BTO2141 BTO2152 GRAPHICS AND ANIMATION IN EDUCATION

TUBA UGRAS (PhD)

YTU / COMPUTER EDUCATION AND INSTRUCTIONAL TECHNOLOGIES

FALL 2020

GRAPHICS AND ANIMATION IN EDUCATION

▶ What is Graphic Design?

  ▶ Graphic Design is the <u>craft</u> of creating <u>visual content</u> to communicate messages. [ID Foundation]

  ▶ Graphic Design is the <u>art</u> of <u>visual communication</u>. «Grafik tasarım, görsel bir iletişim sanatıdır.» [Emre Becer]

  ▶ Graphic Design is the <u>process</u> of <u>visual communication</u> and <u>problem-solving</u> through the use of typography, photography, and illustration. [Wikipedia]

GRAPHICS AND ANIMATION IN EDUCATION

► History of Graphic Design

   ► When, the first graphic design **?**

GRAPHICS AND ANIMATION IN EDUCATION

► History of Graphic Design

  ► The term "graphic design" was coined by William Addison Dwiggins in 1922. [Paul Shaw]

  ► The origins of graphic design can be traced from the origins of human existence…

the caves of Lascaux, around 15,000 BC

Pictographs, from 50,000 BC

GRAPHICS AND ANIMATION IN EDUCATION

- Application Areas of Graphic Design **?**

GRAPHICS AND ANIMATION IN EDUCATION

▶ Application Areas of Graphic Design

    ▶ Corporate design (to design logos and branding, etc.)
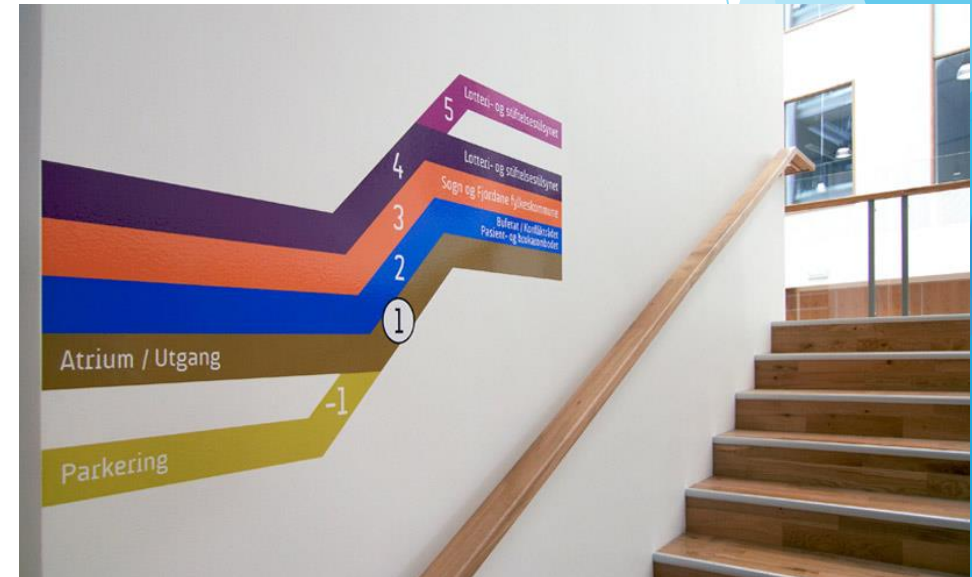
GRAPHICS AND ANIMATION IN EDUCATION

▶ Application Areas of Graphic Design

  ▶ Corporate design (to design logos and branding, etc.)

  ▶ Editorial design (to design magazines, newspapers and books, etc.)

GRAPHICS AND ANIMATION IN EDUCATION

▶ Application Areas of Graphic Design

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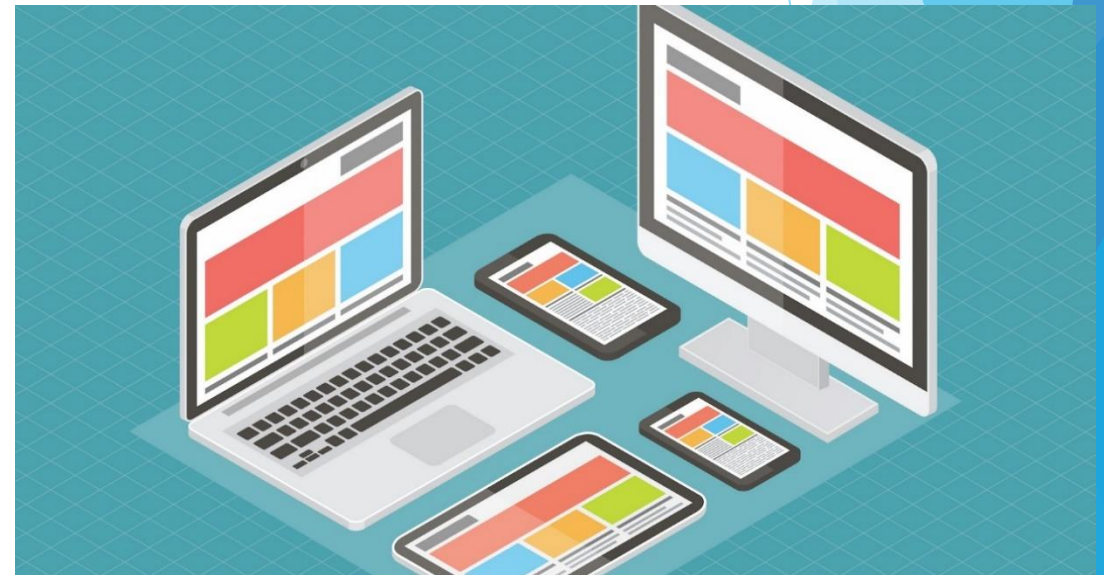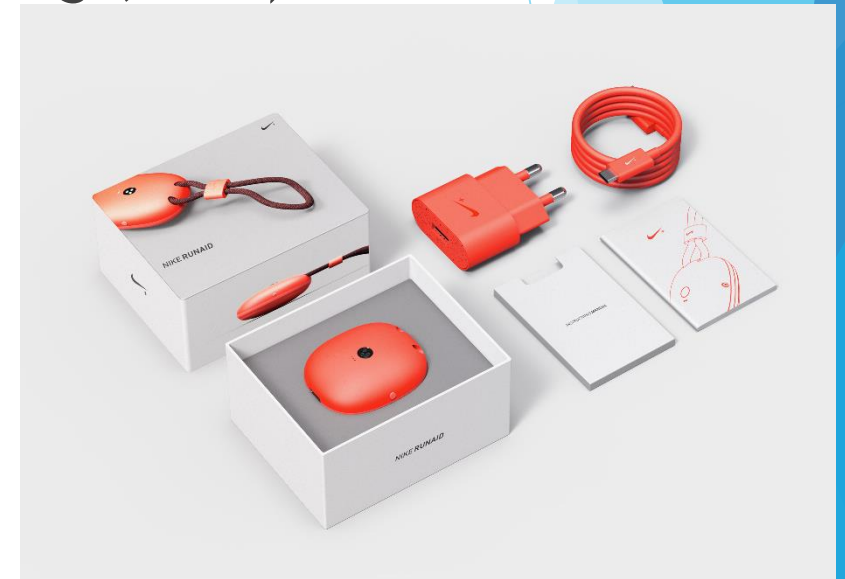 ▶ Environmental design (to design wayfinding, signage, etc.)

GRAPHICS AND ANIMATION IN EDUCATION

▶ Application Areas of Graphic Design

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   ▶ Advertising

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  ► Education (to design educational materials)

GRAPHICS AND ANIMATION IN EDUCATION

▶ Application Areas of Graphic Design

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  ▶ Editorial design (to design magazines, newspapers and boks, etc.)

