G.C.E. O/L Grade 11 ICT · Lesson 4

4.4 Integrating Multimedia: Storyboards, Design and a Sigiriya Video Project

Syllabus 13.4. Now you can make images, animations, audio and video. In this note you will put them **together** in one product. You will learn to **plan** for the **purpose** and **audience**, draw a **storyboard**, put an **animation over a background image**, add **audio and video**, think about **file size** and **copyright**, and follow a full project – a one-minute video about **Sigiriya** – from plan to **YouTube** with **captions**.

1. What does integrating multimedia mean?

Integrating means combining several media elements – **text, images, animation, audio and video** – into **one** product, such as a video, a presentation or a web page. Each element does a job: the image sets the scene, the animation catches the eye, the narration explains and the music sets the mood.

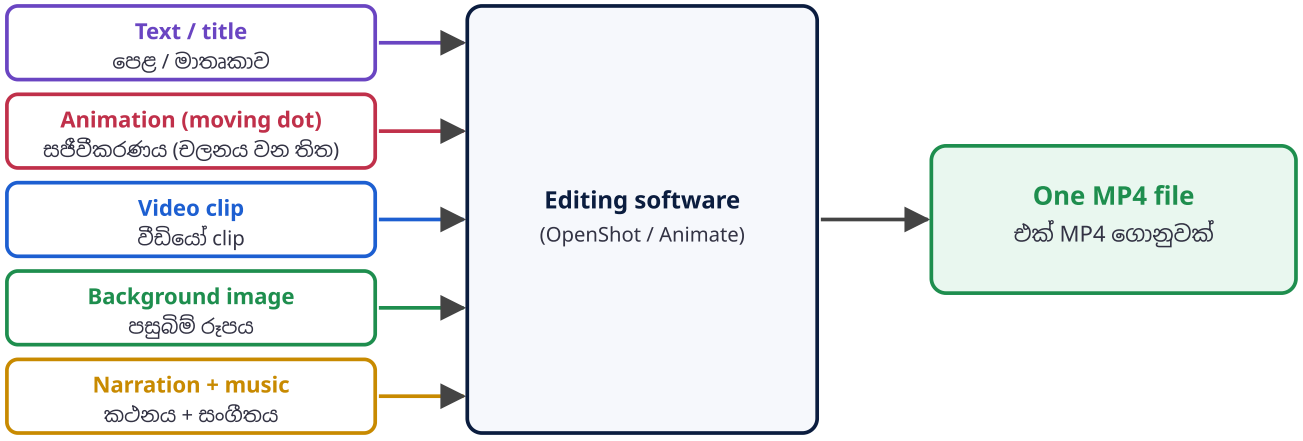


Figure 4.10 – Text, animation, video, a background image and audio are combined in editing software into one MP4.

2. Animation on a background image

Put the **background image** on the **bottom layer** and lock it. Put each moving object (a bird, a title, a dot on a map) on its **own layer above**. Then add a **motion tween** to each moving object. Because the background is on a separate layer, it stays still while the objects move. Use a PNG with **transparency** for objects so the background shows around them.

3. Adding audio and video

- **Narration** – record your voice in Audacity, remove noise, export as MP3, then import.
- **Background music** – keep it **soft** under speech and **fade it out** at the end.

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- **Video clips** – trim them first, then place them on the video track in story order.
- **Sync** – line up the narration with the matching picture on the timeline.

4. Designing for the requirement

Before you open any software, answer these questions. A video for **Grade 6 students** needs simple words and bright colours; a video for **tourists** may need English captions.

Requirement	Ask yourself
Purpose	What should the viewer learn or feel?
Audience	Who will watch it – Grade 6 students, parents, tourists?
Storyboard	Sketch each scene, its text, sound and time
File size and format	Small enough to share (MP4, 1080p)
Copyright	Use your own media or Creative Commons and give credit

5. The storyboard

A **storyboard** is a plan drawn as a row of boxes, like a comic strip. Each box is one **scene**: a quick sketch, the text on screen, the sound and the **time**. It helps the group agree on the story before spending hours editing, and it shows the total length.

6. Worked project – “Sigiriya: Our Heritage”

Task: A Grade 11 group makes a **1-minute video** for the school’s Heritage Day to teach Grade 6 students about Sigiriya, a UNESCO World Heritage Site in the Matale District. **Purpose:** to inform and make students proud of their heritage. **Audience:** Grade 6 students. **Output:** MP4, 1080p, 30 fps.

