MULTIMIDIA GAME

RESILIANT HOUSE



Co-funded by the European Union

Acknowledgement

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HOW CAN YOU PROTECT YOUR HOME FROM FLOODING ?



SEVERAL SOLUTIONS EXIST...

YOUR MISSION ? FIND THE ONES THAT WORK BEST !

IF YOU'RE NOT SURE, DON'T WORRY:

PLACE THE CARD ON THE QUESTION MARK IN THE GAME PANEL,

AND WE'LL DISCOVER THE RIGHT ANSWERS TOGETHER!

CRISEPAC MULTIMEDIA GAME

AN IMMERSIVE EDUCATIONAL TOOL TO RAISE AWARENESS ABOUT FLOOD RISKS

This interactive tool has been designed by the CRISEPAC project partners in order to raise students awareness about flood risks and home protection measures. It is especially intended for teachers and youth educators who wish to explore these topics in a playful and engaging way.

Participants are invited to protect a virtual house against various flood scenarios, applying practical strategies to reduce risk and increase resilience.



GENERAL OBJECTIVES OF THE ACTIVITY

Promote resilience to risks:

- Describe and analyse flood-related risks and prevention measures, including associated challenges and vulnerabilities.
- Enhance knowledge relevant to risks and their management.
- Adopt a responsible attitude towards risk awareness and prevention.

Engage in scientific and technological approaches:

- Formulate well-founded, testable hypotheses.
- Model natural phenomena.
- Communicate methods, results, and decisions with well-reasoned arguments.

GENERAL OBJECTIVES OF THE ACTIVITY

Use appropriate scientific language:

- Report on activities using precise vocabulary specific to science and technology.
- Explain the phenomenon of flooding, its consequences, and prevention methods, both orally and in writing.

Adopt ethical and responsible behaviour:

- Connect scientific and technological knowledge to issues of prevention, safety, and the environment.
- Understand and explain collective and responsible decision-making processes.

FLOOD RISK

HOW TO PROTECT YOURSELF AND YOUR HOME FROM FLOODING?



Main Tools & Materials:

https://www.crisepac.eu/

- Crisepac Multimedia game: online “Resilient House :
- Risk booklet: (Pg. 16–17)
- PowerPoint presentation: As an additional (optional). This presentation can serve as a visual support for discussions and will help consolidate the main ideas in a clear and engaging way.

Session Plan

Workshop Duration: 2,5 to 3 hours (including break)

Target audience: Primary schools and teachers.

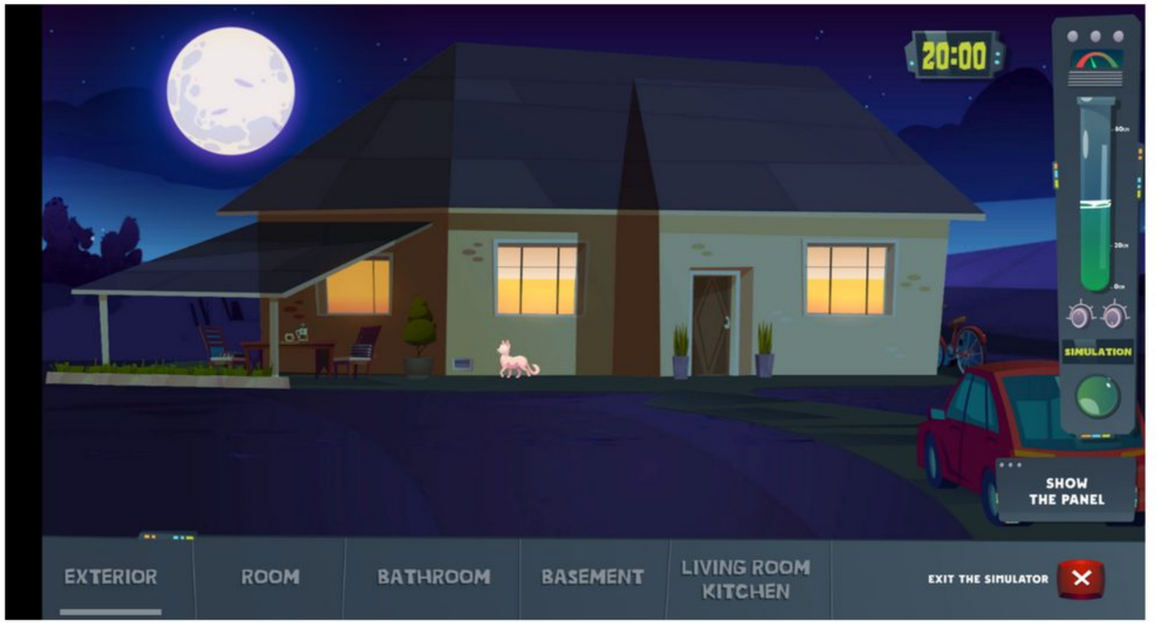
FLOOD RISK: HOW TO PROTECT YOURSELF AND YOUR HOME FROM FLOODING?

