

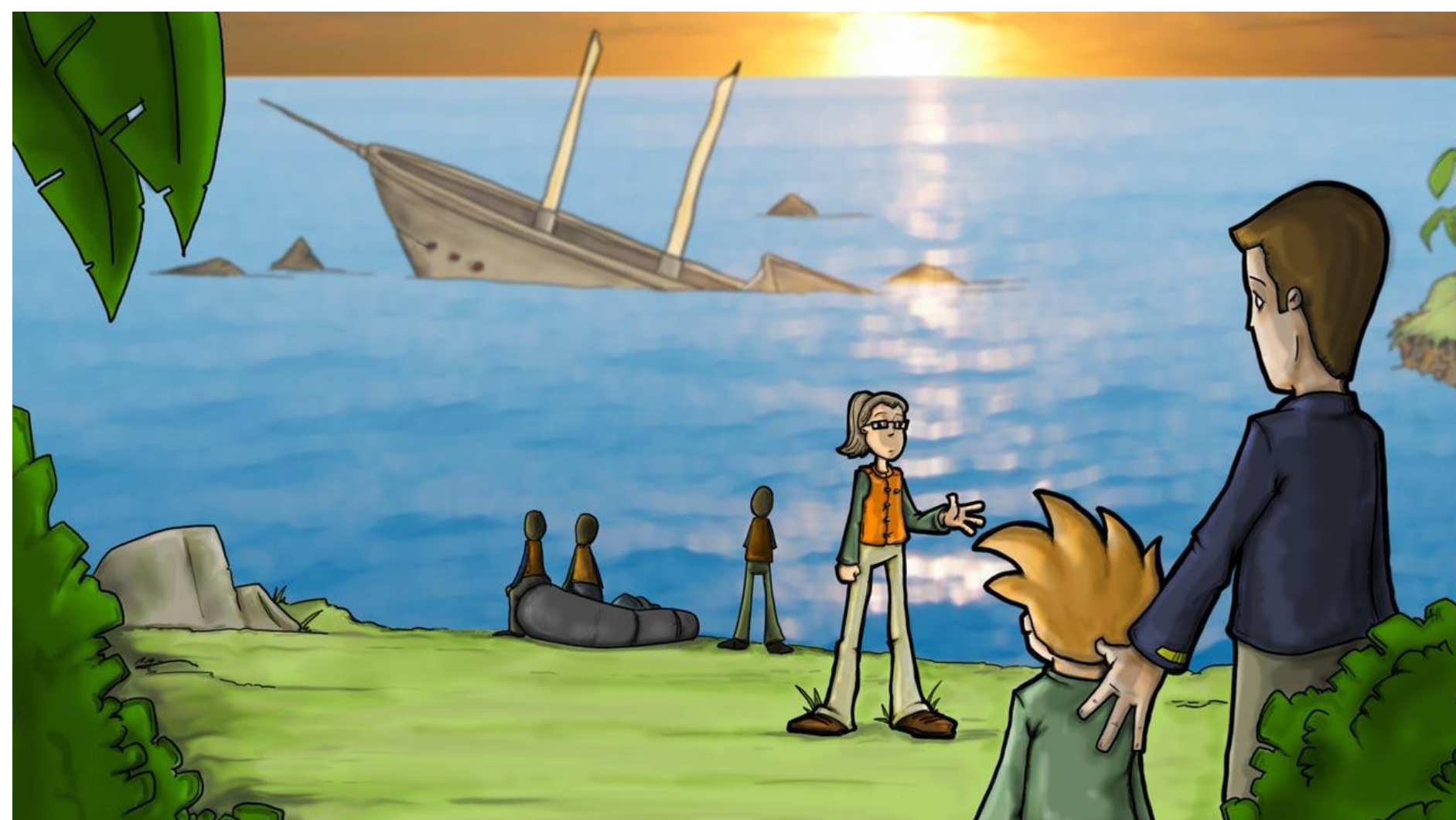


CRYSTAL ISLAND

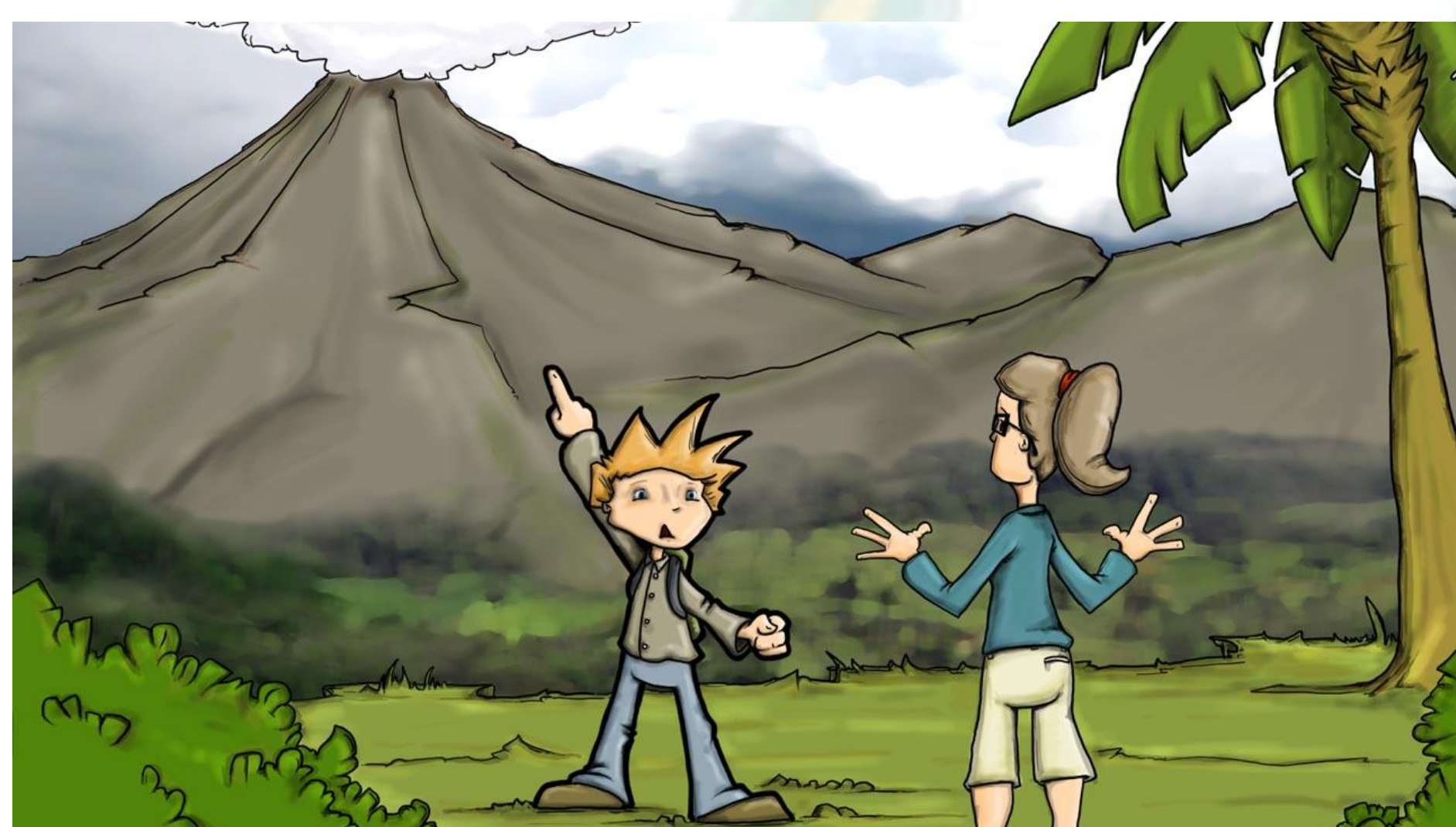
Uncharted Discovery



STORY LINE



The learning environment is set on a cluster of fictional islands in the Oceania region of the Pacific Ocean, where a group of stranded adventurers have established a new life after being shipwrecked on an uncharted volcanic island by a powerful tropical cyclone.



Students are presented with a world of visual splendor mixing the lush vibrant island setting with tranquil life in the village. However, the serenity is short lived as an ancient volcano on the island awakens, threatening the new residents. The student must embark on an epic journey filled with adventure and exploration to save the island from destruction.



Hidden away on the opposite side of the island, near the volcano's base, will be a village inhabited by robots. Students will befriend and receive assistance from the robots, which will enable expanded explorations of the island and curriculum.

RESEARCH QUESTION

How can intelligent game-based environments promote problem solving and engagement in STEM learning for upper elementary students?

PROJECT OBJECTIVES

1. Design a suite of intelligent game-based learning environment technologies for elementary science education.
2. Implement an empirically-based research program to provide a comprehensive account of elementary students' problem-solving processes and engagement with STEM content as they interact with intelligent game-based learning environments.
3. Evaluate the design and implementation of the research in order to assure high quality processes and results.

DISSEMINATION OF CONTENT KNOWLEDGE

- There will be numerous missions and quests players undertake that serve to advance the storyline and provide opportunities for problem solving and adventures in the story world.
- Mini-games will target specific content units. For example, early in the game students will develop an understanding of erosion and learn how to use models, maps, and aerial photography to gather data and reason about landforms.
- Later, in an automated timelapse scenario, students will determine the cause and consequences of years of human activity, as well as the impact of weather on a coastal region.

For more information please visit:
<http://fi.ncsu.edu/project/crystal-island-5/>
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