  ▶ Environmental design (to design wayfinding, signage, etc.)

  ▶ Advertising

  ▶ Web design

  ▶ Product design (to design product packaging, Instructions manuals, etc.)

  ▶ Education (to design educational materials)

  ▶ UI design (to design any kind of UIs)

  ▶ etc.
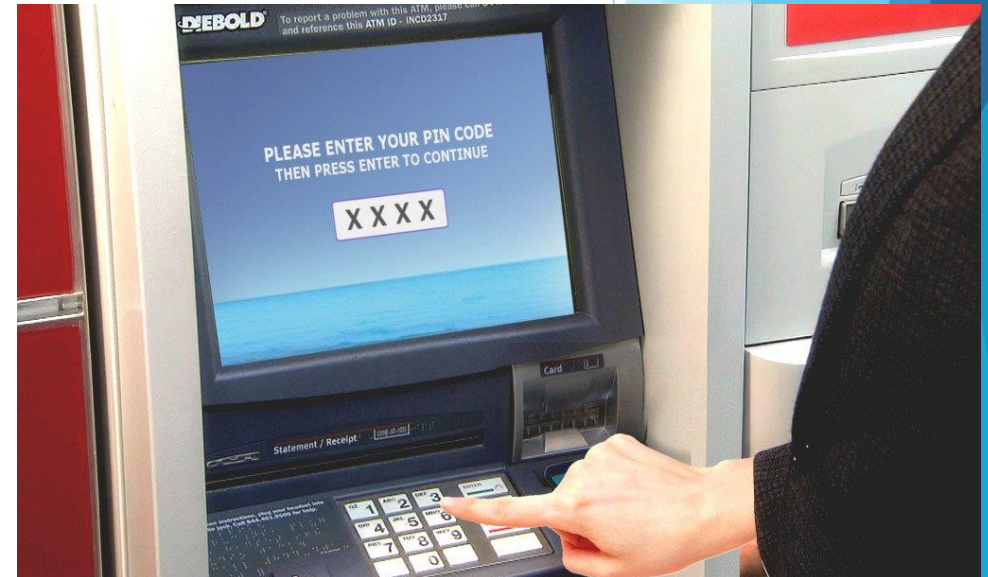
GRAPHICS AND ANIMATION IN EDUCATION

▶ Concepts Related to Graphic Design

  ▶ Illustration

GRAPHICS AND ANIMATION IN EDUCATION

▶ Concepts Related to Graphic Design

   ▶ Illustration

   ▶ Symbol

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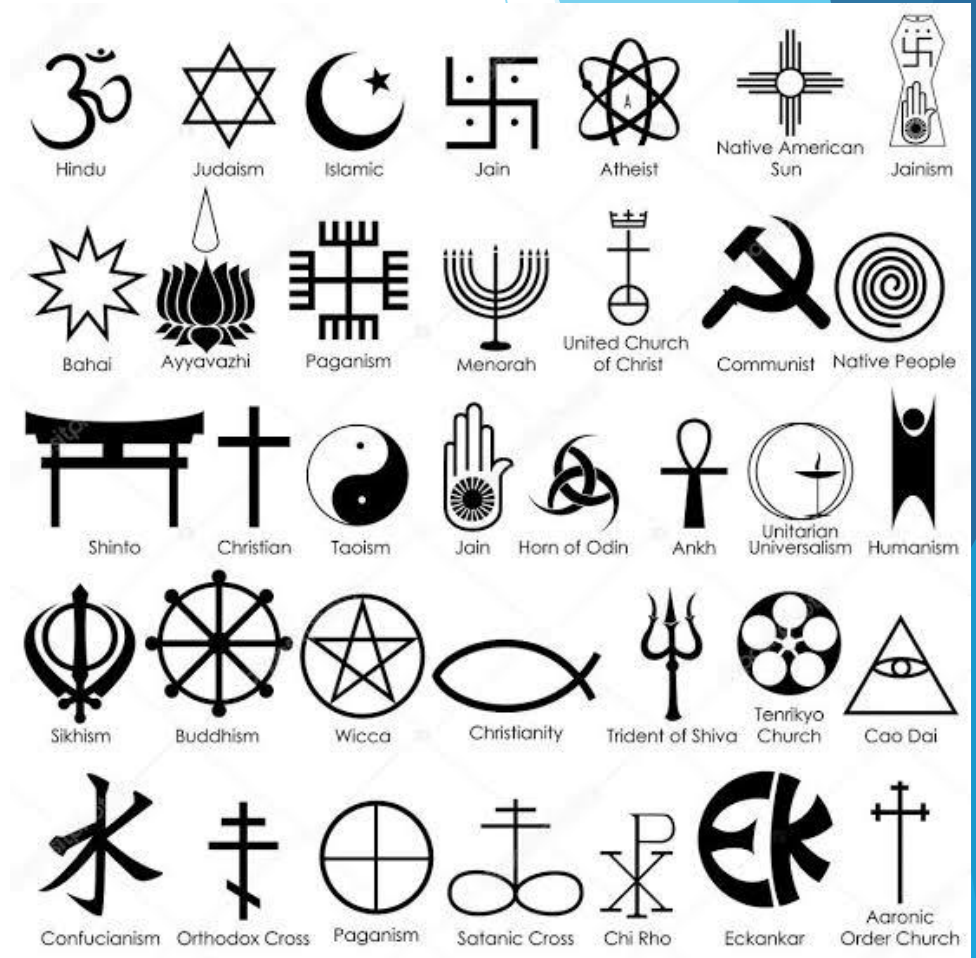
GRAPHICS AND ANIMATION IN EDUCATION

▶ Concepts Related to Graphic Design

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GRAPHICS AND ANIMATION IN EDUCATION