SEQUENCE	INTRODUCTION
Objective	Introduce the topic and review key flood-related concepts.
Activity Outline	1. Define floods and storms in Europe 2. Explore different types of floods and storms 3. Examine the damage they can cause 4. Present 3 case studies: Greece, Portugal, and France 5. Identify flood-prone areas in students' local region 6. Divide the class into 6 groups. 
Student activity / role	Listening – Q&A
Duration	10 min

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"Today, we're going to learn together how to protect a home. The multimedia game represents the Davis family's house, which we are now going to explore."

(show the model house and explain that the solutions can also be adapted for apartments - Ground floor, cellar and garage



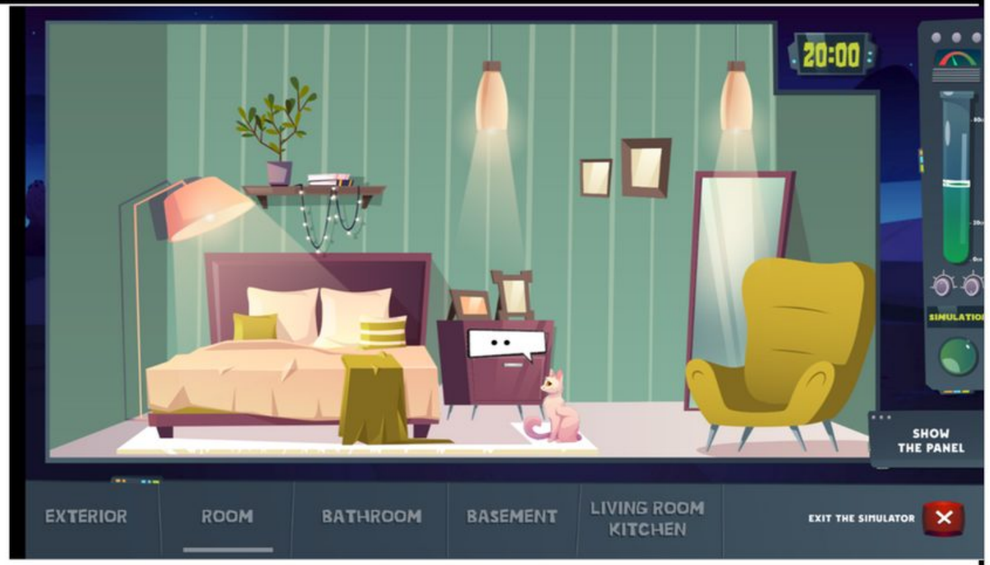
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SEQUENCE	Part 1 : Presentation of the house
Objective	• Explore the house in its original state (before any flooding) • Predict what might happen during a flood • Anticipate possible consequences
Activity Outline	**Step 1 Introduction :** Set the scene by reading aloud the cat's thoughts. This narrative invites students to imagine daily life in the house: The cat's thoughts: "Tonight, everything seems ordinary in my house. As usual, the rooms are filled with life: Mr. and Mrs. Davis are finishing their workday, the children are playing in the living room, and the kitchen is bustling with laughter and activity. I love this family atmosphere, this lively daily routine that warms the walls. But something is rumbling in the distance... The air pressure is dropping slightly, an unusual breeze has picked up, and the clouds in the distance are turning darker. The children, curious, glance out the window, intrigued by the strange light the sky is casting. I can feel it all... I'm alert. **Would you like to visit my home?** 

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SEQUENCE	Part 1 : Presentation of the house

Activity Outline	**Step 2 : Presentation of game**
	
	• Visite each room: exterior, bedroom, bathroom, basement, living room, kitchen.
	• After each, ask students:
	  ◦ What do you observe?
	  ◦ What could happen here during a flood?
	• In the living room, launch the flood alert:
	
	
	
	"We interrupt regular programming to bring you an important weather alert. The National Weather Service has issued a flood warning for the following areas: (insert affected regions). Due to prolonged heavy rainfall, water levels in rivers and drainage systems are rising rapidly."



