Lesson plan module 6-7 - Games

Objectives:

- Apply the computational concepts of conditionals, operators, and data.
- Apply the computational practices of iterating, testing, debugging, and reusing, abstracting, and modularizing by building game projects.
- Identify and use common game mechanics.
- Develop communication skills, critical thinking, problem solving, collaboration, and creativity skills.

Materials:

- Computers
- Internet
- PowerPoint module 6-7

Duration:

- +/- 2,5 hours

Timing	Teachers activities	Learners activities	Competences
Engage Phase 20' 	Divide students into small groups of 2-3 people. In their small groups, ask students to generate a list of games that they enjoy playing. Give students a short time period (1-2minutes) to write down as many games as they can. Then, have students narrow down their favorites from the brain dump list. After a few minutes, facilitate a class discussion about what characteristics make up a game and generate a class list of common game mechanics. Ask: • What do the games have in common? • What features of their design make them a game? Next, ask students to imagine their dream game and write a list of design elements for that game. Invite students to share their dream game lists in their small groups to get feedback and suggestions.	• The learners understand the characteristics of a game • Learners realize they can use Scratch for developping a game. • Learners make a list of their favorite design elements • Learners share their dream game list in their groups to get feedback and suggestions.	Critical thinking, brainstorming and communication skills.

Timing	Teachers activities	Learners activities	Competences
Demonstration Phase 20' 	Show your students how they can use Scratch for developing an game and what the design process is. You can do that by using the PowerPoint of module 6-7 and by showing an example of a game such as **Maze**, **Pong**, and **Scrolling** (you can find them in the in the **Game studio**). Ask the learners to observe. Maybe you can ask **some questions**: • What did you see? Does it look difficult? • How did the game work?	• The learners observe the demonstration and take notes of the following questions : ▪ What did you see? Does it look difficult? ▪ How did the game work? What did I do?	collaboration, creativity computational, problem solving, coding skills, communication skills
Experimenting Phase 60' 	**Design your Dream Game** Let the learners create their dream game. As a first step let them first fill in the game **design template here** You can suggest to the learners to have a look at some examples in the **Game studio** such as **Maze**, **Pong**, and **Scrolling**. Encourage the learners to: • Add multiple levels to their game! This can be done through the use of different backdrops and using broadcast blocks to trigger the next level. • Add difficulty to the game by creating different levels, using a timer, or keeping score • Use the 'make' a variable block to keep score! • Experiment with timer blocks to add new challenges	Learners create (individually or in pairs/groups) a game. They can start building their own games or remix one of the starter projects in the Games Studio. When done learners show their project in their feedback group. Let learners gather feedback by having their feedback group members respond to the following questions: • What is something that doesn't work or could be improved? • What is something that is confusing or could be done differently? • What is something that works well or you really like about the project?	collaboration, creativity computational, problem solving, coding skills, communication skills, feedback skills

Timing	Teachers activities	Learners activities	Competences
	When the learners are ready invite them to share their projects to a 'feedback group'. A feedback group is a small group of learners who share ideas and projects-in-progress with one another in order to get feedback and suggestions for further development. Divide students in smaller groups of 3 - 4 people. In these feedback groups, ask the learners to take turns sharing their games. Give the learners time to improve the games using the feedback.		
Experimenting Phase 30' 	**Game Fair** To celebrate and share final game creations, we recommend hosting a Game fair. Final game projects are placed in presentation mode; students walk around and play each other's games. Half of the students stay in their seats with their projects open while the other half walks around trying out the games, asking questions, and giving feedback, then switch sides.	Learners showcase and test each others game and give feedback.	collaboration, creativity computational, problem solving, coding skills, communication skills, feedback skills
Reflection Phase 20' 	Ask the learners what they have discovered today and what they would like to do in the next coding club. **Guiding questions:** • *What was challenging about designing your game?* • *What are you proud of?* • *What was the main feedback you got from your fellow coders?* • *What would you like to improve still?*	• The learners share and reflect on the coding club session. • The learners express their aspirations for the next coding club session.	Reflection, communication skills