



Learn how to save lives with Minecraft Education



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Let's play

1 CHALLENGE DESCRIPTION

As a result of a research project carried out by UCAM with the support of the MAPFRE Foundation and in collaboration with Letcraft Education, a learning challenge has been developed within Minecraft Education. It provides the opportunity for students to immerse themselves in situations that require decision-making to solve missions and challenges related to BLS (basic life support) and the use of AED, changing completely the way that students acquire these skills.

Welcome to the Rescue Brigade.

In the Heartbeat Residence neighborhood, players aspire to join the Rescue Brigade, a group of volunteers created to educate and train residents in first aid and CPR techniques. This virtual neighborhood is established as a learning center for the future heroes.

Dr. HeartSaver is the mentor of the Brigade, she and her volunteers will introduce players to the activities. Their goal is to train the next generation of helpers capable of acting quickly and effectively in emergency situations.

Throughout the neighborhood, **players will find educational resources and challenges**, from practical missions related to CPR and choking to informative posters and characters offering useful data and links.

By completing this journey, players will become members of the Rescue Brigade, having acquired knowledge that could save lives in the real world.



→ In addition to these challenges and activities, students will find 2 building challenges, one designed for ages below 12 and another for older participants.

→ Design and build a "nursing classroom" and build "the hospital of the future".

2 LEARNING APPROACH

This Minecraft Education world is intended for **individual student play**. The activities and missions are crafted for completion by a single player, ensuring the achievement of program learning objectives. Each student should have their own device with internet connectivity, and the Minecraft Education world should be installed on it. Alternatively, students may collaborate in small groups, sharing one device per group.

When it comes to the building challenges, it is advisable to carry them out in small groups.

To log into Minecraft Education, students are required to use their Microsoft 365 username and password. Throughout the session, students have the option to keep a journal documenting the activities and lessons they engage in. This journal can take two formats:

- **Digital Format:** Using the in-game book and quill, along with the camera in Minecraft Education, and exporting the book at the end of the session.
- **Physical Format:** Taking notes of their adventures in a classroom notebook.

A Multiple Intelligences approach can be implemented in different ways within Minecraft Education. Specifically, with the activities proposed in this world, the intelligences developed are the following, being addressed in a cross-cutting manner:

Linguistic	Logical - Mathematical	Spatial	Musical	Bodily - Kinesthetic	Intra-personal	Inter-personal	Naturalist
✓		✓	✓	✓	✓	✓	

Other Minecraft Education projects that address Multiple Intelligences can be found in this [article](#).

Teaching and Learning Strategies

Minecraft Education is an ideal setting for designing teaching and learning experiences for students to learn the content in an attractive and engaging way, as it is a tool that is widely connected with their interests.

A Game-Based Learning approach is used in this project. The activities and challenges that students need to complete are in the educational version of the popular video game Minecraft, with the intention of facilitating learning through it. The game is used as a tool to learn new concepts and practice concepts previously learned.

Through the tasks, activities, and construction challenges students will find alternatives and solutions to everyday situations, becoming actively involved and connecting with this new learning environment.

Furthermore, the multiplayer functionality offered by Minecraft Education will facilitate the collaboration among classmates. This functionality enhance peer support while having fun, completing adventures, and building together. These situations help foster critical thinking in students and develop skills and competencies such as creativity, teamwork, and interpersonal skills.

Evidence collection forms

At both the beginning and end of the Minecraft CPR world activity, students will be invited to complete a form to find out your current first aid knowledge. These are not mandatory surveys, but they will go a long way in helping us personalize your learning experience.

At the beginning of the activity when we talk to Dr. SalvaCorazones we will find the initial form.



