*Education on the Horizon: Teaching and Learning with Technology*

# Week 3: Multimedia Learning

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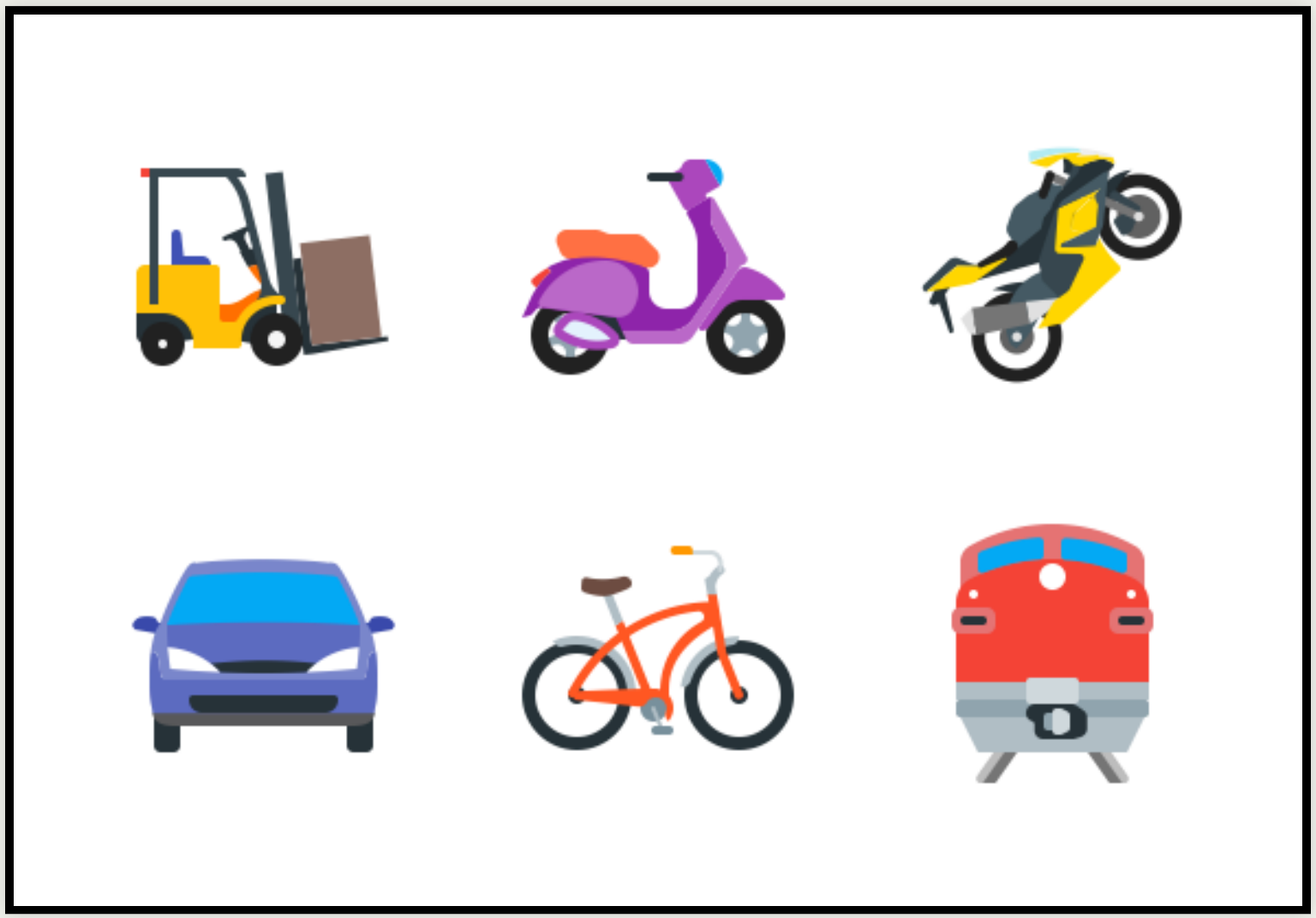
# What is media?

- Media (singular: medium) are tools used to store and deliver information or data
- Multimedia are communications that incorporate multiple forms of information content and processing

Medium is like the *vehicle* of information.