Scene	What we see	Media used	Seconds
1	Title on a Sigiriya photo	Background image + animated title	6
2	Map: a dot moves to Matale	Motion tween on a map	8
3	King Kashyapa and the 5th century	Narration audio + still image	12
4	Video: the Lion’s Paw steps	Trimmed video clip	14
5	Frescoes and the Mirror Wall	Photos with zoom effect	12
6	Protect our heritage – credits	Text + music fade out	8

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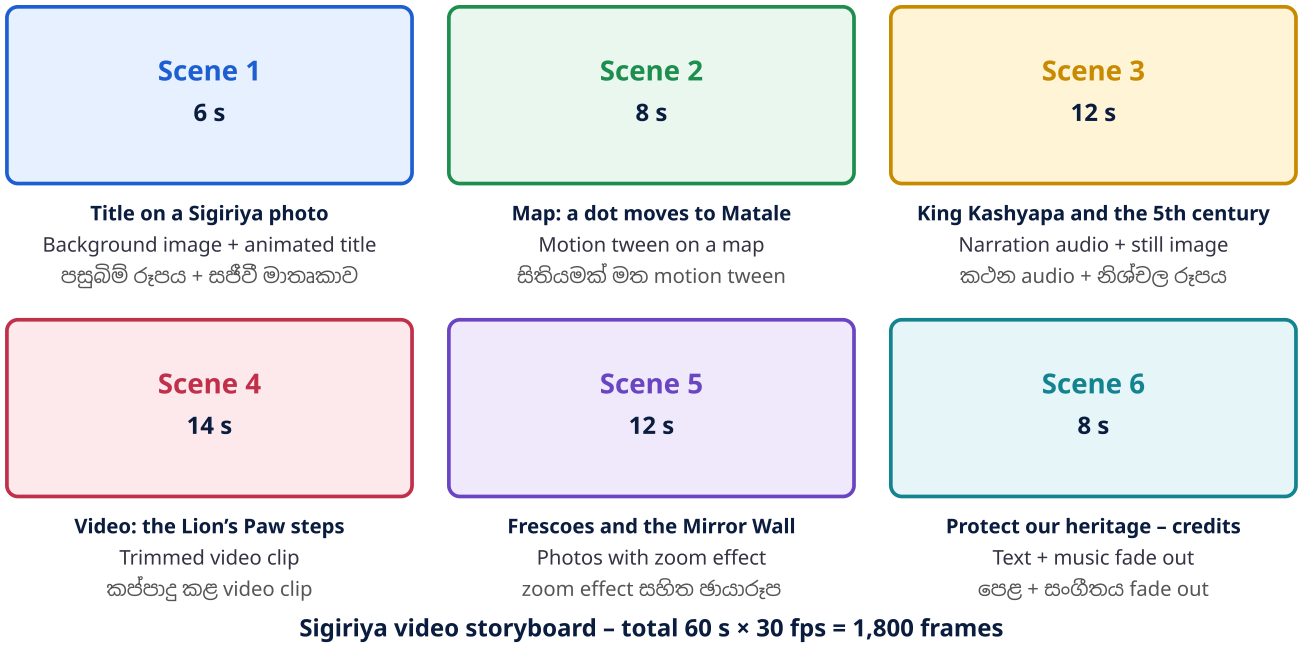


Figure 4.11 – Storyboard for the Sigiriya video: 6 scenes, total 60 s = 1,800 frames at 30 fps.

Check the plan: 6 + 8 + 12 + 14 + 12 + 8 = **60 s** = exactly 1 minute. At 30 fps that is 60 × 30 = **1,800 frames**.

- **Images:** the group's own photos from a school trip (no copyright problem).
- **Animation:** a dot moves across a map of Sri Lanka to Matale with a motion tween.
- **Audio:** narration recorded in Audacity; Creative Commons music with credit at the end.
- **Video:** a trimmed 14-second clip of the Lion's Paw steps.
- **Edit and export:** put everything on the OpenShot timeline, add a title and fade, export MP4.

> 💡 Keep text on screen long enough to read aloud twice. A Grade 6 student reads slowly!

7. File size and copyright

A long 4K video can be several gigabytes – too big for WhatsApp or a school pen drive. For most school projects **1080p MP4** is a good balance. Compress large photos (JPEG) before putting them in. For **copyright**, use your own media, or Creative Commons media, and **list credits** at the end.

8. Sharing online – YouTube, captions and vertical video

Platform	Aspect ratio	Pixels
YouTube / TV	16:9	1920 × 1080
Shorts, Reels, TikTok	9:16	1080 × 1920
Instagram square	1:1	1080 × 1080

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Figure 4.12 – Aspect ratios: 16:9 for YouTube, 9:16 for Shorts and Reels, 1:1 square.

NEW 2026 **2026:** When you upload to **YouTube**, write a clear title and description, choose **"Made for kids"** if it is for children, and add **captions/subtitles** (Sinhala, Tamil, English) so deaf viewers and people without sound can follow. For **Shorts, Reels and TikTok**, make a **vertical 9:16** version. Mark AI-made content if the platform asks.

Key Words

Integrating multimedia – Combining text, images, animation, audio and video in one product.

Storyboard – A scene-by-scene plan with sketches, text, sound and time.

Scene – One part of the story shown in one storyboard box.

Purpose – What the product should achieve.

Target audience – The people the product is made for.

Background image – A still picture on the bottom layer behind moving objects.

Narration – Recorded voice that explains the pictures.

Sync – Lining up sound with the matching picture.

Copyright – The creator's legal right to decide who uses their work.

Creative Commons – Licences that let others use work under simple rules.

Captions / subtitles – Text on screen showing what is said.

Aspect ratio – Width to height shape, e.g. 16:9 or 9:16.