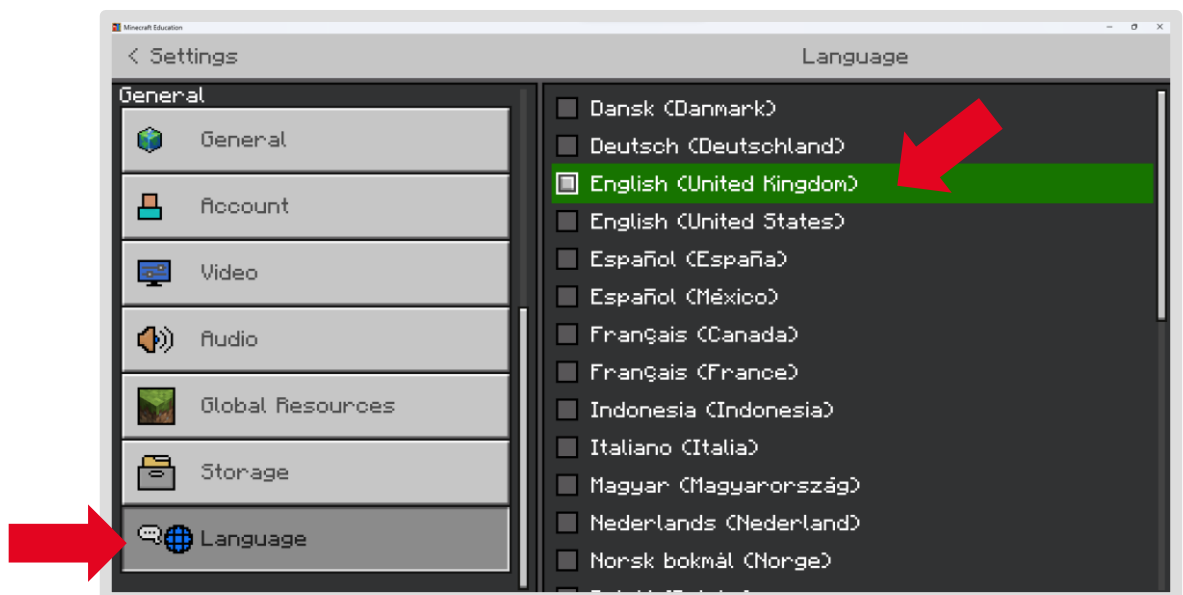
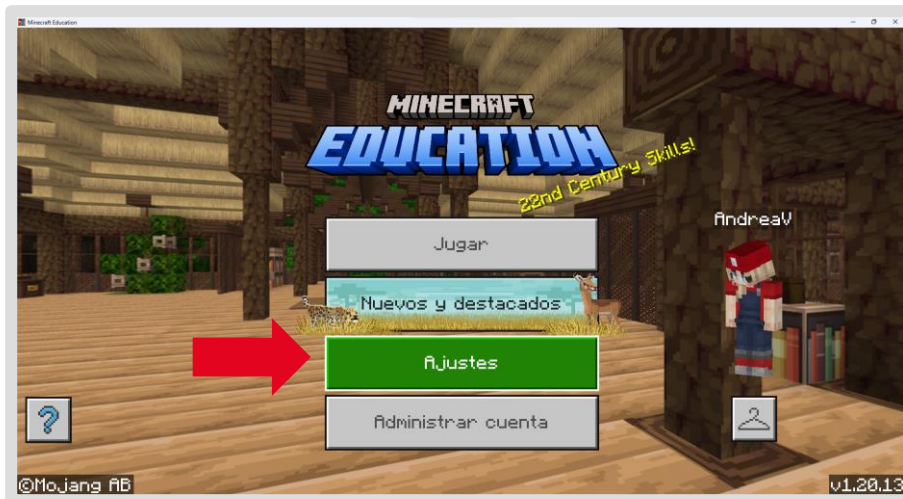
At the end of all the activities, we will have to go back to the city square to talk to Dr. SalvaCorazones to congratulate us, give us the official certificate as members of the Rescue Brigade and share with us the final survey.



Working on content in English

In case we want to work the contents of the RCP world in Minecraft, we will have to change the game settings before going to the world.

On the main screen when logging in, go to "**settings**" and in the "**language**" section select **English** (United Kingdom and United States are supported).