# You can convey similar content with different media



# What is multimedia learning

- Present the material using various media types that are intended to foster learning.
- Types of media: text, audio, static graphic (photos, drawings, maps, charts, figures), dynamic graphic (video, animation), or any other vehicle of information

# How to design a course with multimedia elements?

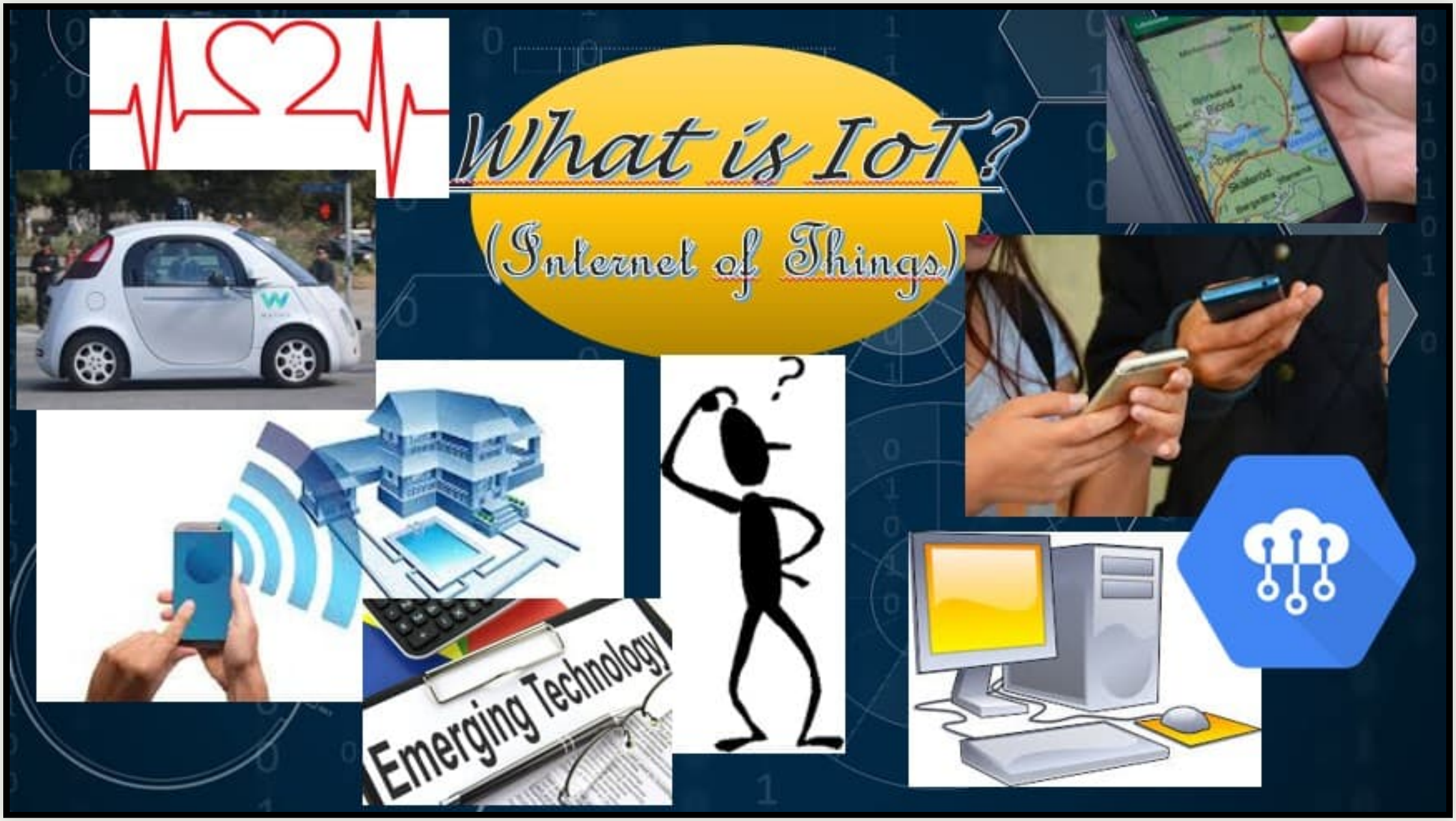
*I wonder, how do I decide which medium will be the most fitting one, for the topic as well as for my students?*

General rule of thumbs...👍

1.The multimedia element needs to have *representational*, not *decorational*, purpose

- Decorational: the primary instructional function of the element is to intrigue/motivate the learner
- Representational: the topic to be learned is explicitly depicted in the multi-media element

# Example: Bad Clipart



2. Inclusion of multiple sensory modalities are usually helpful, given that they are *meaningfully* associated

- Storage of information is like a web
- More associations = better remembering

# Example

- When using visuals to teach language, do you really want to teach the visual details?
- Using visuals to teach English alphabet?
- What about Chinese characters?

