

## Creation of the graphic design

Previous compulsory steps / Prior students' knowledge	Definition of game genre and atmosphere, creation of the story (all steps)
Learning objectives	To learn how to create the visuals of a video game and how to give consistency to the graphics.
Subjects	Arts, Mathematics (Geometry)
Recommended Age (10 – 14) or (15 - 18)	(15 – 18)
Material needed	<ul style="list-style-type: none"> <li>● To create graphics: Image editing software, video game character creation software.</li> <li>● To implement graphics: Video game creation software</li> </ul>
Expected duration	2 - 3 hours
Skills developed (after learning objectives)	Digital literacy, collaboration & teamwork, creativity
Points of attention for inclusion / Inclusion best practices	Consider the possibility of finding assistive software/hardware for students with visual or hearing impairments.
Individual or group activity	Recommended for small groups (ideally in pairs).
Extension / differentiation activities (at the end of the sequence)	Playability/ mechanics
Similar games to use with the approach of the sequence	The story-driven titles by the Austrian studio <a href="#">Mi'pu'mi Games</a> , including <b>The Lion's Song</b> (inspired by 1900's Vienna) and <b>The Flower Collectors</b> (inspired by 1970's Barcelona) are clear examples of how graphics can evoke many feelings

and ideas from different perspectives. The first game uses slightly pixelated graphics mixed with different tones of sepia and a more dominant interface at certain points. The second game shows wide 3D spaces that contrast between day and night. By doing this, they achieve a sober, retro-looking universe that focuses on dialogue and interface navigation for *The Lion's Song*, and a more realistic and atmospheric approach for *The Flower Collectors*.

## Step by step: how to implement the sequence

- **Step 1 – Determine the game graphics**

In pairs, have the students analyze the information they have learned so far about the game: atmosphere, characters, story, etc., to define what types of graphics the game will need to design and what type of look is most appropriate.

Examples of **types of graphics** include: backgrounds, scenery with landscape elements, characters (main and NPCs), icons, illustrations, and patterns to create animations, among others.

Students should also think about the game and answer questions such as: does it have a humorous aspect? Is it an epic fantasy? Does it have a historical setting? They should then use these considerations to determine the aesthetics of the graphics.

- **Step 2 – Look at Technical Requirements**

What are the technical requirements of the graphics, depending on the video game creation software they will use? Normally, we will need image files that meet certain requirements such as size, proportions, file format, etc. that may vary depending on different conditions, including the type of graphic, whether it is 2D or 3D, and many others.

Here is one example of the technical requirements for the assets of a specific video game creation software (RPG Maker MV) that mainly includes graphics:

- [Asset Standards.](#)

Students may use this example to see different definitions of types of graphics and to get an idea of what their requirements may be. Note that this example provides an explanation of 2D graphics only.

If students need more specific guidance, they may also see the following videos, which explain in more detail how to create graphics with different types of software in both 2D and 3D.

- [Creating CUSTOM TILESETS](#)
- [How to Make a 2D Game in Unity](#)
- [Beginners Guide to Learning 3D Computer Graphics](#)

Finally, for a historical overview on the evolution of graphics, check out this video:

- [A Brief History of Graphics](#)

- **Step 3 – Create and implement the graphics with consistency**

Each pair of students should use the necessary software to create their graphics. They can decide themselves which software to use, or the educator can give guidance. For 2D graphics, an image editing program will most likely be adequate.

Before creating graphics, students should be introduced to the idea of **consistency**, which is a key concept in graphic design. Applied to video games, it means that all of the different graphics in a game should be credible when compared to one another and, moreover, should always be consistent with the aesthetics determined in Step 1.

Examples of consistency may include: sizes should be proportionate, characters should have the same drawing style, in a horror game the graphics should have darker colours, etc.

To maintain consistency, it is also important to meet the technical requirements seen in Step 2. Otherwise, there could be inconsistencies such as disproportionate characters, non-walkable paths, incoherent animations, and most likely, graphical errors (glitches).

Note: Instead of creating graphics, it is also possible to implement graphics previously made by others. In this case, it is still important to work on the consistency of the graphics used in the game. In addition, others' graphics will most likely have a license attached, which can be copyright, creative commons, or one of many other types of licenses on the work. The easiest way to avoid using licensed material is to either: 1. create your own graphics, or 2. check for graphics available on the creative commons.

## Example of a graphic inconsistency

Take a look at the following photo and see if you can spot the graphic inconsistency in the game:



There are two characters in this game scenario, and the one of the bottom right is considered graphically inconsistent with the game. This is because the character nearer the top of the photo has a very similar drawing style to that of the game's environment (colourful, round-shaped), while the other character in the bottom right corner does not. This character, with his sharper angles, thinner profile, and different style of clothing, probably belongs to a science fiction or action video game.

## References

Brackeys. (2018, July 8). *How to Make a 2D Game in Unity* [Video]. YouTube.  
<https://www.youtube.com/watch?v=on9nwbZngyw>

Mipumi Games. (2021). *Mipumi Games*. Studio Homepage.  
<https://www.mipumi.com/>

User Ahoy. (n.d.) *A Brief History of Graphics* [Video]. YouTube.  
<https://www.youtube.com/watch?v=QygyWUrHsFc>

User BenderWaffles. (2016, October 6). *Creating CUSTOM TILESETS | BenderWaffles Teaches - RPG Maker Tutorial HOW TO #15 Guide VX MV MZ* [Video]. YouTube.  
[https://www.youtube.com/watch?v=AKwQ5ZpQMxo&list=PLFx\\_7sHrMIWUr6Kuk5FCHj6xsCncZVWYN&index=21](https://www.youtube.com/watch?v=AKwQ5ZpQMxo&list=PLFx_7sHrMIWUr6Kuk5FCHj6xsCncZVWYN&index=21)

User Blender Guru. (2016, October 13). *Beginner's Guide to Learning 3D Computer Graphics* [Video]. YouTube. <https://www.youtube.com/watch?v=VT5oZndzj68>

RPG Maker MV. (2021). *Asset Standards*. RPG Maker Documentation site.  
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