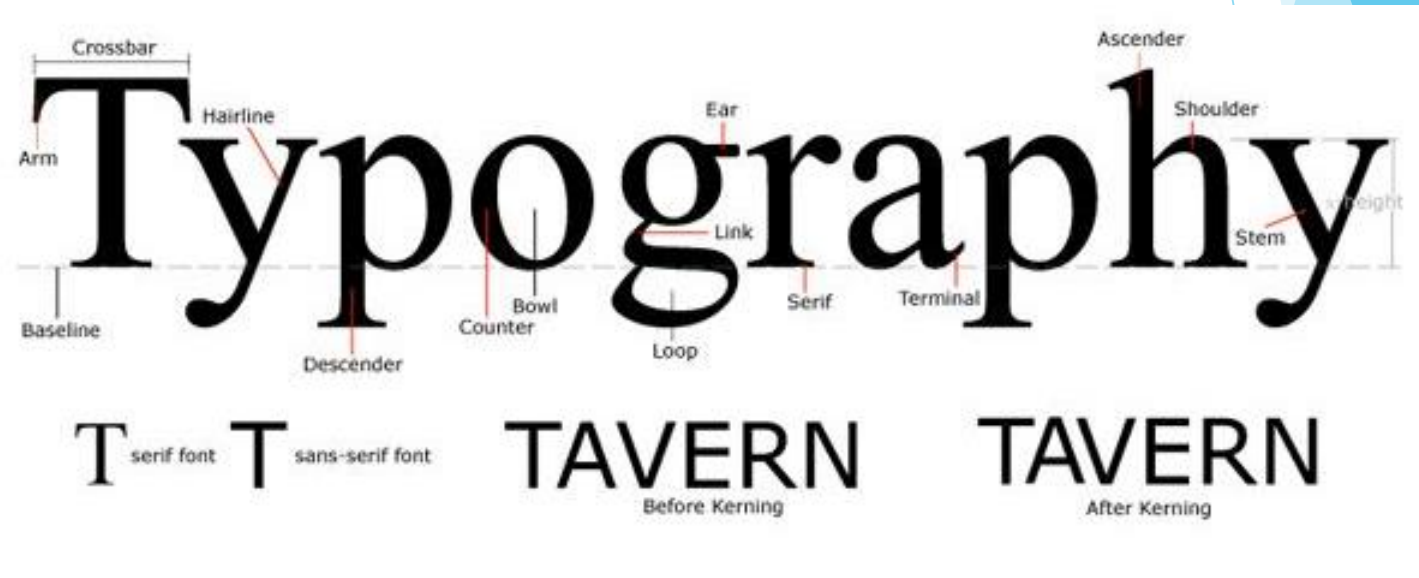▶ Concepts Related to Graphic Design

  ▶ Illustration

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  ▶ Icon

  ▶ Logo

GRAPHICS AND ANIMATION IN EDUCATION

▶ Concepts Related to Graphic Design

- ▶ Illustration
- ▶ Symbol
- ▶ Icon
- ▶ Logo
- ▶ Alphabet

A	B	C	D	E	F	G
H	I	J	K	L	M	N
O	P	Q	R	S	T	U
V	W	X	Y	Z		

GRAPHICS AND ANIMATION IN EDUCATION

▶ Concepts Related to Graphic Design

    ▶ Illustration

    ▶ Symbol

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    ▶ Logo

    ▶ Alphabet

    ▶ Typography

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GRAPHICS AND ANIMATION IN EDUCATION

► Concepts Related to Graphic Design

  ► Illustration

  ► Symbol

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  ► Typography
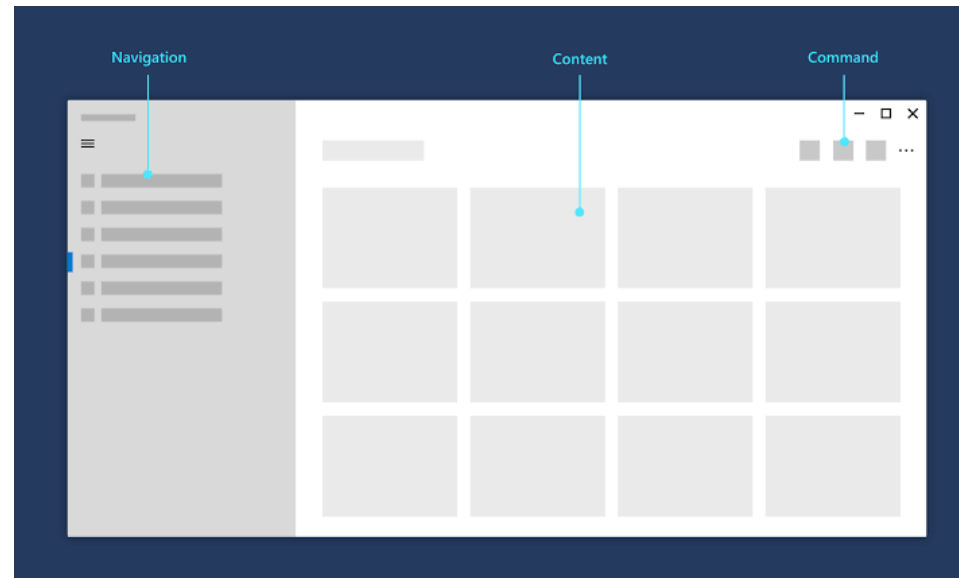
  ► Page layout

GRAPHICS AND ANIMATION IN EDUCATION

▶ Concepts Related to Graphic Design

▶ Illustration

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▶ Typography

▶ Page layout

▶ Photography

▶ etc.

GRAPHICS AND ANIMATION IN EDUCATION

▶ Graphic Design Process
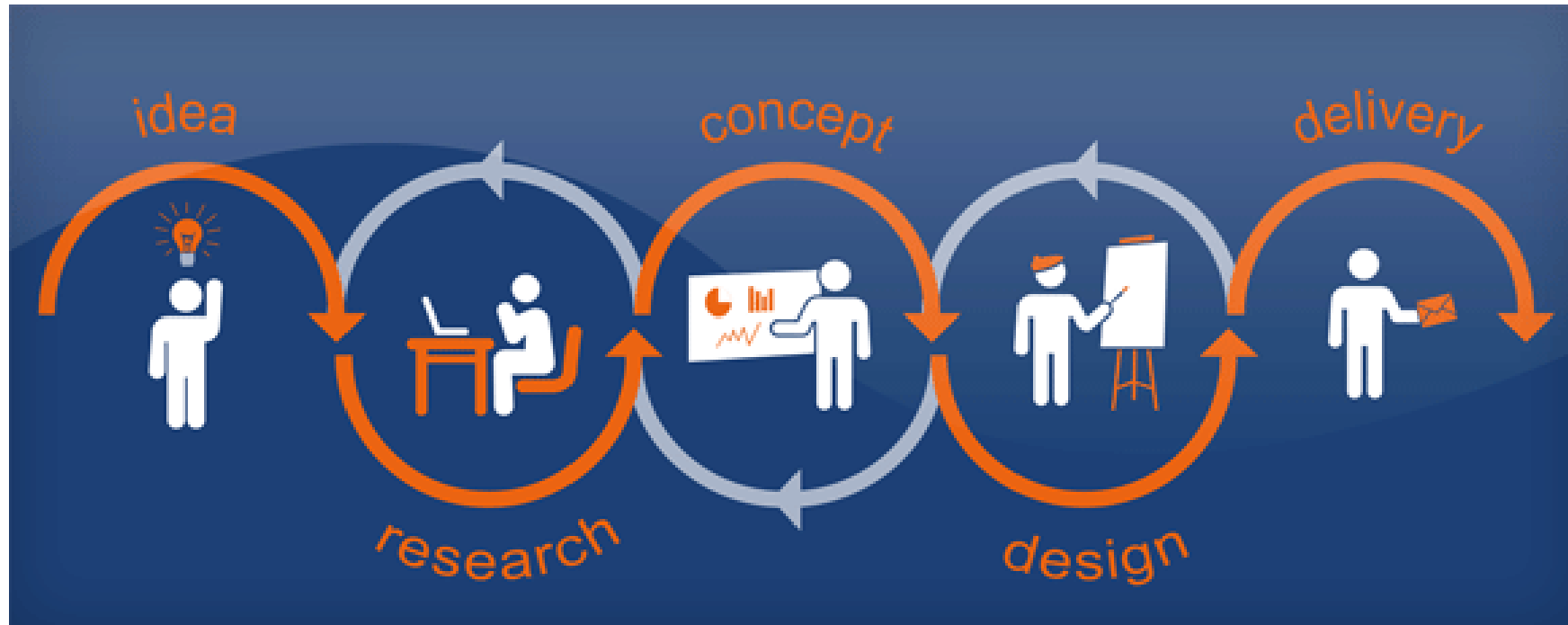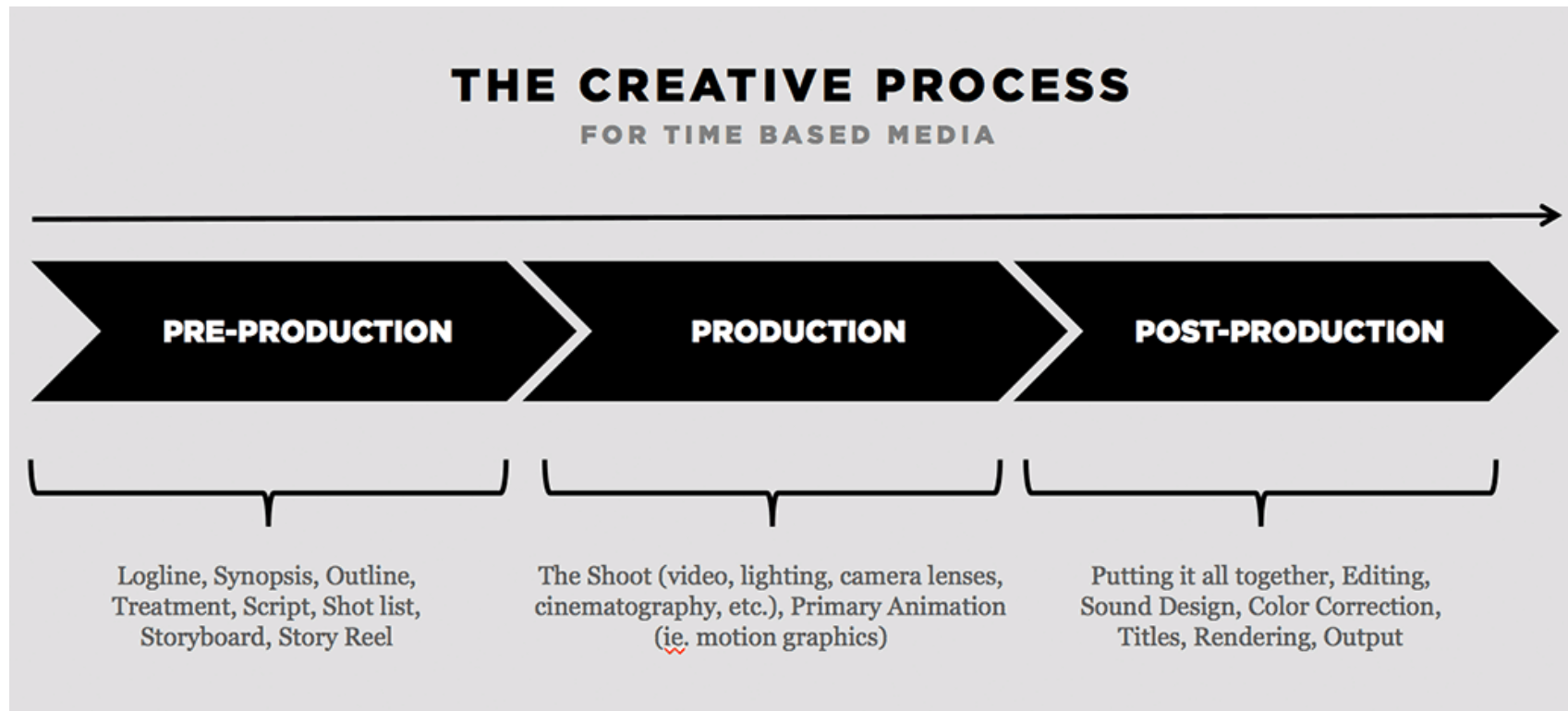

