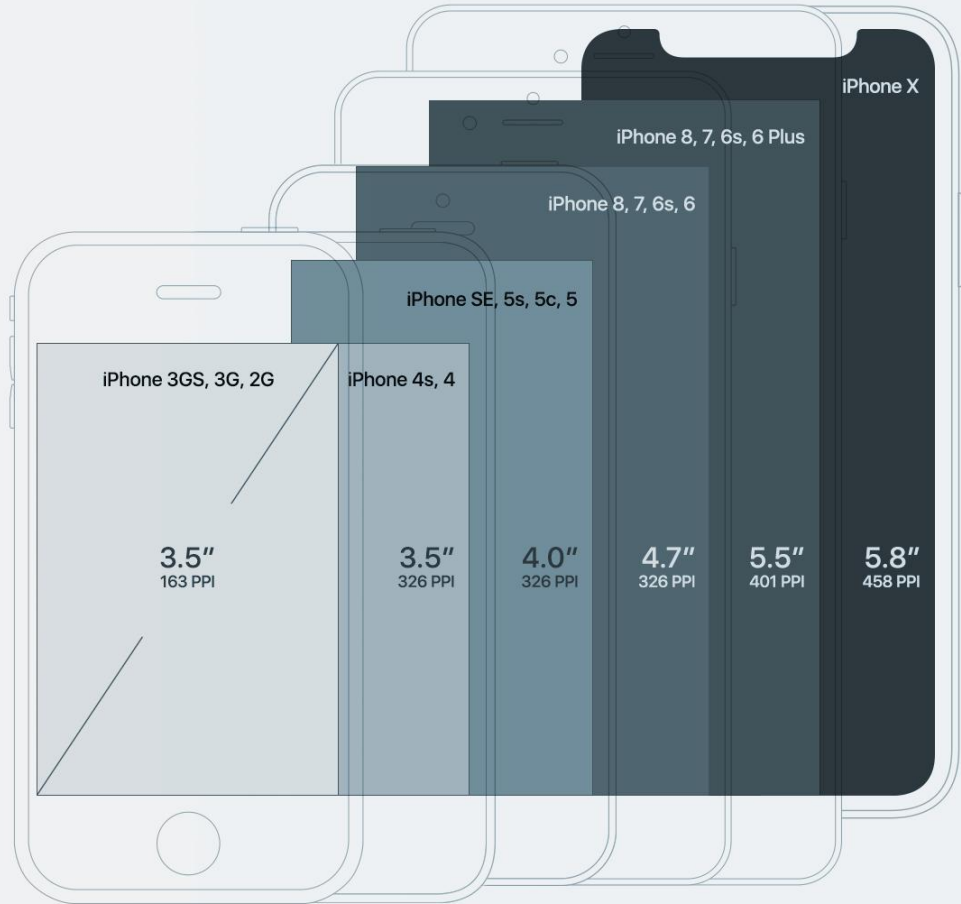
iPhone SE, 5s, 5c, 5

iPhone 4s, 4

iPhone 3GS, 3G, 2G

# iPhone

◀ Screen Resolution | Size ▶  
Through the Years



# *Vector*

## Used for:

- Logos
- Icons
- Charts
- Illustrations

## File formats:

- .svg
- .eps
- .ai
- .pdf

# *Bitmap (Raster)*

## Used for:

- Photography
- Collages
- Pixel based Imagery

## File formats:

- .jpg / .jpeg
- .png
- .gif
- .tif
- .bmp
- .psd

# *File Types*





# Image file formats



## Raster images

Pixel-based graphics  
Resolution dependent  
Photos & web graphics

**JPG**

Web & print photos and quick previews

**GIF**

Animation & transparency in limited colors

**PNG**

Transparency with millions of colors

**TIFF**

High quality print graphics and scans

**RAW**

Unprocessed data from digital cameras

**PSD**

Layered Adobe Photoshop design files



## Vector images

Curve-based graphics  
Resolution independent  
Logos, icons, & type

**PDF**

Print files and web-based documents

**EPS**

Individual vector design elements

**AI**

Original Adobe Illustrator design files

These vector image formats can also incorporate raster elements.