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

甲骨文
金文
篆文
楷书

# 3. Coherence principle: Remove *unessential* elements from instructional material

# Example: Which one do you choose?

- 2 minutes of animated narration introducing ocean waves
- the narration plus video clips showing sensational tsunami storms
- the narration plus formulas and numerical computations

# 4. Temporal / spatial contiguity principle

- When both verbal explanation and graphic representation are necessary for learning, present both simultaneously

# Example: Which one do you choose?

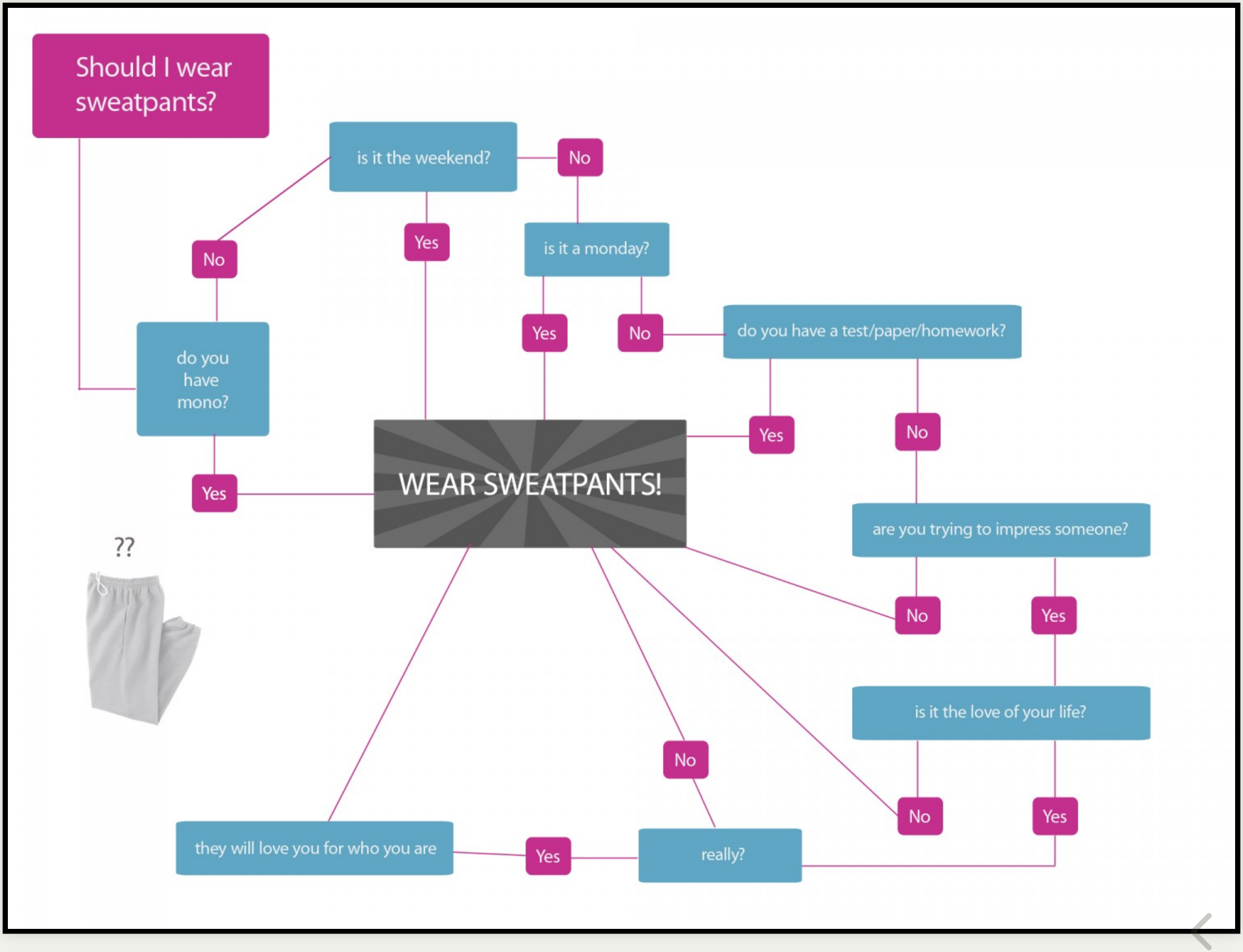
- written text and figure on the same page
- written text and figure on different pages

# Bonus: choose single medium

Sometimes visuals are better than words?

# Example 1. How would you explain how a *smart phone* works?

# Example 2. How do you decide what to wear?


Should I wear sweatpants?
is it the weekend?
No
Yes
No
is it a monday?
Yes
No
do you have a test/paper/homework?
do you have mono?
Yes
No
Yes
No
WEAR SWEATPANTS!
are you trying to impress someone?
??
No
Yes
is it the love of your life?
No
No
Yes
they will love you for who you are
Yes
really?

# Visual over words

- When the concept is abstract and hard to visualize in the mind.
- When the logic is not linear.
- example in presentation slides design

# But are visuals also relevant for PE?

*In PE lessons it might be more difficult (to use audio/visual), because to me movement is always something you have to experience in order to learn and improve it.*