3 NARRATIVE AND STORYTELLING



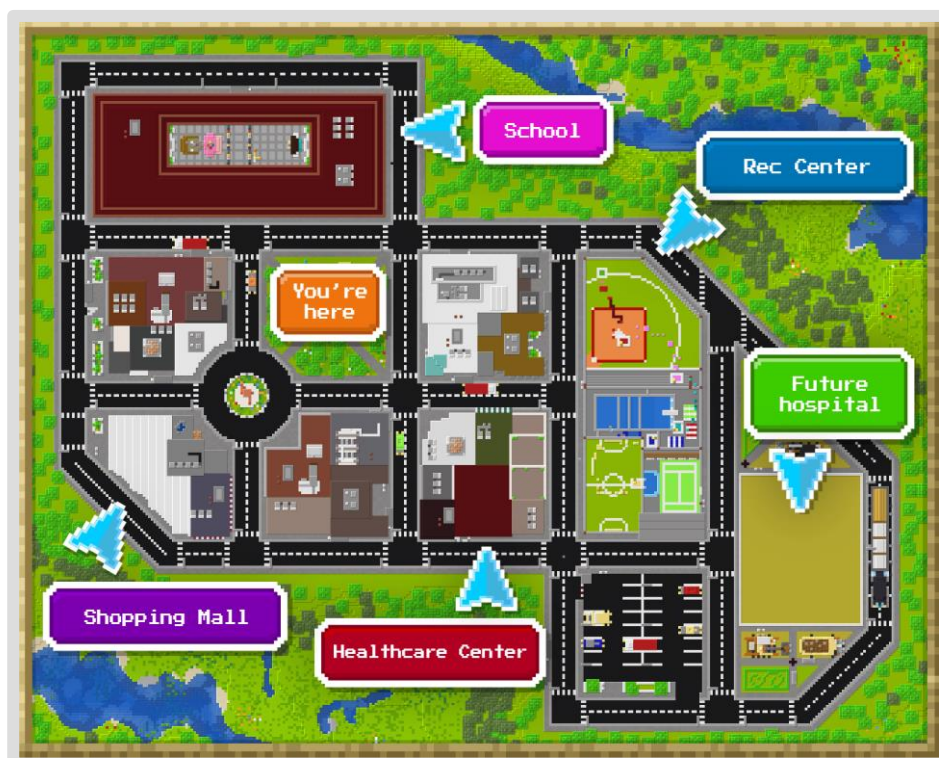
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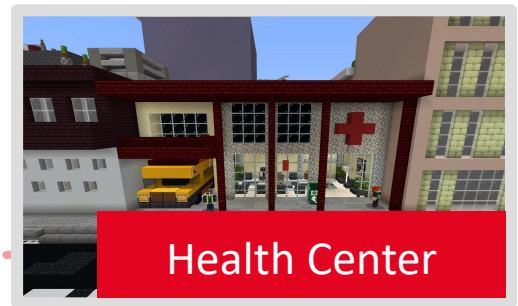
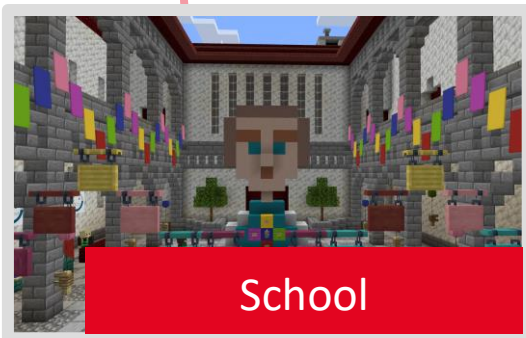
The Residence

In this world, students will find themselves in a city that invites them to join the Rescue Brigade and collaborate with other volunteers throughout the Residence.

To achieve this, they will embark on various missions where they will enhance their first aid knowledge in order to become members of the Brigade.

The different missions and activities will take place in the following locations:

- **School.** First Aid Fair and Nursing Classroom
- **Health center.** CPR Simulators.
- **Shopping Mall.** Chocking
- **Rec Center.** Trivial parkour.
- **The Hospital of the Future.** Building Challenge



Construction Areas

The construction zones in the city are closed until students speak with the volunteer at the entrance:

- **The School.** Students will need to build their ideal nursing classroom. This construction challenge is recommended for students under 12 years old.
- **The Hospital.** Students will need to build a "hospital of the future." They should take into account the number of class periods they will have to construct their hospital and plan its dimensions accordingly. This construction challenge is recommended for students over 12 years old.

The construction challenges are independent of the world's missions and activities. It is recommended that students first complete the activities found in the world and then proceed to the construction challenges. **The world activities do not have a specific order to follow and can be done independently, except for the trivial parkour activity in the rec center, which is designed to be the last activity and will be unlocked after completing the previous ones.**

Taking this into account, the following route is recommended for the proper development of the Project:

Visit the different areas of the city and complete challenges and activities



Complete the rec center activity (Trivial Parkour), which will be unlocked once all the activities have been completed



Visit the construction area according your age and complete the construction challenge