Sample Q&A

1. What is a storyboard?

Answer: A scene-by-scene plan with sketches, text, sound and time.

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2. Why put the background image on its own bottom layer?

> **Answer:** So it stays still while objects on upper layers move.

3. Name two things to decide before making a multimedia product.

> **Answer:** Purpose and target audience (also file size, copyright).

4. Scenes of 6, 8, 12, 14, 12, 8 s are planned. How long is the video?

> **Answer:** 60 s = 1 minute.

5. Why add captions?

> **Answer:** So deaf viewers and people watching without sound can understand.

6. Which aspect ratio suits YouTube Shorts?

> **Answer:** 9:16 (vertical), 1080 × 1920.

MCQ

1. Combining text, images, audio and video in one product is

A. integrating multimedia
B. cropping
C. compression
D. tweening

2. A scene-by-scene plan drawn as boxes is a

A. codec
B. storyboard
C. layer
D. timeline

3. Who the product is made for is the

A. purpose
B. resolution
C. target audience
D. format

4. To keep a background still while a bird flies over it, put the background

A. on the same layer as the bird
B. in a shape tween
C. on its own bottom layer
D. in the audio track

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5. Scenes of 6, 8, 12, 14, 12, 8 seconds give a total of

A. 6 seconds
B. 50 seconds
C. 72 seconds
D. 60 seconds

6. A 60-second video at 30 fps has how many frames?

A. 600
B. 2
C. 1,800
D. 90

7. Which image is safest to use in a school video?

A. a film poster
B. any Google image
C. a TV channel’s logo
D. your own photo

8. CC BY means you may use the work if you

A. give credit to the creator
B. remove the creator’s name
C. never share it
D. pay a fee every time

9. Text at the bottom of a video showing what is said is called

A. key frames
B. captions/subtitles
C. credits
D. thumbnails

10. YouTube Shorts and Instagram Reels use the aspect ratio

A. 9:16
B. 16:9
C. 4:3
D. 1:1

11. A normal YouTube video is usually

A. 9:16 (1080 × 1920)
B. 2:1 (100 × 50)
C. 1:1 (1080 × 1080)
D. 16:9 (1920 × 1080)

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12. Lining up narration with the matching picture is called

A. compress
B. crop
C. sync
D. rotate

13. Which output is best for most school video projects?

A. 1080p MP4
B. BMP
C. WAV
D. 4K uncompressed AVI

14. Background music under narration should be

A. any copyright song
B. soft, and faded out at the end
C. louder than the voice
D. stopped suddenly

15. A video for Grade 6 students should use

A. very small text
B. simple words and clear pictures
C. no sound or pictures
D. long technical paragraphs

Structured Questions

1. (i) What is a storyboard? (1 mark)
(ii) Give two reasons for making one before editing. (2 marks) *(3 marks)*

> (i) A scene-by-scene plan with sketches, text, sound and time (1). (ii) The group agrees on the story (1); shows the total time and media needed, saving editing time (1).

2. A Sigiriya video has scenes of 6, 8, 12, 14, 12, 8 seconds and is exported at 30 fps.
(i) Find the total length. (1 mark)
(ii) Find the number of frames. (1 mark) *(2 marks)*

> (i) 60 s (1). (ii) 60 × 30 = 1,800 (1).

3. Explain how to show an animated bird flying over a still photo of a paddy field. (3 marks) *(3 marks)*

> Import the photo onto the bottom layer (1); put the bird (transparent PNG) on a new layer above (1); add a motion tween from an initial to a destination key frame (1).

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4. List four things to consider when designing a multimedia product for a requirement. (4 marks) *(4 marks)*

> Purpose (1); target audience (1); file size and format (1); copyright / credit (1). (Storyboard also accepted.)

5. The group will upload the video to YouTube and also share a version on Reels. Give three good practices. (3 marks) *(3 marks)*

> Add captions/subtitles (1); make a vertical 9:16 version for Reels (1); clear title/description, “Made for kids”, credits for music (1).

Summary

- Integrating = text + images + animation + audio + video in one product.
- Plan purpose and audience first.
- Storyboard = boxes per scene with sketch, text, sound and time.
- Background on the bottom layer; moving objects tweened on layers above.
- Narration soft music, sync, fade out; trim video clips.
- Total time = sum of scenes; frames = seconds × fps.
- 1080p MP4 for school; own or Creative Commons media with credits.
- YouTube 16:9, Shorts/Reels 9:16; add captions.

MCQ answer key – 4.4

1. **A** – Integrating = putting media together.
2. **B** – Storyboards are planned before editing.
3. **C** – Audience = the viewers.
4. **C** – Separate layers move separately.
5. **D** – 6+8+12+14+12+8 = 60.
6. **C** – 60 × 30 = 1,800.
7. **D** – You own the copyright of your own photo.
8. **A** – BY = attribution.
9. **B** – Captions help deaf viewers.
10. **A** – Vertical video = 9:16.
11. **D** – Landscape 16:9.
12. **C** – Sync = in time together.
13. **A** – Good quality, reasonable size.
14. **B** – Speech must be clear.
15. **B** – Design for the audience.

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