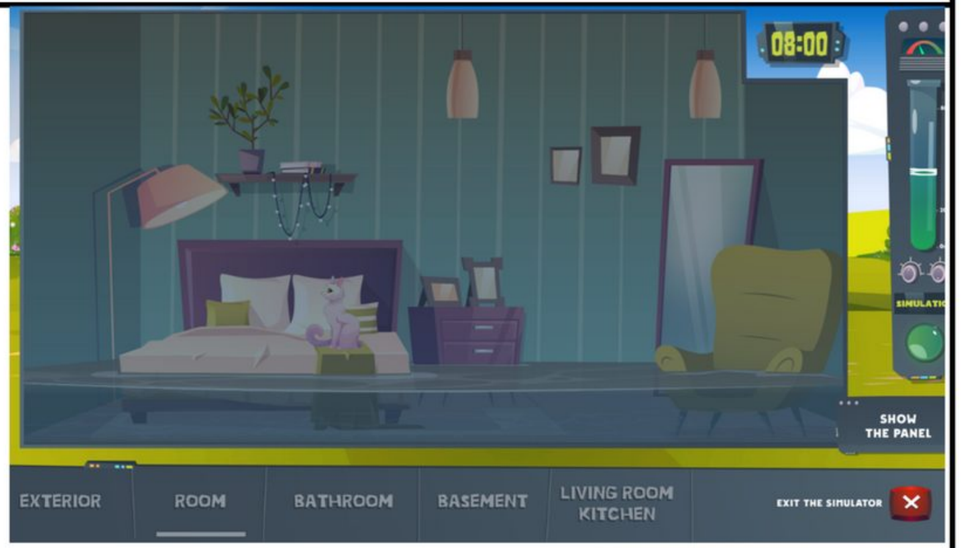
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SEQUENCE	Part 1 : Presentation of the house
Student activity / role	Active participation
Conclusion	In flood-prone areas, the risks are significant if a flood occurs. That is why it is essential to know how to protect your home and how to stay safe.
Duration	20 minuts