[How Do Design - James Hendriksen]

GRAPHICS AND ANIMATION IN EDUCATION

▶ Graphic Design Process: DESIGN THINKING
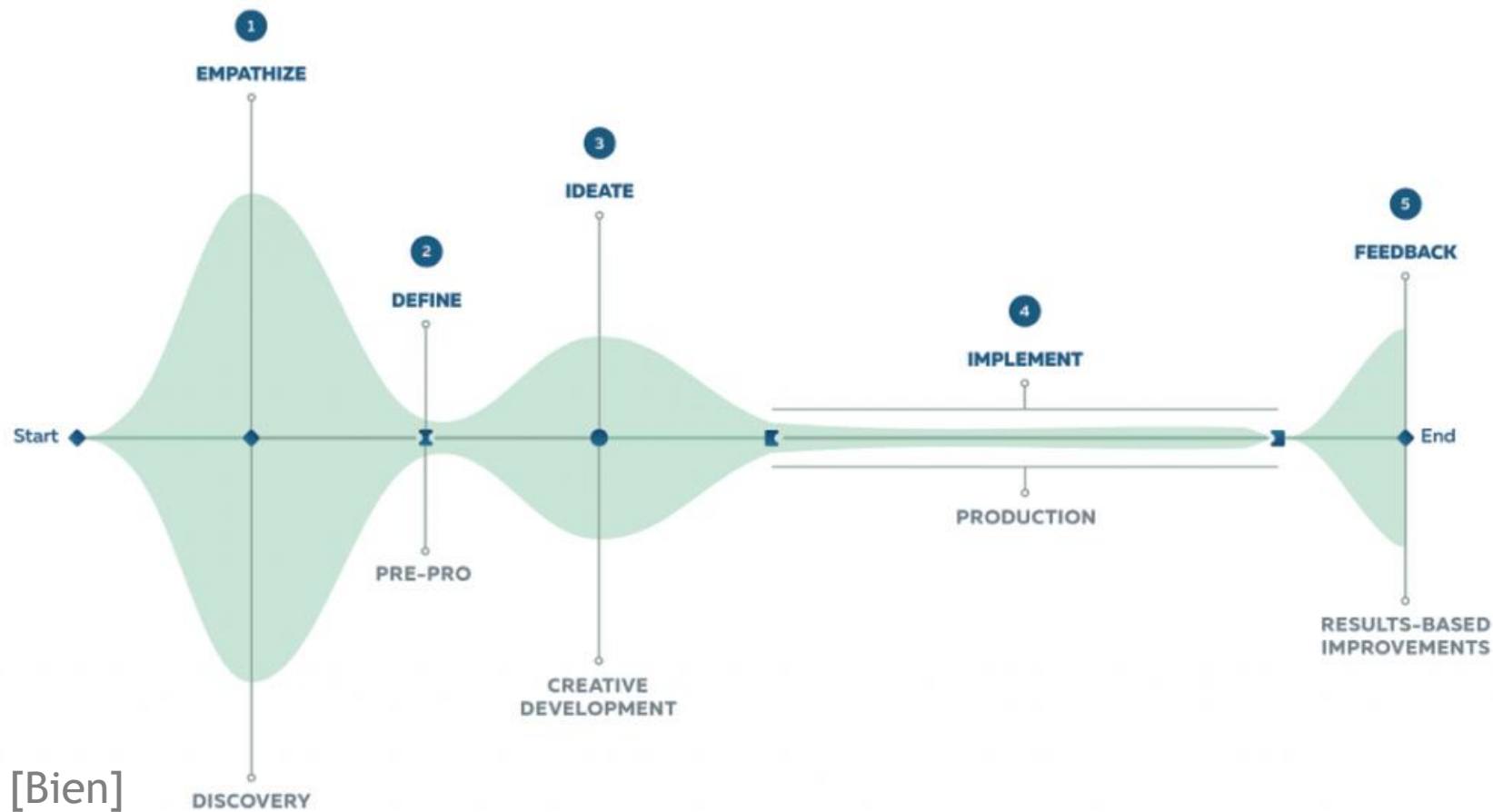
[Bien]

GRAPHICS AND ANIMATION IN EDUCATION
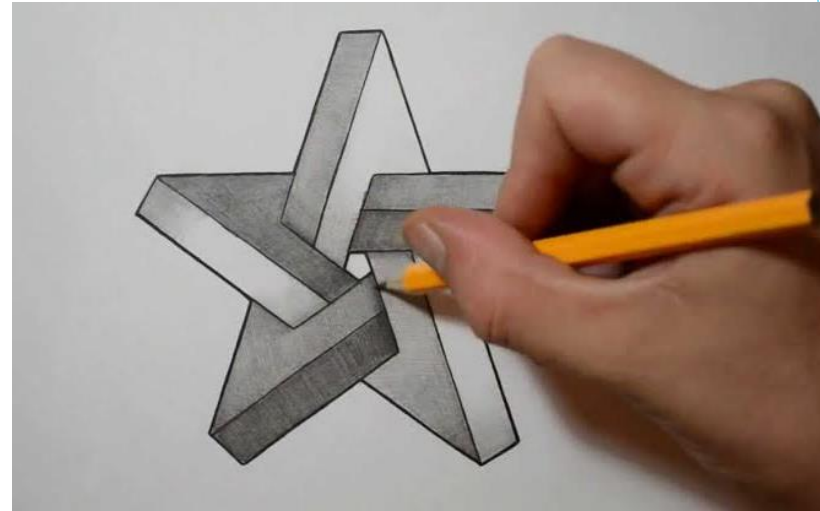
▶ Graphic Design Process: The Creative Process