Public Transportation

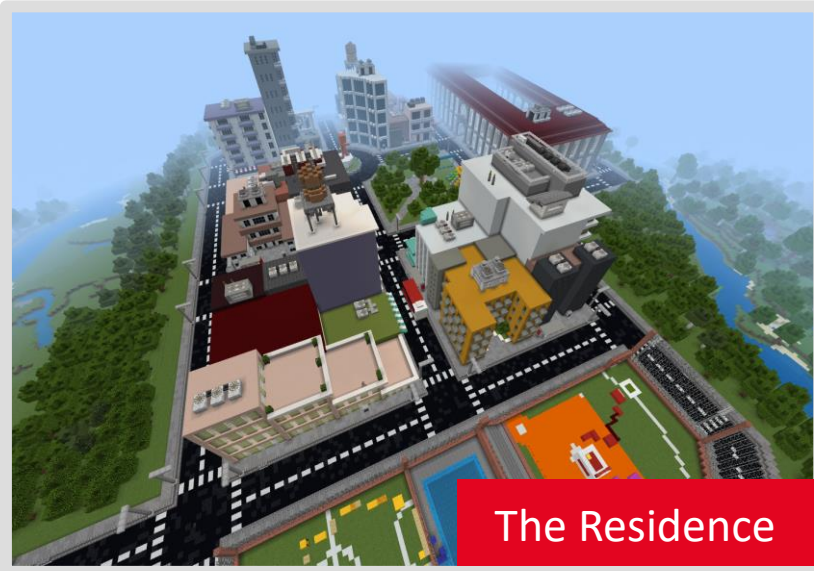
Students can move around the Heartbeat Residence in two different ways: on foot or by using buses located throughout the city. These buses can be found at key points and can be used to transport students between different areas of interest. Upon boarding a bus, they can engage in dialogue with the driver and choose their next destination, providing quick and efficient access to all areas and activities.

Once students speak with the driver, she will offer them different areas to travel to:

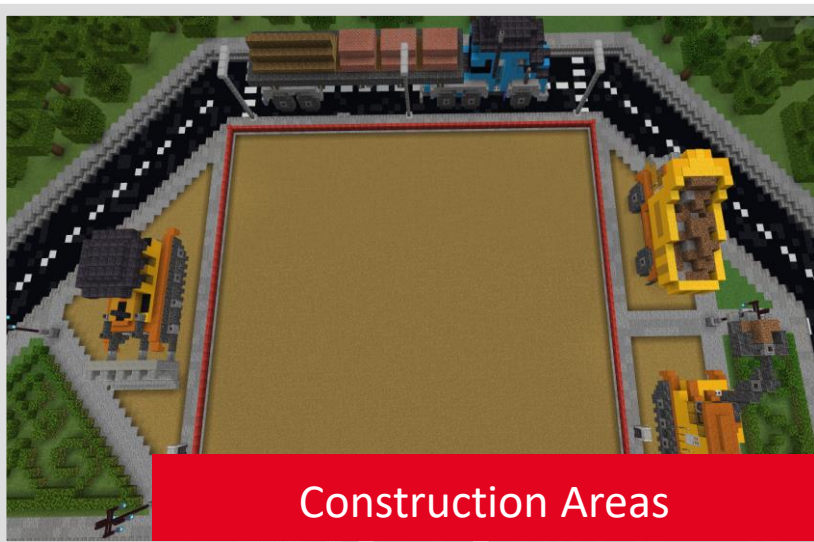
- **School (First Aid Fair).**
- **Health Center**
- **Shopping Mall**
- **Rec Center**
- **Hospital Area**

4 ACTIVITIES

The Residence



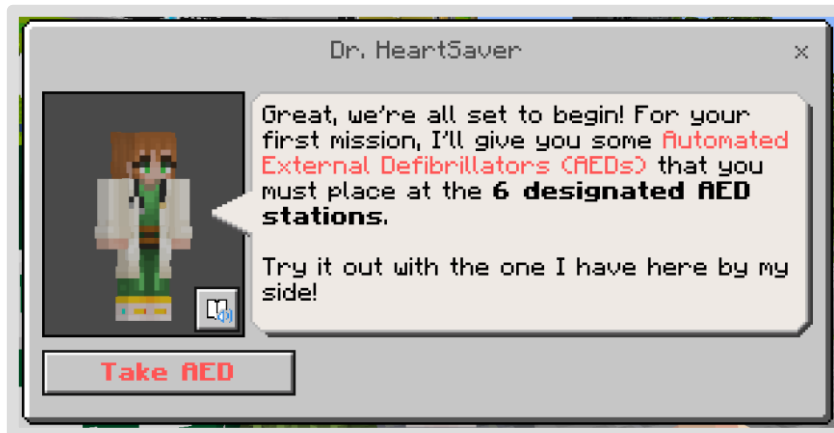
The residence is the city where the spawn point is located. In this space, students will find five places that will play a key role in the development of their quest to become members of the Rescue Brigade



The construction areas are spaces where the creative mode of Minecraft Education is activated, which means that students will be able to play with any block they need for building. Students may enter the building zones by speaking with the volunteer that they will find at the entrance.

Placing AED Devices

Right at the beginning of the Minecraft CPR world, we will find Dr. HeartSaver. She will tell us about our first mission, which involves placing 6 AED stations in key areas of the city.