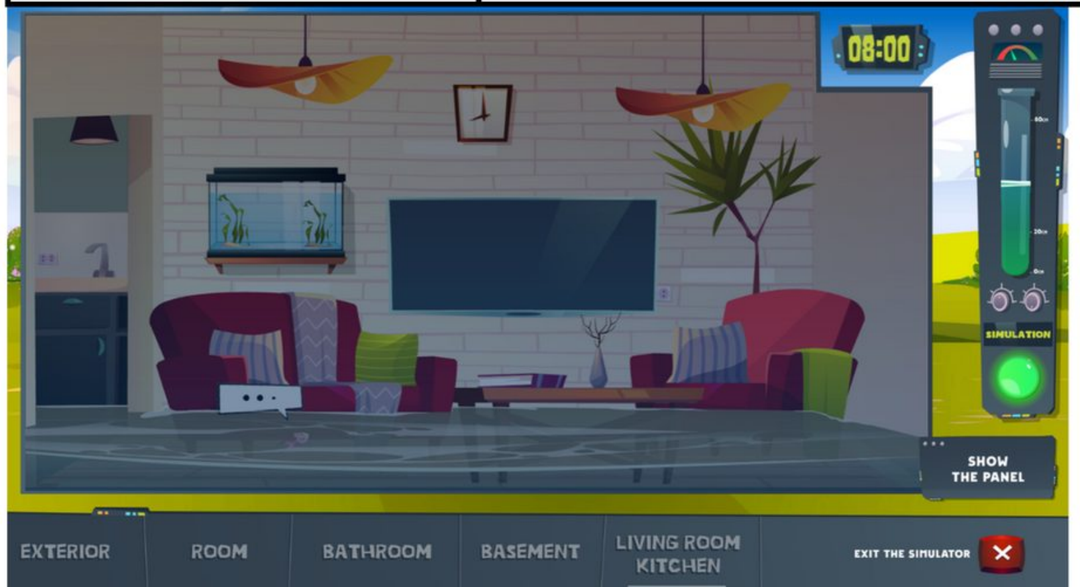


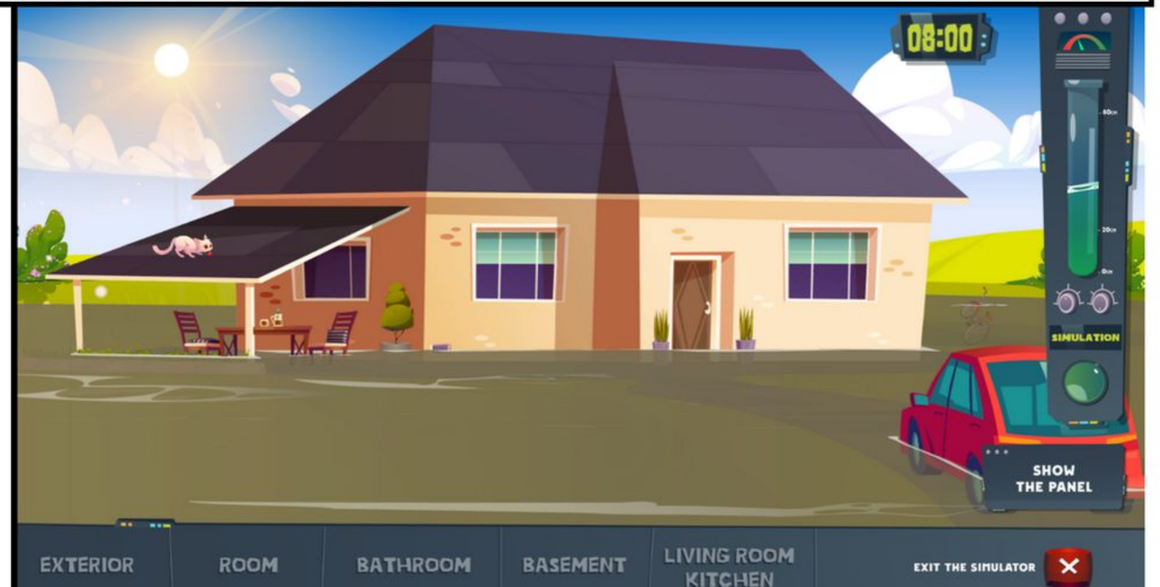
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SEQUENCE	Part 2 : Simulation and Game-Based Learning
Objective	• Discover flood protection equipment and the concept of resilience • Familiarize yourself with the actions that need to be done when a flood alert is issued
Activity Outline	**Step 1 : 20 cm Flood Simulation** • Return to the outside view of the house. • Play the 20 cm flood simulation video with no protective actions. • Then, explore, observe room by room and discuss:  • **What happened?** • **What problems and vulnerabilities did you notice?**

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SEQUENCE	Part 2 : Simulation and Game-Based Learning
Activity Outline	• Let students express their observations and identify the consequences and concerns to solve. Guide them to find the vulnerabilities that need to be addressed. **Once all the consequences have been identified by the students, it's their turn to protect the house and its inhabitants!**





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SEQUENCE	Part 2 : Simulation and Game-Based Learning
Activity Outline 	**Step2 : Protect the house** • Display the game board and click on Show the panel • Introduce the different equipments to protect the house (without explaining their use for now). • The game will be played over several rounds. **Goal of the game: Do your best to protect the house and its inhabitants!** 

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SEQUENCE	Part 2 : Simulation and Game-Based Learning
Activity Outline	**Round 1: Instruction:** • Each group selects one equipment card without knowing yet how it protects the house and its inhabitants. • Give the students a few minutes to present the equipment they chose. • One student from each group describes how they think the chosen equipment works to protect the house. • Place the equipment card on the question mark spot to confirm and validate the group's explanation. • Ask students to imagine and describe how their house would be protected if they had this equipment. • Have students rephrase what they understood in their own words. Then, provide the correct explanation or complete any missing information. • Go through the same steps for all equipment cards chosen by the different groups.



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SEQUENCE	Part 2 : Simulation and Game-Based Learning
Activity Outline	**Round 2: Instruction:** • Choose one card that will help protect the house. • Give students a few minutes to discuss and decide on their chosen equipment. • One student from each team announces their teams' selected equipment and where it will be placed. • Demonstrate the effect of placing the equipment by replaying the simulation and visiting the selected room. • Have students rephrase what they understood, then provide explanation as needed. • Repeat the process for each card selected by the different teams, one at a time. • Review the actions of the cards and discuss what might still be missing to protect the house and its inhabitants.

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SEQUENCE	Part 2 : Simulation and Game-Based Learning
Activity Outline	**Round 3: Instruction:** Based on the cards used and what has been protected in the second round, tailor the instructions to have students select other cards, for example: • Choose one card that **will prevent water from entering the basement.** → Possible answer: ventilation grille (to be closed). Place the card and rerun the flooding simulation. • Choose one card that **will prevent sewage water from backing up into the basement.** → Possible Answer: backflow preventer valve. Place the card and rerun the flooding simulation. • Choose one card that **will protect both the house and its inhabitants.** → Possible Answer: skylight window (ultimate solution).