[Chris Gargiulo]

GRAPHICS AND ANIMATION IN EDUCATION

- Graphic Design Tools

  - What are the graphic design tools **?**

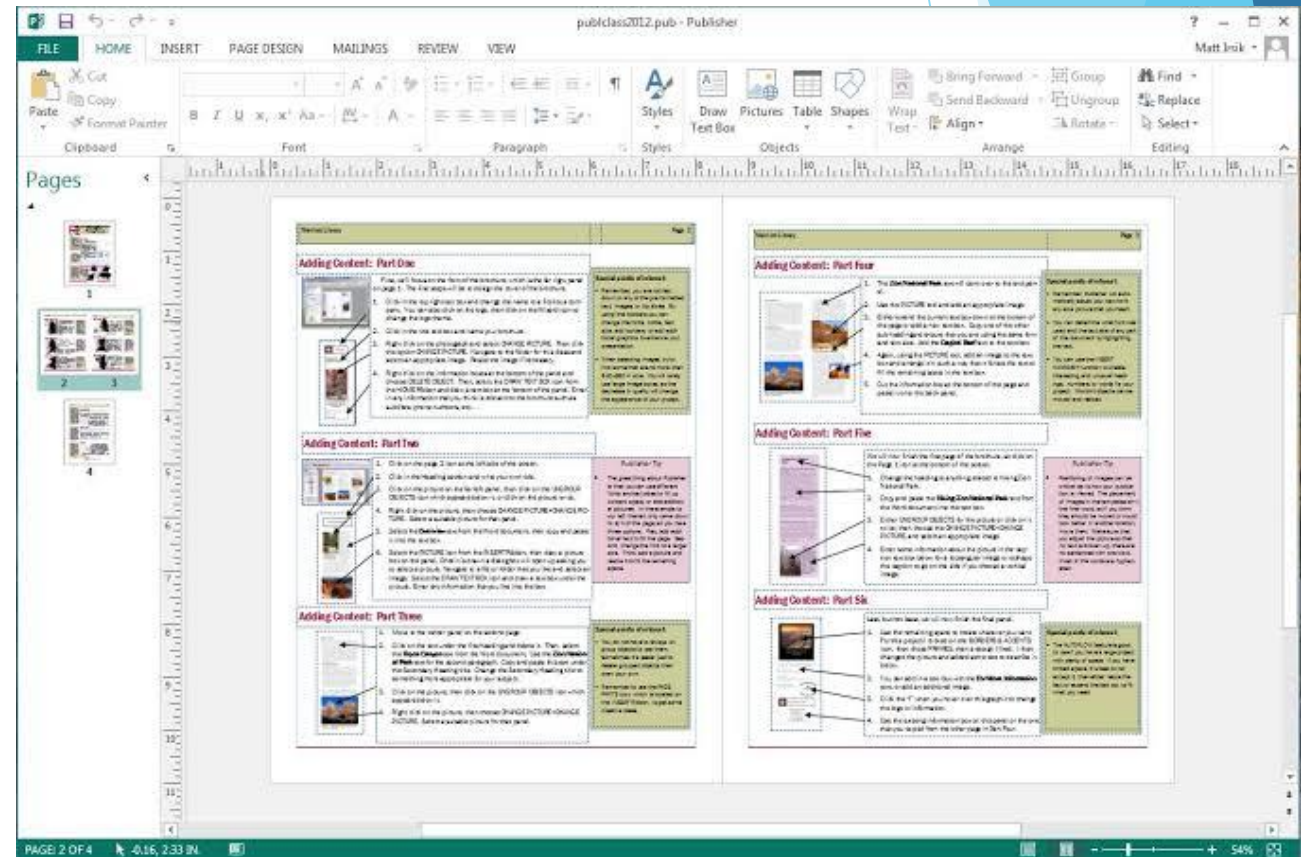# GRAPHICS AND ANIMATION IN EDUCATION

► Graphic Design Tools

  ► Traditional media
    → Pen, pencil, ink, crayons,
    paints, etc.

GRAPHICS AND ANIMATION IN EDUCATION

- **Graphic Design Tools**
  - Traditional media
    → Pen, pencil, ink, crayons, paints, etc.
  - Traditional press media
    → Printing press, desktop publishing tools and software

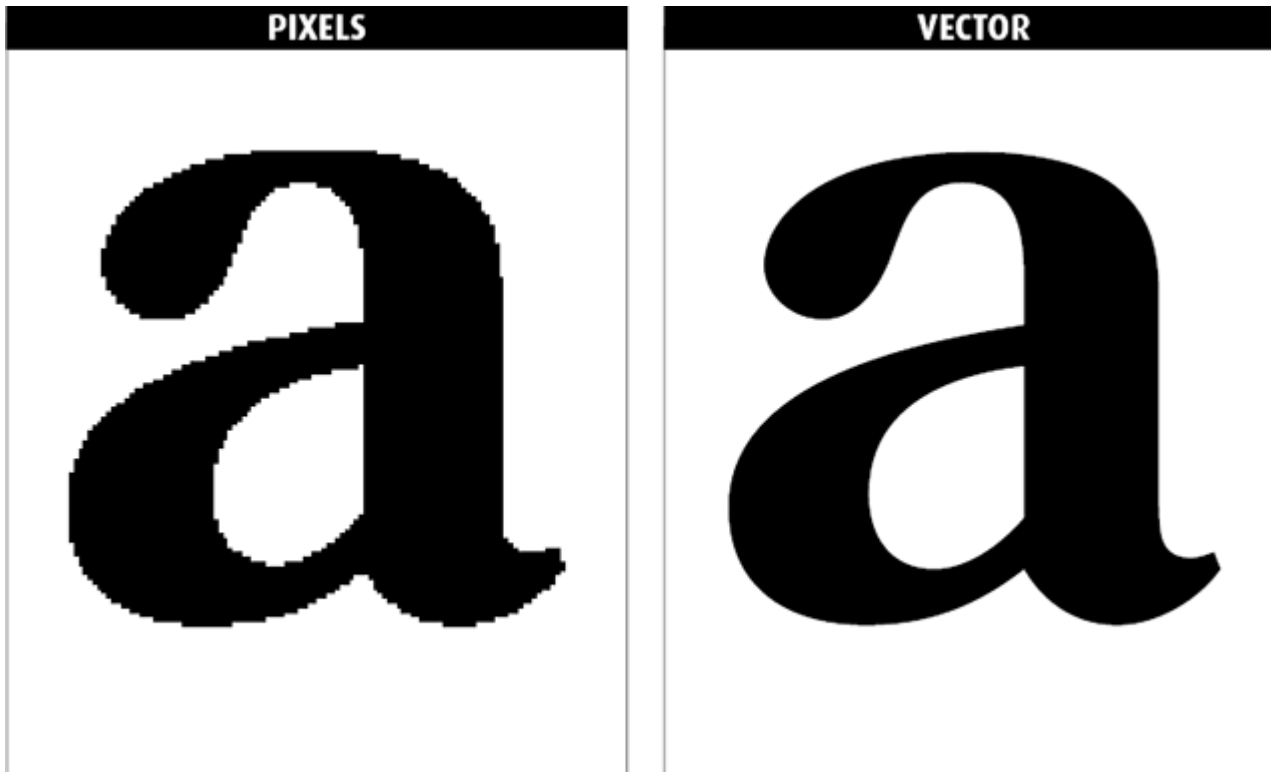# GRAPHICS AND ANIMATION IN EDUCATION

- Graphic Design Tools
  - Traditional media
    → Pen, pencil, ink, crayons, paints, etc.
  - Traditional press media
    → Printing press, desktop publishing tools and software
  - Digital media
    → Digital publishing software