→ Placing AED Devices in the city

After placing the first AED device in the park area, we will have five more to place in the rest of the city.

Students will always have a counter on the screen indicating the number of AED devices they have placed. If they happen to run out of AEDs for any reason (e.g., accidentally throwing and losing them), they can talk to Dr. HeartSaver again to request more.



The School

At school, we will come across the "First Aid Fair." Here, students will find games in which they will need to practice different techniques for clearing airways and performing compressions.



→ Color pattern – chest compressions activities.

Students will learn a vital technique: how to perform chest compressions with the correct pressure and rhythm. They will need to repeat the color pattern that will appear on the screen for a specified period of time.

The "bloquechico" will have four buttons and a lever, each placed on a different color. The buttons represent chest compressions, and the lever symbolizes the use of the AED. For 2 minutes, messages with color names will appear on the screen, and the player must press the button or lever whose name matches the color displayed.

Health Center

At the health center, students will find several volunteers providing training on what to do in the event of a cardiac arrest.

In the same room, there will be informative posters, along with all the data and information that the volunteers will be providing.



→ CPR Simulations

In this activity, students will need to assist a mannequin. Students will use various techniques and tools used in a real emergency.

Students will be asked to follow the following procedure:

- **First:** Ensure there are no risks in the area.
- **Second:** Check if the subject responds.
- **Third:** Call 112 and report the emergency.
- **Fourth:** While waiting, start chest compressions, maintaining a steady rhythm.
- **Fifth:** Perform a series of ventilations to assist with breathing.
- **Sixth:** Use the defibrillator to attempt to restart the heart.
- **Seventh:** Finally, continue with the chest compressions, ventilations, and the use of the AED until the emergency team arrives.

Health Center

→ CPR Simulations

Once we finish practicing CPR simulations with the manikin at the Health Center, we will leave the building and meet a person who needs our help.

After that simulations, we have to put into practice what we have learned in the previous room, using the different techniques and tools that should be used in an emergency situation, in this case with a real person.



The Shopping Mall

At the shopping center, students will find several volunteers. They will need to set up an area with mannequins to create a choking simulation. In this scenario, students will be asked to practice different techniques that will help clear obstructed airways.



→ Chocking Activity

In this activity, students will continue their training to join the Rescue Brigade. To be able to do that, they will need to gain some first aid knowledge.

Here, they will be able to learn how to act in the event of witnessing a choking incident. They will have the opportunity to practice different maneuvers, such as the Heimlich maneuver, by assisting mannequins experiencing choking.

There will be some mannequins programmed to simulate various types of choking. **Each mannequin will change color according to the severity of its situation**, and students will have a few seconds to assist them.

- If it turns orange, encourage them to cough.
- If it turns purple, administer back blows.
- If it turns blue, it's time to apply the Heimlich maneuver.

Polideportivo

In the re center, students will find a parkour-style trivia challenge where they must demonstrate their knowledge of CPR and how they would respond to various emergency situations. **This is the last mission, it will be unlocked once we have completed the activities in the school, health center, and shopping mall.**



→ Trivial Parkour

In this trivia challenge, once students have gone through the other scenarios and learned various aspects of CPR and AED usage, they will need to put our knowledge to the test.

Throughout the course, students will face a series of first aid-related questions. They'll need to answer them correctly and showcase their Minecraft parkour skills to reach the end of the challenge.

There will be several checkpoints throughout the course that will be used to save progress in case they fall while doing parkour

If they fall, they'll need to talk to the volunteer in the ground area to travel directly to the last checkpoint and avoid having to repeat the entire parkour course.



The Rec Center - Trivial Parkour

The trivia parkour questions that students will face in the rec center will simulate different emergency situations.

They will need to overcome obstacles and provide correct responses to different CPR questions.