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SEQUENCE	Part 2 : Simulation and Game-Based Learning
Activity Outline	**Round 4: Instruction:** • Show the cumulative effects of all the protective devices and explain that it is the combination of measures that provides full protection for the house. • Briefly review key points, such as the importance of a survival kit, when to call the firefighters, the use of special actions like moving cards by canoe or using snorkel gear). • Conclude by highlighting that: thanks to the students' actions, the house is now "resilient" to flooding! 

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SEQUENCE	Part 2 : Simulation and Game-Based Learning
Activity Outline	**What is a resilient house?** "A flood-resilient house is a building designed, constructed, or adapted to reduce its vulnerability to flooding, limit physical damage, ensure occupant safety, and enabling rapid post-flood recovery. Flood resilience emphasizes resistance, durability, and recoverability rather than complete flood exclusion." • Emphasize that we are not alone in taking action: the mayor, the prefect, firefighters, emergency medical services, and teachers: they are all prepared to help and respond in the event of a flood.
Student activity / role	Listening – Q&A
Conclusion	A home becomes resilient when it's properly prepared to face a flood.

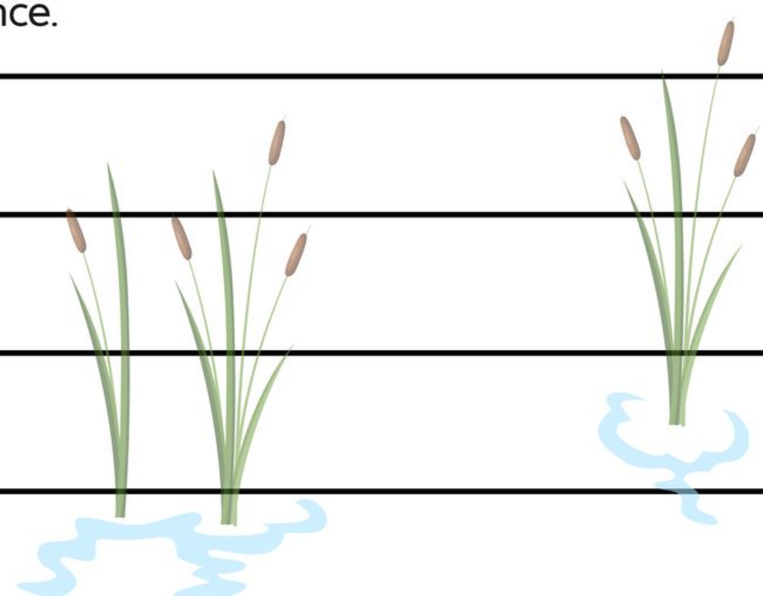
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SEQUENCE	Part 3 : Risk Booklet
Objective	• Review and gain a deeper understanding of relevant concepts using the Risk Booklet • Work with students to complete the Risk Booklet together. • Check the answers on the Booklet Solutions
Activity Outline	Page 17 – Identifying protective equipment Instruction: Circle some protective equipment and place them in the correct area of the house. Use colors to indicate the type of protection 🔴 Red for fire protection 🟢 Green for storm protection 🔵 Blue for flood protection (Note: you had "in red when it comes to flood" but red is already used for fire – blue is typically used for water)

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SEQUENCE	Part 3 : Risk Booklet
Activity Outline	**Page 18 – Wetlands: A solution for flooding** • Explain how wetlands act as natural sponges, absorbing and slowing down excess rainwater. • Discuss their role in reducing flood risks and preserving biodiversity. • Let students identify benefits of wetlands and possibly locate examples near their region or in France.
Student activity / role	Listening – Q&A
Duration	30 min
Materials	Power point



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SEQUENCE	Conclusion
Objective	To conclude the current activity and introduce the next session.
Activity Outline	The key to managing flood risk is being prepared: this means knowing which equipment can protect our homes (the concept of resilience) and also understanding how to keep ourselves safe during a flood. Encourage students to reflect on what they found most surprising or useful from the activity before ending the session.
Student activity / role	Listening – Q&A
Duration	05 minutes



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Explore CRISEPAC's educational tools!

CRISEPAC offers free resources on natural hazards and disasters, available online and for download — perfect for teachers and youth educators. Ready to use in class or training.

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