GRAPHICS AND ANIMATION IN EDUCATION

▶ Visual Formats

    ▶ Pixel vs Vector
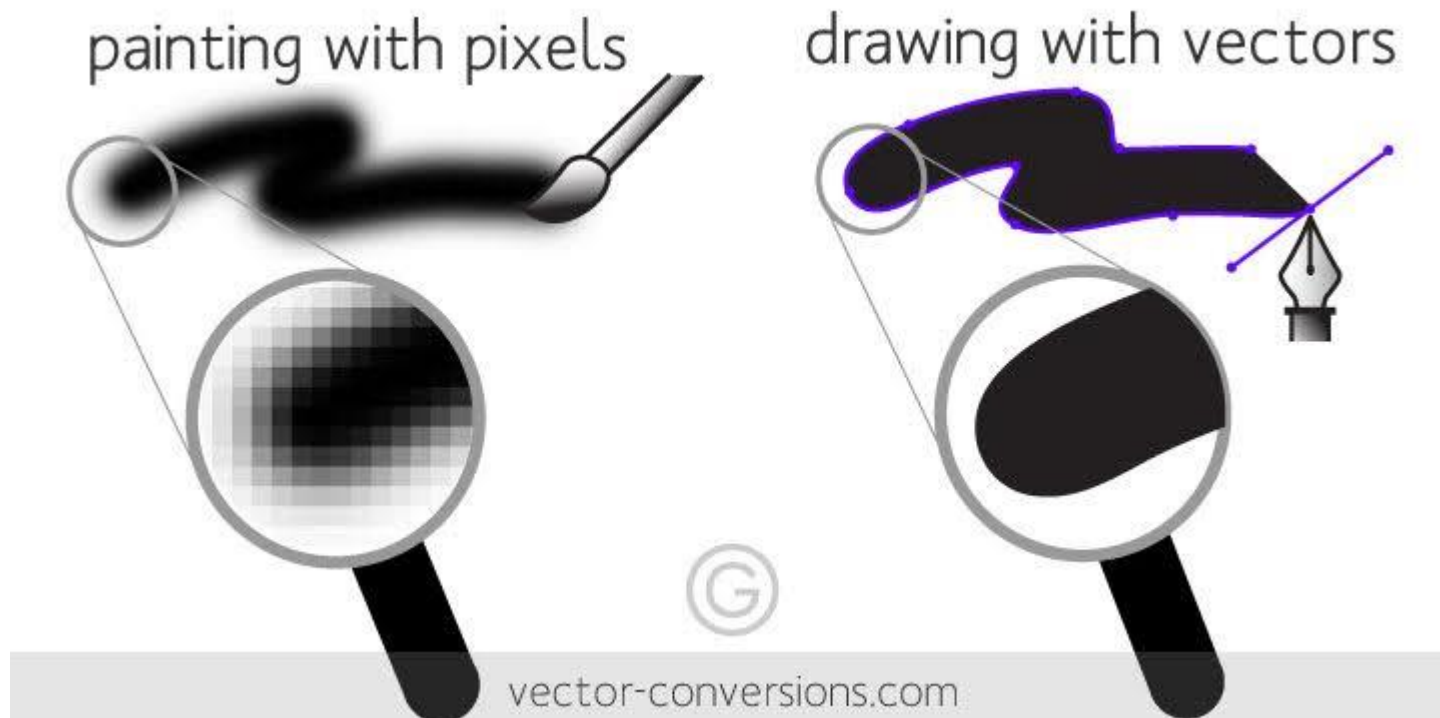

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GRAPHICS AND ANIMATION IN EDUCATION

- Visual Formats
  - Pixel vs Vector

painting with pixels   drawing with vectors

vector-conversions.com
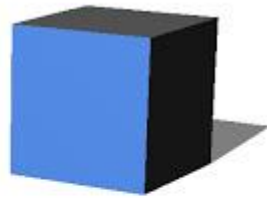
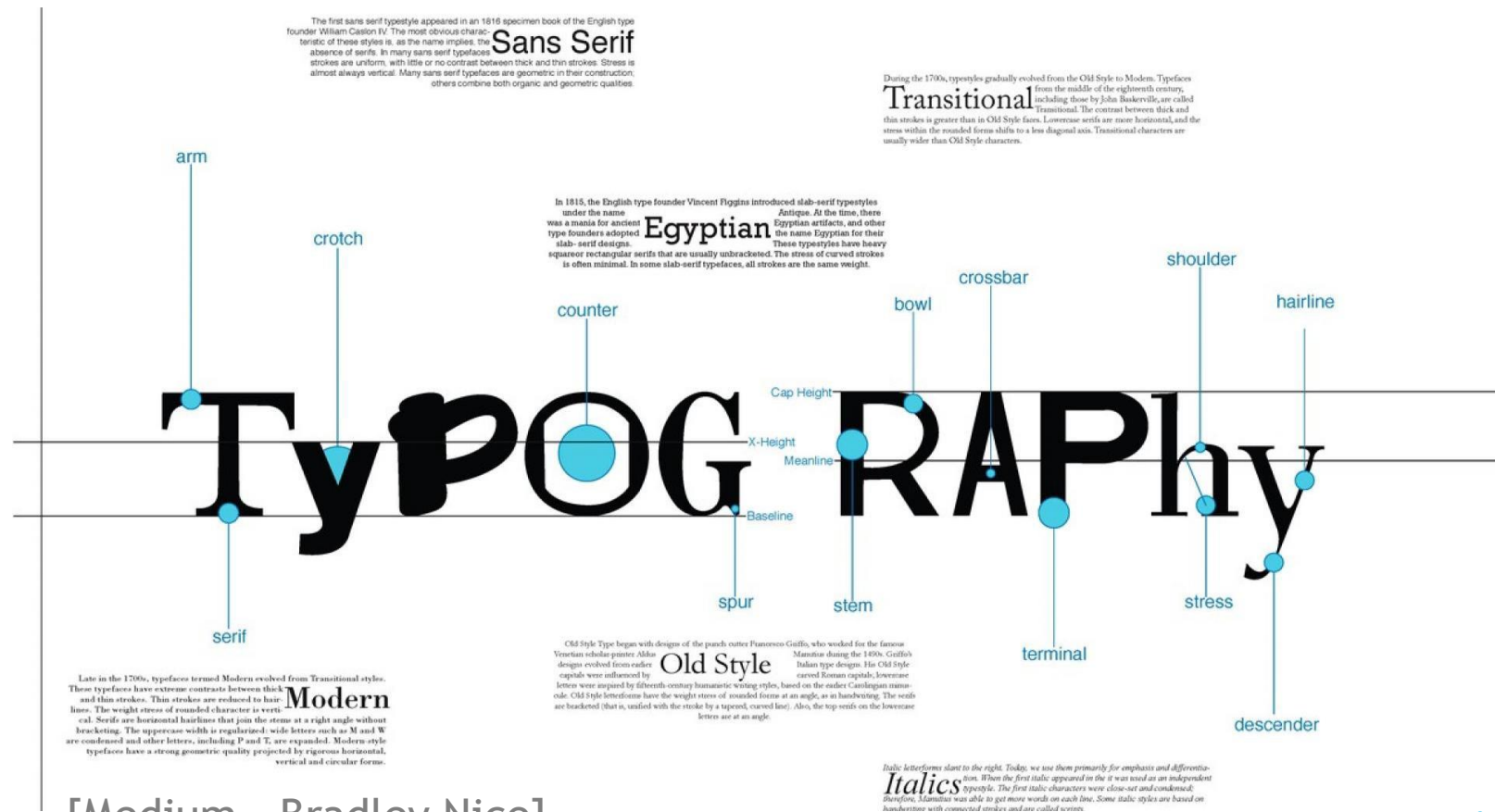# GRAPHICS AND ANIMATION IN EDUCATION
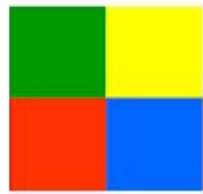
▶ Graphic Design Elements