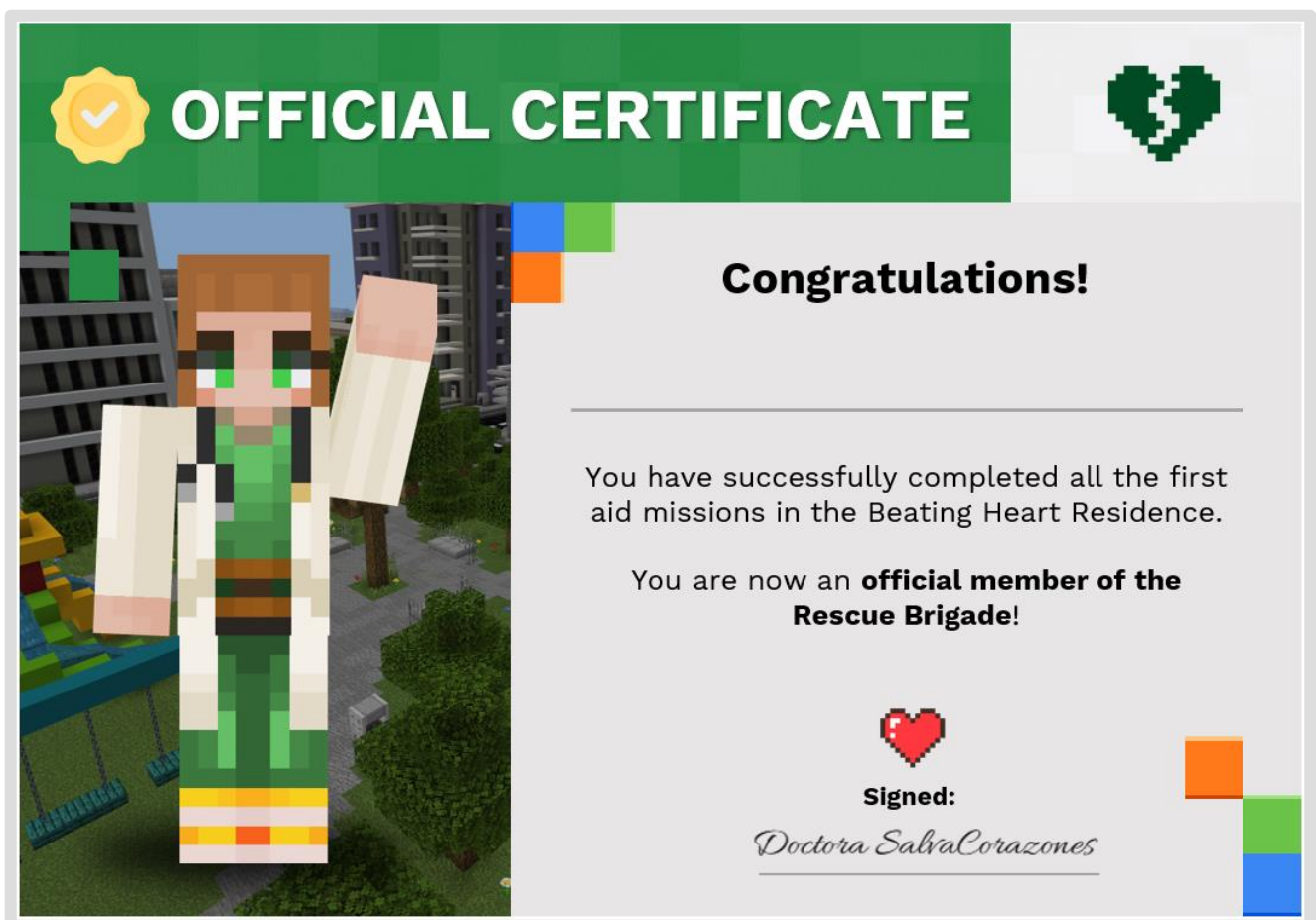
Question	Answer	Reward
<p>Question 1: What is the first thing you would do if you find a person on the ground?</p>	<p>A) Before approaching, I would ask for help from those around me. B) Before approaching, I would check that there is no danger around me. C) Before starting cardiopulmonary resuscitation (CPR), inflate air into their mouth</p>	<p>Unlock the next parkour area.</p>
<p>Question 2: How do you know if a person is experiencing cardiac arrest?</p>	<p>A) When they have their eyes closed and are not moving. B) When their heart beats very slowly. C) When I call them, they don't respond, and they are not breathing or not breathing normally.</p>	<p>Unlock the next parkour area.</p>
<p>Question 3: ¿Qué debo decir cuando llamo por teléfono al servicio de emergencia (112)</p>	<p>A) When I call, I shout for help and hang up. B) Just adults can call 112. C) If asked, I would share my location.</p>	<p>Unlock the next parkour area.</p>
<p>Question 4: While waiting for the ambulance, how many chest compressions should I perform on the person?</p>	<p>A) Between a hundred and two hundred compressions per minute. B) 30 compressions per minute. C) Quick compressions for five minutes.</p>	<p>Unlock the next parkour area.</p>
<p>Question 5: What is the purpose of the AED or defibrillator?</p>	<p>A) We keep it for when the ambulance arrives. B) If we follow its instructions, it can help restart the heart. C) I will use it when the person starts breathing again.</p>	<p>Unlock the next parkour area where the answers to the questions and a final score will be found.</p>

5 THE GAME'S ENDING

Welcome to the Rescue Brigade!