## Image color formats



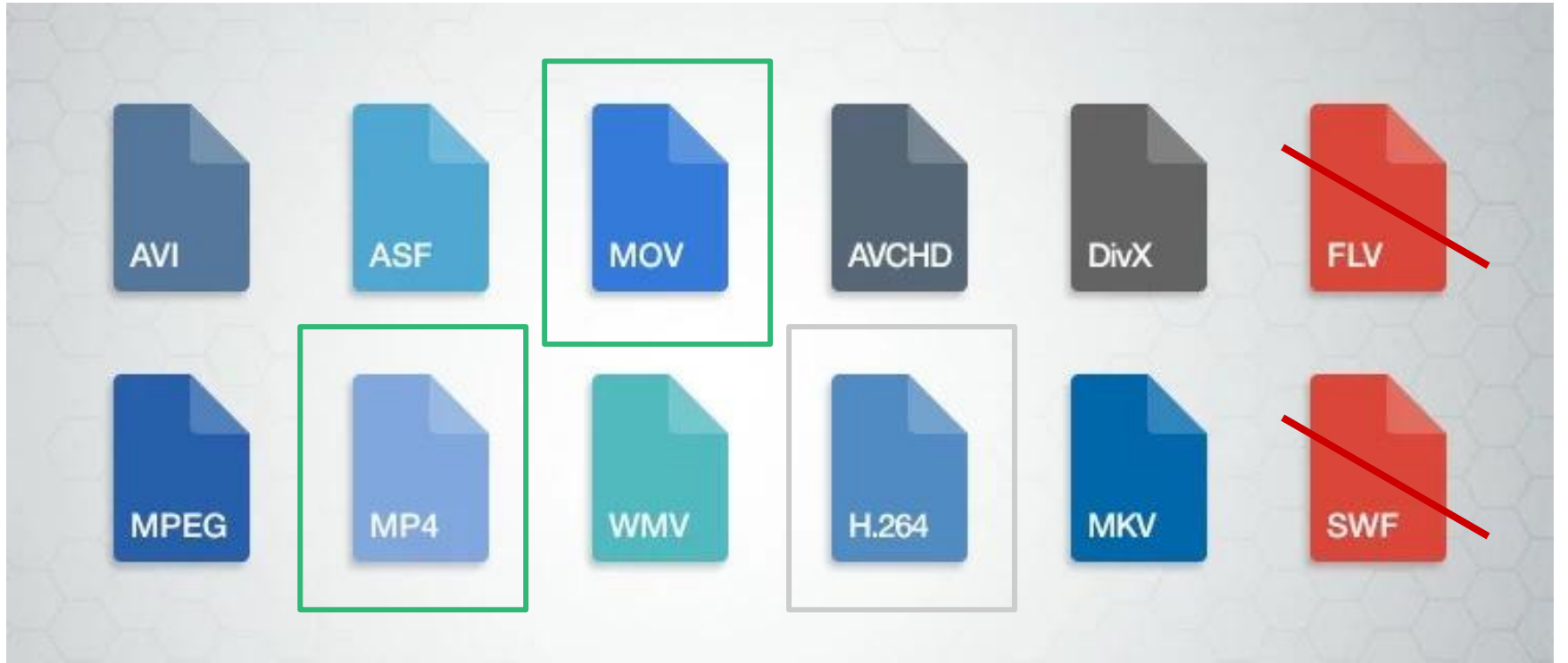
CMYK is a 4-color printing process that stands for cyan, magenta, yellow and key (black).



RGB is a light-based color model that stands for red, green and blue.

# VIDEO FORMAT





**ANY  
QUESTIONS?**



**QUICK  
BREAK?**



*Field Trip APPROVED!:*

**October 30th (SAVE THE DATE)**

**9:30 am @Cotton**

**Design in Manhattan**

291 Broadway Suite 702, NYC

# Homework Review





*Last week homework:*

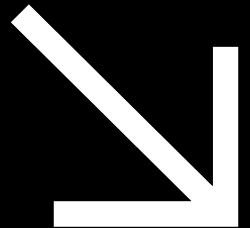
# Sketch your poster!

Understanding design principles and take your design research to the next level, start sketching the **layout** of your event's poster (manually or on a software of your choice. Make sure to create the most impactful and communicative design for your posters. GO WILD!

*Continue with:*

1. **The event you are focusing on**
2. **Start sketch out your poster - roughly with pencil on paper or digitally**
3. **Refine your mood-boards!**
4. **Watch video from next slide**

[Present next class for feedback](#)

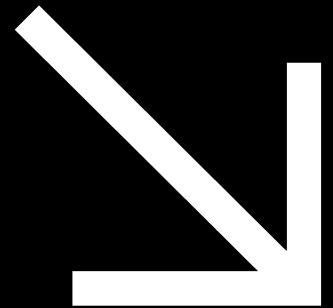


# A great mood board example from last semester

## Mood board/ Inspo



# Your homework for next week!



*Homework:*

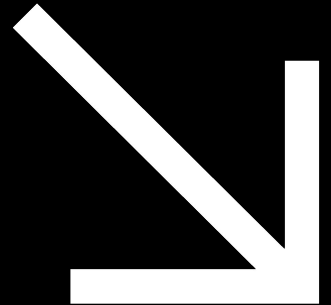
# Design your poster!