[Online Design Teacher]

GRAPHICS AND ANIMATION IN EDUCATION

▶ Graphic Design Elements

[Medium - Bradley Nice]

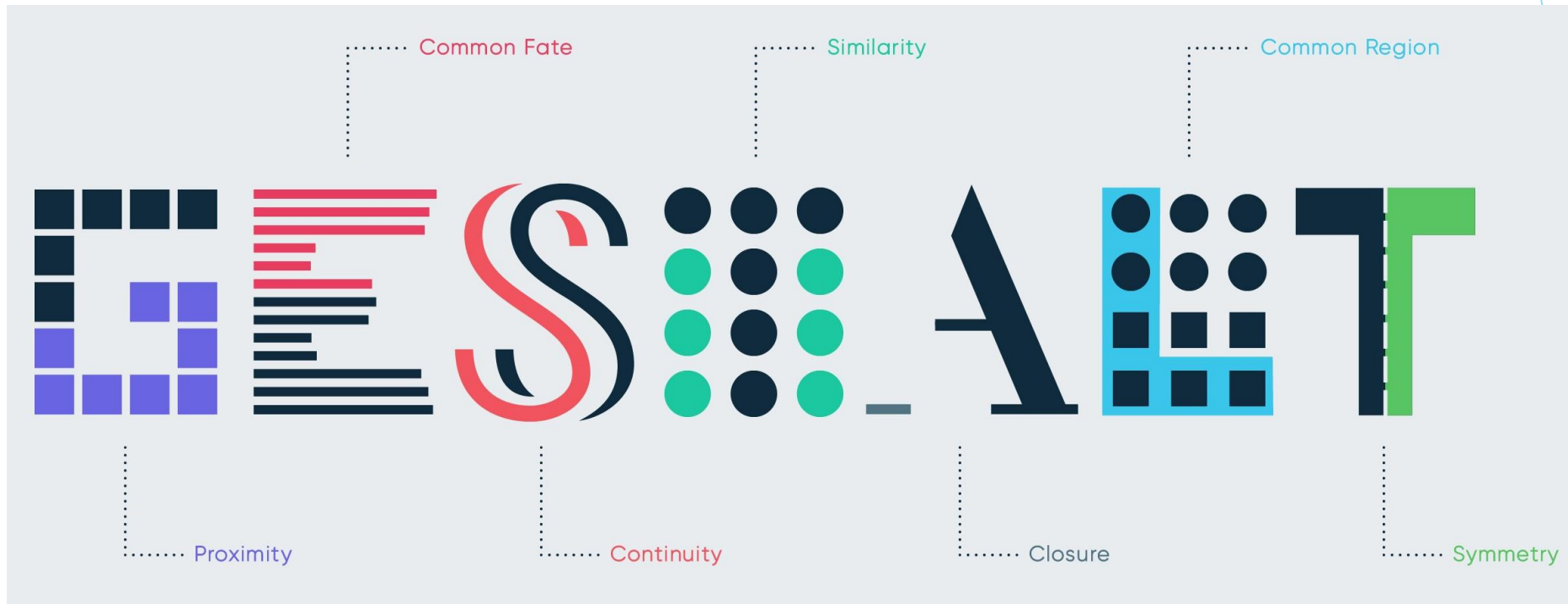# GRAPHICS AND ANIMATION IN EDUCATION

▶ Graphic Design Principles

  ▶ GESTALT THEORY

  "The whole is something else than the sum of its parts."

    ▶ When the human mind (perceptual system) forms a percept or "**gestalt**", the whole has a reality of its own, independent of the parts. [Bing Liu et. al.]

GRAPHICS AND ANIMATION IN EDUCATION

▶ Graphic Design Principles

  ▶ Based on GESTALT THEORY

[Medium - Eleana Gkogka]

GRAPHICS AND ANIMATION IN EDUCATION

▶ Graphic Design Principles

▶ Based on GESTALT THEORY

[Design Contest - Natalie Antiuk]

DESIGNING WITH GESTALT PRINCIPLES
10 primary principles underpin the practical uses of Gestalt Psychology

1 Simplicity
Combining simplicity with creativity can lead to stunning creations.

How to Master Simplicity:
Know how to balance simple shapes with visual stimulation. Give the eye a comfortable form that helps it interpret what it sees.

2 Figure-Ground
People can immediately identify which element is the figure, and which is the ground. Use these two related principles to make the most of the figure-ground effect:
• **Area** - The viewer's mind sees the smallest element as the figure and the larger one as the ground or background.
• **Convexity** - Convex elements are related to figures.

3 Proximity
Elements close to each other are perceived as part of the same group.
Common Use
Case: Kerning. Proper kerning helps readers snap up each word.

4 Similarity
Elements that look alike are perceived as part of a group. The principle of similarity applies to:

• Color   • Shape
• Size   • Texture
• Orientation

5 Common Fate
Objects that seem to be moving in the same direction are often seen as a group.

6 Symmetry
The principle of symmetry applies to
• Mirrored shapes
• Balanced elements
• Parallel lines

7 Continuity
Objects that are plotted in a continuous pattern are grouped together by the mind. Smooth lines often make a unified figure.

8 Closure
The mind wants closure. A shape only needs to be implied for the mind to "fill in the gaps" and see what it wants to see
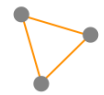
9 Common Region
Elements in one region are seen as one group. Badge designs are seen as unified, despite some containing text, banners, and other objects.

10 Connectedness
When there is a connection between elements. it is easy to see a unified ligure.
Achieve connections with:
• Arrow
• Lines
• Ilustrations (i.e. a rope)

Gestalt Theory

Humans are bombarded with countless signals day-to-day. To keep from going crazy, we unify these signals into groups. Gestalt designers are obsessed with how people put objects together in their minds.

Good designs leads people to experience the message you want to convey.

Arm yourself with the principles of Gestalt and create designs that have the impact you want.

GRAPHICS AND ANIMATION IN EDUCATION

▶ Graphic Design Principles

   ▶ Based on GESTALT THEORY

1

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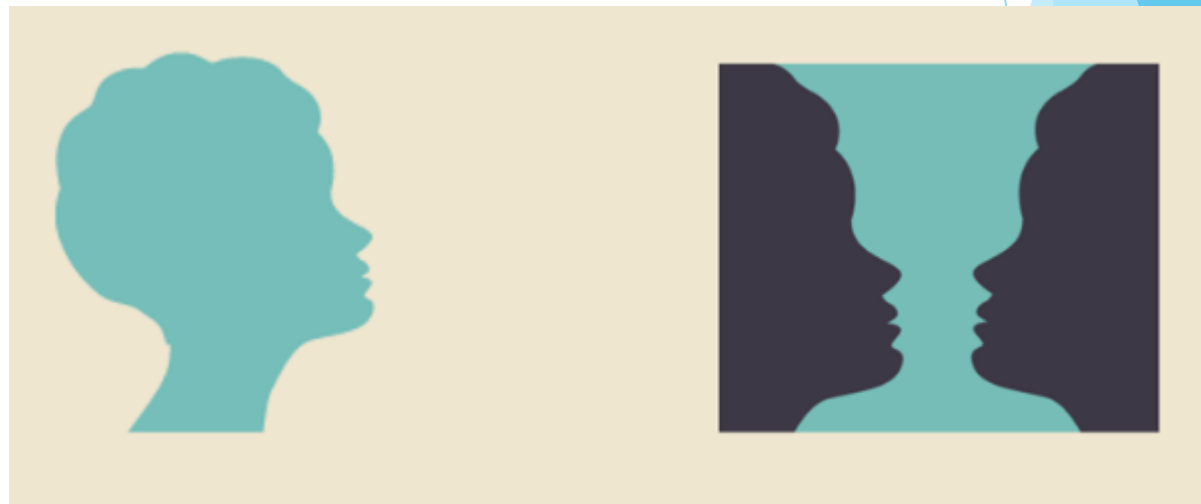▶ Graphic Design Principles

