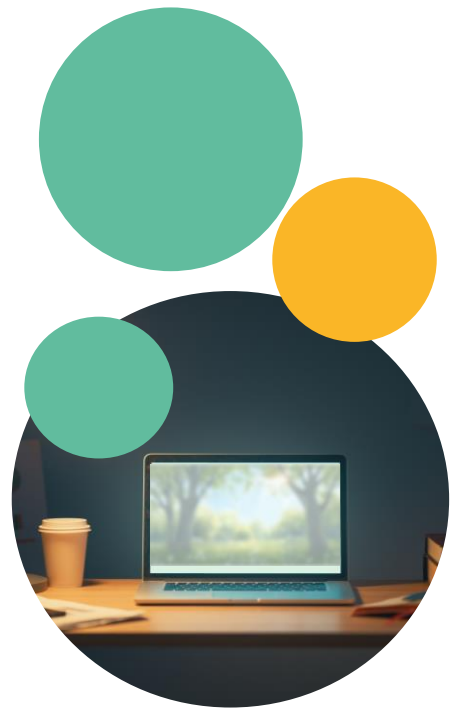


Green Siesta

AI-BASED SERIOUS GAME

Artificial intelligence (AI) enables machines to learn, adapt, and perform tasks that typically require human intelligence, revolutionizing industries through automation, data analysis, and decision-making.

In the **Green Siesta** serious game **AI** is used for **walking** and **navigation**, building a **software agent that acts as a sidekicks** and **supporting text-to-speech (TTS)** for improving accessibility and interaction.



MULTILINGUAL SERIOUS GAME

The game is implemented as a multilingual game. All text within the game has been translated into five EU languages: **English, Croatian, Spanish, Hungarian** and **French**.



GREEN - THEMED SERIOUS GAME

Paper, plastic and organic waste management

This serious game revolves around waste management. **Green Siesta** takes players on a journey into a green dream during an afternoon nap, where they explore three distinct dream worlds: **Paper, Plastic, and Organic Waste Dream**.

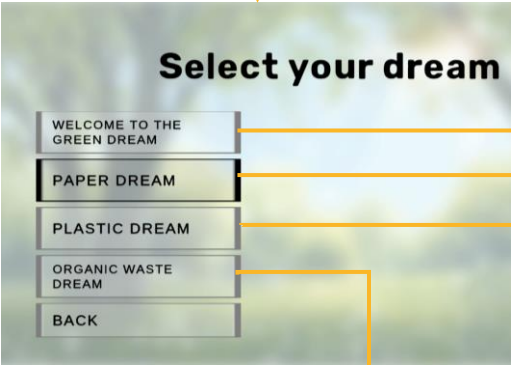
Each dream offers education on proper waste disposal practices. Users collect recyclable waste and transform it into new, useful objects. Non-recyclable waste gets disposed of and vanishes into thin air.

The game also features "**green secrets**"—interactive objects that provide players with valuable insights into waste management, making learning both engaging and immersive.

Gameplay information



- User manual
- Questionnaires
- Credits
- About the project



Welcome dream where you get familiar with game play



Progress status

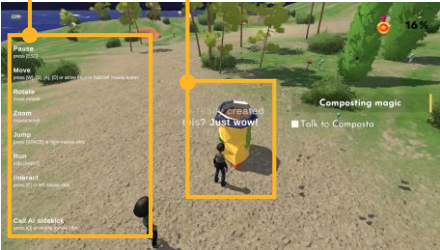


Specific task you need to do



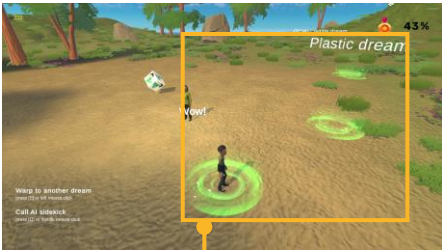
Instructions for possible interactions

This symbolizes the completion of tasks and the creation of useful objects in each dream