With the feedback you got in class, take your sketches to the next level and start adding: colors, typefaces, image-making (your style!) try as many iterations as possible and bring your designs for next class (digitally only)

*Continue with:*

- 1. Sketches to Design**
- 2. Move to a software (illustrator, figma, photoshop, etc)**
- 3. Create as many options as possible and present in class for feedback next class.**

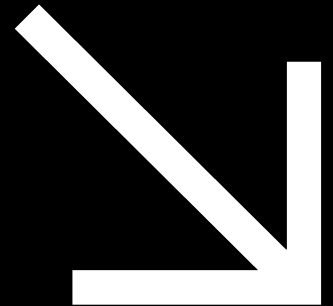
*Present next class for feedback*



# *Homework:*

## **Extra fun stuff before next class (Color theory):**

1. [this article](#)
2. [this quiz](#)
3. [this video](#)
4. <https://graf1x.com/product/color-theory-poster/>



**1** **Research & Discovery**

**2** **Ideation & Brainstorming**

**3** **Concept Development**

**4** **Prototyping & Wireframing**

**5** **Design Development**

**6** **User Testing & Feedback**

**7** **Refinement**

**8** **Finalization**

**9** **Presentation & Communication**

**10** **Delivery, Implementation & Evaluation**

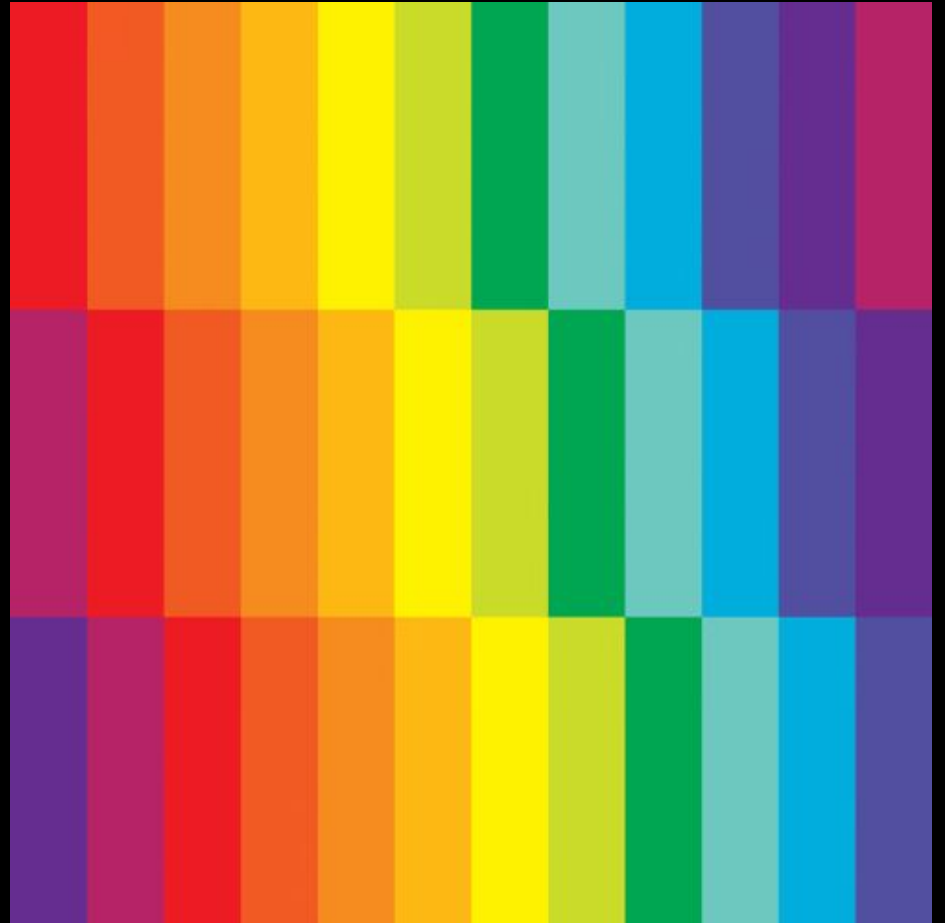
**Which Image-making  
style will you choose?**

**Try as many as you can!  
+ this is your chance to  
learn something new  
and get out of your  
comfort zone!**



*Next Week:*

# Color Theory!



**ANY  
QUESTIONS?**



**THANK  
YOU!**