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Figure-Ground

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GRAPHICS AND ANIMATION IN EDUCATION

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Common Fate

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GRAPHICS AND ANIMATION IN EDUCATION
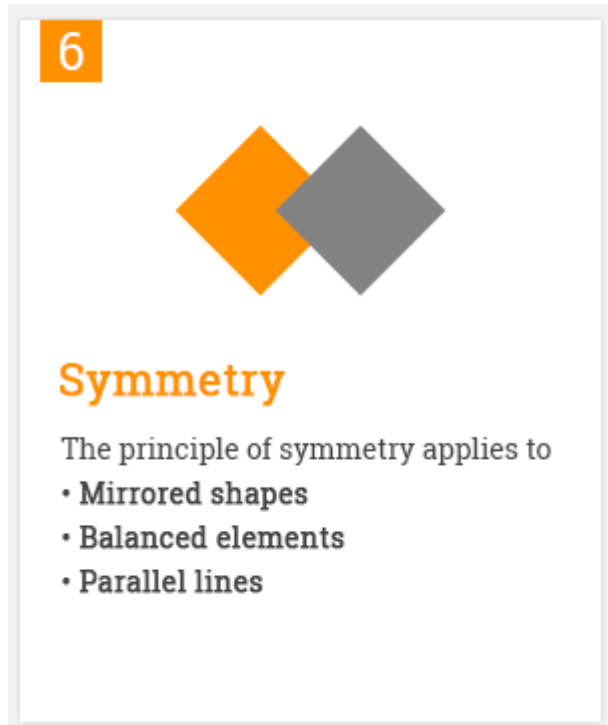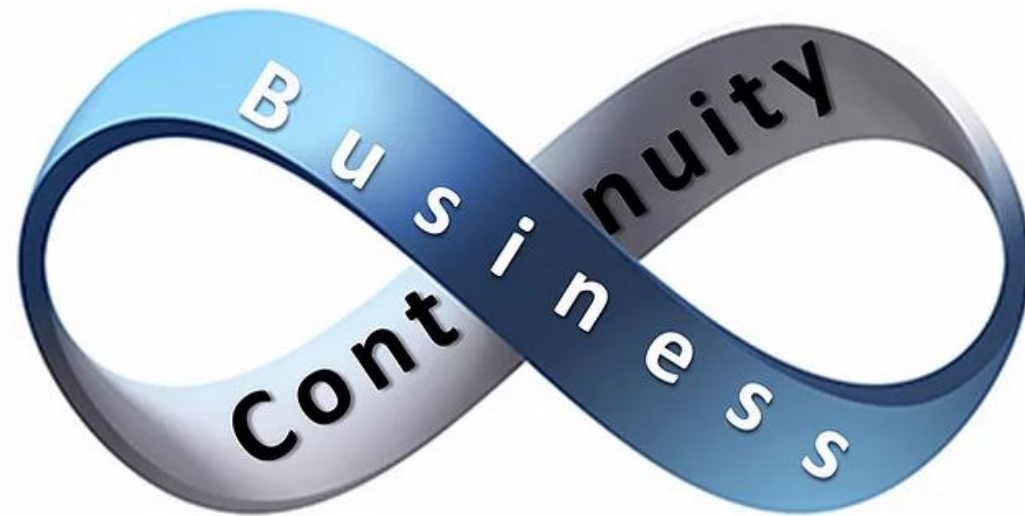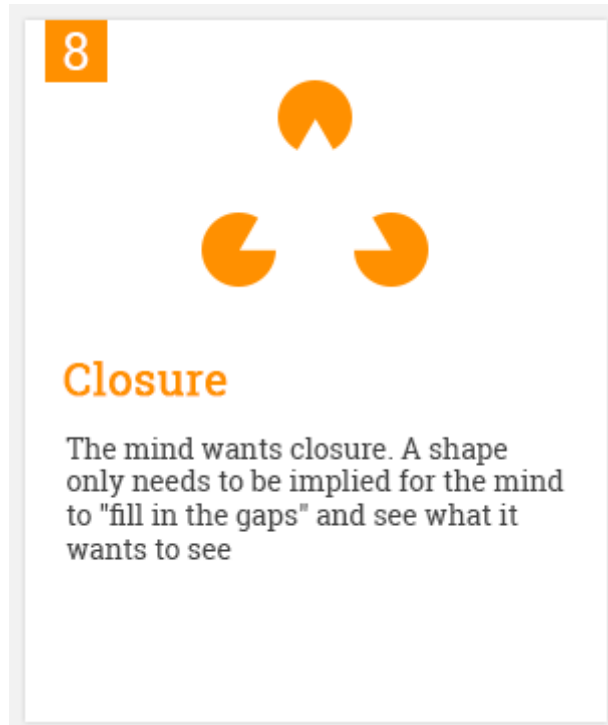
- Graphic Design Principles
  - Based on GESTALT THEORY

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WWF

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Common Region

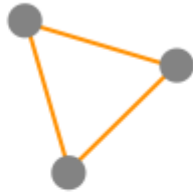Elements in one region are seen as one group. Badge designs are seen as unified, despite some containing text, banners, and other objects.

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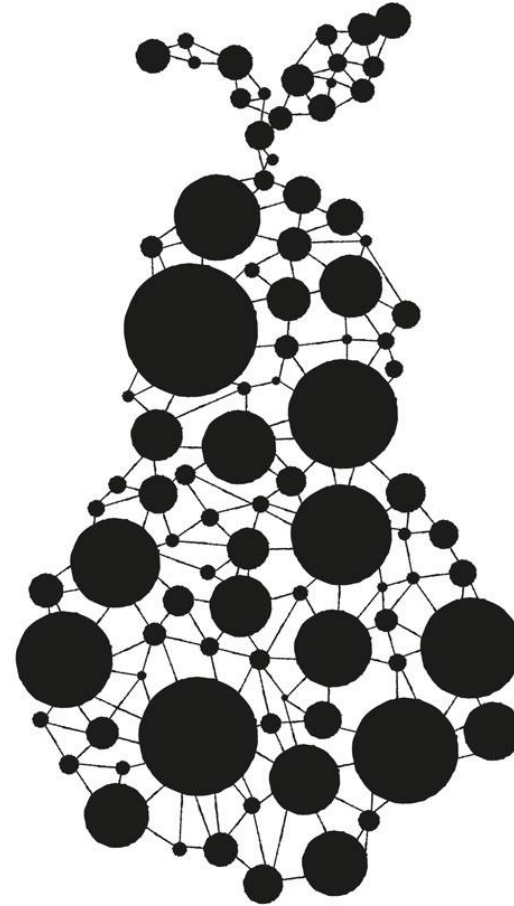▶ Graphic Design Principles

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References

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▶ Influence Mechanism of Visual Perception on Driver's Speed Control and Steering Behaviors. Bing Liu, Jing Xia, Zipei Zhang, Naikan Ding, W Peng. 2018.

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