Once students place all the AEDs in their respective locations and complete all the activities (both at the School, the Health Center, the Shopping Center, and the Parkour), they may speak with the Doctor again. She will welcome them to the Rescue Brigade!

She will allow students to download the official Rescue Brigade member certificate in PDF format, which gives them the option to add a name and print it!



6 EVALUATION

The Minecraft RCP world does not require teachers to evaluate students, as it is designed for students to learn autonomously through various activities and challenges.

The scores students receive in different challenges (such as school or shopping center scenarios) are intended to add a motivational component to certain activities through which students will discover learnings related to first aid.

Regarding the assessment options available to teachers to gather information about the knowledge their students may have acquired, we have the following assessment formats:

- **The Trivial Parkour evaluation table:** In this activity in the recreation center, students will need to answer multiple-choice questions about what they have learned during the exploration of the RCP world.
- **Evaluation during the building challenges** will be based on the creativity section of the rubric, which can be found on the following page.

Some instructions that can be given in the construction zones include:

- Students can think or imagine "**what a nursing classroom would be like**" and "**what their hospital of the future would look like.**" In the first case, they may analyze whether they have a nursing classroom in their school and propose improvements, or in the absence of one, identify essential elements and furniture for a school nursing classroom. In the second case, what elements would they include, in terms of technological innovation and infrastructure, when building a hospital?
- **Use the boards and characters (NPCs)** to provide information and explanations about their constructions.

Rubric (focus on the building challenges)

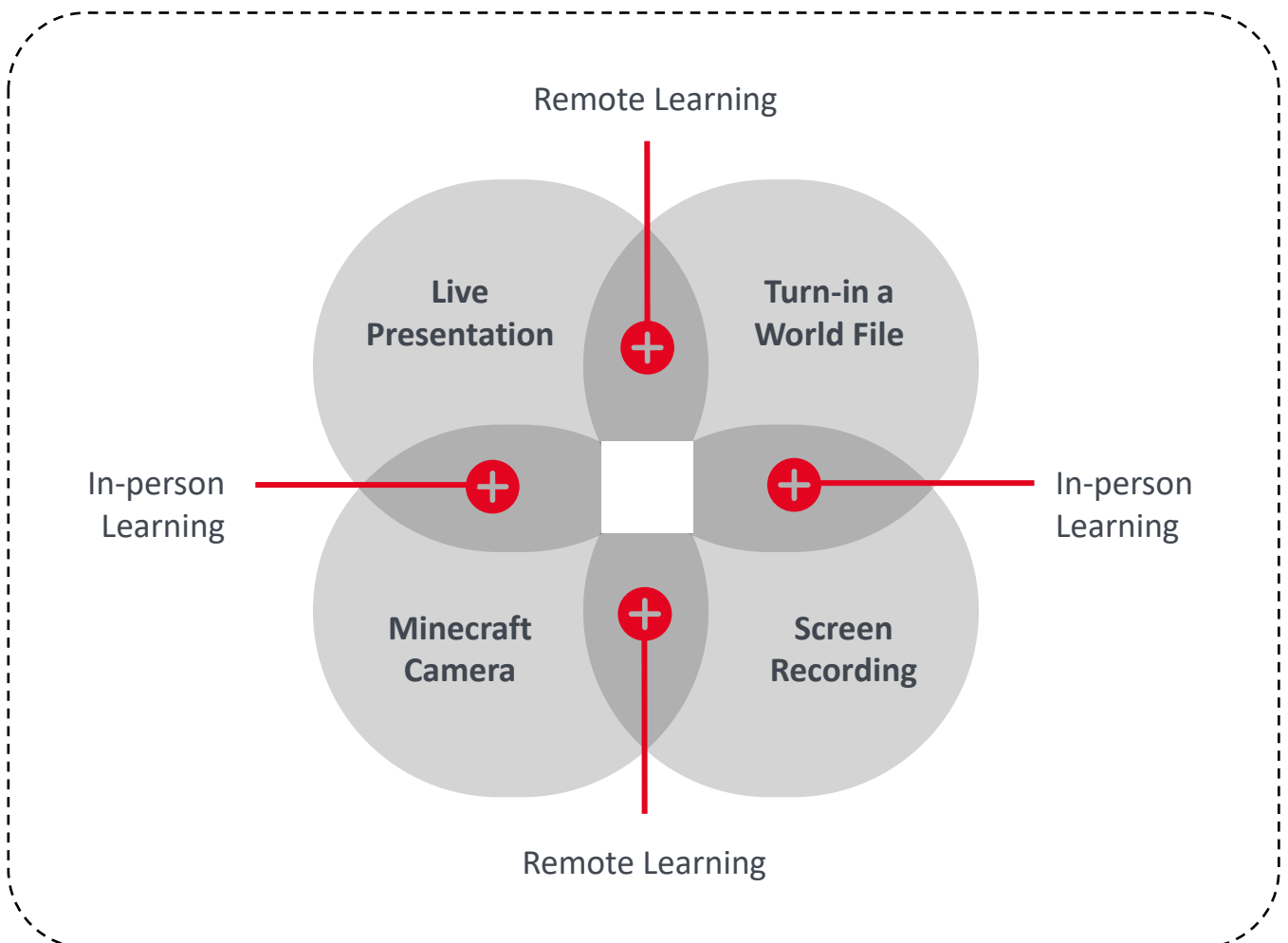
	4	3	2	1
Problem-solving Skills	The student has successfully completed all the activities on their own.	The student has successfully completed most of the activities.	The student has successfully completed some activities, making a few mistakes.	The student has needed help from the teacher to complete most of the activities.
Digital Competency	The student demonstrates advanced knowledge of the device's operation and the game, making appropriate use of them.	The student understands how the device and game controls work, making appropriate use of them.	The student can handle the basic controls of the game and their device.	The student has encountered difficulties in handling the device and game controls.
Creativity	The construction design is unique and helps to understand the objectives of the activity.	In the structure, there is an original and functional object or block that is not mentioned in the instructions.	The use of colors and materials helps to better understand the activity's objective.	The activity has been completed following the instructions.
Collaboration	The group members have overcome the challenges presented to them as a team, collaborating and supporting each other in tasks	The group members have worked together, supporting and distributing tasks fairly.	The group members have worked well together, dividing tasks among themselves.	The group members have achieved the goal but needed assistance from the teacher to solve some problems."