Instruction that task is successfully completed

Game progress saved



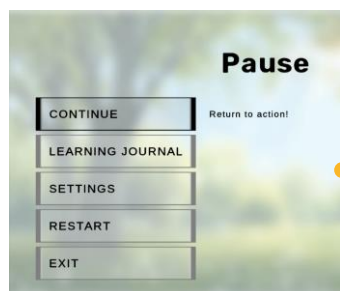
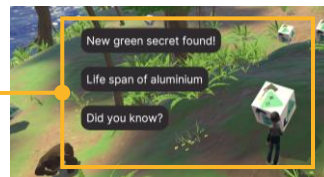
After completing all tasks in the dream, teleportation portals will appear in order to play another dream



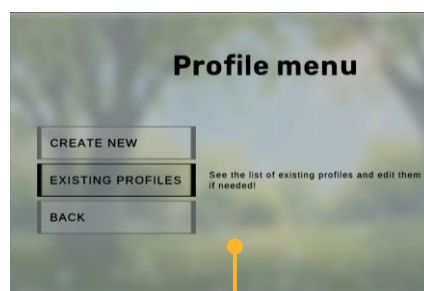
Teleportation in action



Green secrets objects – they are spinning all the time. Interact with them and get some green knowledge



By pressing the Esc (escape) button you will get the Pause screen



By pressing Exit in the main screen you can manage profiles

DOWNLOAD GAME AND MORE INFO:

<https://sociallab.fer.hr/play2green/games/green-siesta/>



UDL GUIDELINES

The **Green Siesta** serious game implements **26 Universal Design for Learning (UDL)** guidelines. According to these guidelines, they are divided into three pillars that offer multiple means design guidelines for: Engagement, Representation and Action & Expression.

Multiple means of ENGAGEMENT

<p>1</p> <p>Users can choose between an introduction level and three levels divided by the waste management of plastic, paper or organic waste.</p>	<p>2</p> <p>The learning materials are divided into three waste management levels/courses.</p>	<p>3</p> <p>The user is able to implement their own user profile which changes the name of the main character and memorises their achievements and advances in the game.</p>
<p>4</p> <p>Gameplay is heavily based on dialogues and storytelling.</p>		<p>5</p> <p>There is an NPC that serves as a guide who can be called if needed.</p>
<p>6</p> <p>There are motivational messages from NPCs in the game upon finishing a certain task.</p>	<p>7</p> <p>Progress reports are implemented to remind the player which tasks and fun facts have been opened and completed.</p>	<p>8</p> <p>There are multiple NPCs which pose as guides and agents.</p>

A tutorial is implemented for the user to be introduced to the storyline and game mechanics.

9

All of the player profiles can follow their own progress depending on a particular level or overall progress in a learning journal containing progress and statistics of their efforts.

10

A dashboard is implemented which clearly states the user's progress and statistics analysis.

11

Multiple means of REPRESENTATION ●

The user has the ability to adjust the volume/graphics/sound intensity.

12

13

The main menu offers icons to accompany audial representation.

14

All dialogues and audial information has subtitles.

There are sound effects to accompany solved quests, character movement, and all actions that are done in the game.

15

The game supports five languages (English, Croatian, French, Spanish and Hungarian).

16

There are sound effects on the facts which serve as educational materials.

17

18

There is an introduction level in which the user is accustomed to the environment and game mechanics.

19

Multiple NPCs are implemented in the game, most of them serve as narrators, but there is a sidekick who serves as a guide.

20

There are multiple levels depending on the waste which you would like to learn about.

Multiple means of ACTION & EXPRESSION ●

The game can be played using multiple keys on the keyboard (either the WASD keys or the arrow keys), it is also completely playable via just the computer mouse and works with joysticks.

21

The progresses and collected items/facts are all visible in a "learning journal" which is a progress report.

22

Beginning any challenge the user gets a clear interpretation of what is expected of them via dialogue.

23

Each of the quests has checklists for tasks the user is expected to complete.

24

25

The user can see their progress throughout the game, in the form of a percentage.

26

Depending on the task at hand, the user can craft an item which serves as a reward for a job well done.