### MARIO & BIANCA MALABUNGA (ROKE COUNTY SCHOOLS)

#### CTE MIDDLE SCHOOL

**Unit Standards:**
- Examine how technology is developed to solve problems as a result of demands, values, and interests of consumers and businesses (STL 6D, AAAS 9P)
- Identify recent innovations to products or systems that have led to changes in society. Describe inventions or innovations that changed society and created new needs and wants. (STL 6E, AAAS 3A/M3)
- Describe new products and systems that have been developed to solve problems. Identify new products and systems that cannot be done without the help of technology. (STL 1F)
- Explain that the development of technology is a human activity and is the result individual or collective needs and the ability to be creative. (STL 1G, AAAS 1C/M3)
- Explain how technology is closely linked to creativity. Discuss how creativity has resulted in innovations to technology. (STL 1H)
- Design a product or system that adheres to certain parameters. (STL 2R)
- Utilize tools such as computer aided design software and other modeling tools to provide two-dimensional and three-dimensional representations of technology innovations/solutions. (STL 11J, NCTM 1Q/8J/12J)

**Evaluation:** By the end of the unit, create an Alice animation of not more than 1 minute showing all the skills learned in Alice.

### Lesson 1

**Objectives:** At the end of this lesson, students should be able to set up a world scene, add and position characters and objects, use basic buttons, and add a method.

**Essential Question:** How do you set up a scene in Alice?

**Focus & Review:** Ask students about past lesson on storyboards. Introduce the focus topic by showing an example.

**Teacher Input:** The teacher will model the following topics:
- saving world
- exploring the viewer
- adding characters and objects to world
- play, undo, redo buttons
- positioning objects and characters in world.
- camera (single view, quad view, dummy camera, moving camera)
- using default methods

**Guided Practice:** Students will follow step by step the instructions in doing the teacherExample world while the teacher models it.

**Independent Practice:** Create a moon scene with lunar lander, astronaut, rock, alien (hiding behind rock), flag (on top of rock), and satellite. Astronaut hops once using “do together”.

**Closure:** Share work to class. Ask teacher for questions and clarifications. Wrap up lessons learned.
Lesson 2

Objectives: At the end of this lesson, students should be able to add a billboard, sound, and 3D text “wait” to adding billboards, sounds, wait, text

Essential Question: How can adding sounds and billboards affect the over-all package of the project?

Focus & Review: Ask students about what they have learned from the past lesson. Introduce the focus topic by showing an example.

Teacher Input: The teacher will demonstrate how to import pictures and sound files, and how to use the “wait” when syncing events and sounds while tweaking the last phase of the animation.

parameters, creating new method, creating an event, function (distance to), while loop
- Create a new event by pressing the arrow keys to do the “astronaut.Hop” method

Guided Practice: Students will follow step by step the instructions in doing the teacherExample world while the teacher models it.

Independent Practice: Students will add on the moonWalk world a billboard of the mission control center with a screenshot of the last frame as another billboard over one of the monitor in the mission control.

Closure: Share work to class. Ask teacher for questions and clarifications. Wrap up lessons learned.

Homework: Enhance your final work by adding other objects, characters, text, billboards, or sounds. Export your movie file to be shared.

Lesson 3

Objectives: At the end of this lesson, students will add a billboard, sound, and 3D text “wait” to adding billboards, sounds, wait, text

Essential Question: How can adding sounds and billboards affect the over-all package of the project?

Focus & Review: Ask students about what they have learned from the past lesson. Introduce the focus topic by showing an example.

Teacher Input: The teacher will demonstrate how to import pictures and sound files, and how to use the “wait” when syncing events and sounds while tweaking the last phase of the animation.

Astronaut is initially holding the flag, then hops toward the rock, and plants the flag. Create a list (satellite and space dock) that will move in orbit.

Guided Practice: Students will follow step by step the instructions in doing the teacherExample world while the teacher models it.

Independent Practice: Students will add on the moonWalk world a billboard of the mission control center with a screenshot of the last frame as another billboard over one of the monitor in the mission control.

Closure: Share work to class. Ask teacher for questions and clarifications. Wrap up lessons learned.
**Lesson 4**

**Objectives:** At the end of this lesson, students will add a billboard, sound, and 3D text “wait” to adding billboards, sounds, wait, text

**Essential Question:** How can adding sounds and billboards affect the over-all package of the project?

**Focus & Review:** Ask students about what they have learned from the past lesson. Introduce the focus topic by showing an example.

**Teacher Input:** The teacher will demonstrate how to import pictures and sound files, and how to use the “wait” when syncing events and sounds while tweaking the last phase of the animation.

Move astronaut using mouse. Astronaut must hop towards rock. Alien will pop up, face and surprise the astronaut, and hide again. conditions (BDE event)

**Guided Practice:** Students will follow step by step the instructions in doing the teacherExample world while the teacher models it.

**Independent Practice:** Students will add on the moonWalk world a billboard of the mission control center with a screenshot of the last frame as another billboard over one of the monitor in the mission control.

**Closure:** Share work to class. Ask teacher for questions and clarifications. Wrap up lessons learned.

**Homework:** Enhance your final work by adding other objects, characters, text, billboards, or sounds. Export your movie file to be shared.

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**Lesson 5**

**Objectives:** At the end of this lesson, students will add a billboard, sound, and 3D text “wait” to adding billboards, sounds, wait, text

**Essential Question:** How can adding sounds and billboards affect the over-all package of the project?

**Focus & Review:** Ask students about what they have learned from the past lesson. Introduce the focus topic by showing an example.

**Teacher Input:** The teacher will demonstrate how to import pictures and sound files, and how to use the “wait” when syncing events and sounds while tweaking the last phase of the animation.

change scene, use variable

**Guided Practice:** Students will follow step by step the instructions in doing the teacherExample world while the teacher models it.

**Independent Practice:** Students will add on the moonWalk world a billboard of the mission control center with a screenshot of the last frame as another billboard over one of the monitor in the mission control.

**Closure:** Share work to class. Ask teacher for questions and clarifications. Wrap up lessons learned.
Lesson 6

Objectives: At the end of this lesson, students will add a billboard, sound, and 3D text “wait” to adding billboards, sounds, wait, text

Essential Question: How can adding sounds and billboards affect the over-all package of the project?

Focus & Review: Ask students about what they have learned from the past lesson. Introduce the focus topic by showing an example. Give a quick review also about fair use guidelines, and how to grab and cut mp3 and other files.

Teacher Input: The teacher will demonstrate how to import pictures and sound files, and how to use the “wait” when syncing events and sounds while tweaking the last phase of the animation.

Guided Practice: Students will follow step by step the instructions in doing the teacherExample world while the teacher models it.

Independent Practice: Students will add on the moonWalk world a billboard of the mission control center with a screenshot of the last frame as another billboard over one of the monitor in the mission control.

Closure: Share work to class. Ask teacher for questions and clarifications. Wrap up lessons learned.

Homework: Enhance your final work by adding other objects, characters, text, billboards, or sounds. Export your movie file to be shared.