***Summative Evaluation= Full Rubric**

Share Learning Outcomes

There are many ways of sharing learning outcomes. In this graphic, we will explore four of them, taking into account the environment in which the activities take place: **in-person, remote, or hybrid**.

1. **Live Presentation:** Students share their screen in a in-person environment and share what they did with their classmates.
2. **Turn-in a World File:** Students download their world in their computer and turn it in using a LMS (Learning Management System)
3. **Minecraft Camera:** Students take pictures using the Minecraft Camera and Portfolio.
4. **Screen Recording:** Students record their screen explaining their world on Flip.



7 APPROPRIATE TIMING

Game Mode

This Minecraft Education world can be completed in two different ways depending on how the teacher wants to organize their class time: Intensive Game Mode or Extensive Game Mode.

Intensive Game Mode	Extensive Game Mode
<p>The world can be completed by students in a classroom session in an intensive mode. In this case, it will be important to know how much experience the students have with the game, as it will influence how quickly they complete the activities.</p>	<p>The world will be completed in different classroom sessions. In this way, the contents of the world can be worked on according to the teacher's flexibility and schedule.</p> <p>To complete the world, its challenges and activities and the construction challenges (the classroom and the hospital) over a longer period of time. A total of four classroom sessions are recommended to complete the world and the construction challenges.</p>
<p>As for the part of the construction challenges, we will be able to take advantage of the classroom session that we dedicate to the completion of the challenges and activities proposed by the world. Students will use the end of the classroom session to carry out the construction (of the nursing classroom and/or the hospital of the future).</p>	<p>In extensive play mode, we recommend using an extra session or two for them to complete the construction challenges (the nursing classroom and/or the hospital of the future).</p> <p>Depending on whether they are going to complete only one of the challenges, we will use that extra session. If they are going to do both building challenges, we recommend using two or more classroom sessions.</p>
<p>Recommended for teachers who want to carry out a learning challenge using Minecraft in a classroom session.</p>	<p>Recommended for teachers who want to introduce the use of Minecraft in multiple classroom sessions.</p>



TIPS AND RECOMMENDATIONS

Here are some tips and recommendations that you can follow to ensure the success of the activities and challenges you pose in your classroom.

→ The Game in the Classroom

- Positive Attitude.
- Respeto.
- Calm.

→ Potential Tech Issues

- Internet Conexion (check before starting).
- Game Version (upload the latest version of the game).
- O365 and Minecraft Education licenses need to be activated.

→ Class Dynamic

- The teacher may walk around the classroom helping students.
- Students may help each other.

Fundación **MAPFRE**