

Field game about Mad Scientist - learning physics through fun.

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Abstract. Our poster shows the educational game "Mad Scientist". We organised it, among others: during summer camps at the Aviation Education Center. We have presented knowledge of physics in a scenario related to discovering inventions and getting to know scientists. Through elements of competition and fun, we tried to provide kids not only with knowledge, but also with the method of inquiry through discovery and experimentation. One particular type of game is a field game, in which each point is located in a different place and is required to be found.

Introduction

The utilization of games has been increasingly prevalent in education for several years [1]. This allows for heightened engagement of students and the conveyance of scientific knowledge in a more accessible manner, particularly for younger generations [2]. A well-prepared game can also utilize the competitive aspect between teams in a constructive manner [3]. The game took place at the Aviation Education Center during summer camps called "Eureka". Including a summer break from school, the main purpose of the field game was to present kids some useful knowledge, but not through formal education, but through cooperation and fun. Participants in groups had to solve the mystery of the disappearance of a mad scientist. The spaces of the Aviation Education Center were arranged as a laboratory. The kids x-rayed unknown packaging, prepared a non-Newtonian liquid, built lemon batteries, deciphered messages using an infrared camera and UV light, solved puzzles about famous scientists, and built a spectroscope. While playing, they were asking questions and looking for answers - they were learning not only about science, but also about scientific methods.

About Aviation Education Centre

The Aviation Education Centre (CEL) is a separate organizational unit of the Kraków Airport and a unique center for popularizing and disseminating knowledge in the field of civil aviation. It has a comprehensive offer of educational programs for various age groups - from preschoolers to seniors. The offer includes, among others: educational programs, specialist classes and thematic workshops, apprenticeships, summer camps, open days, e-learning, field games, theaters for the youngest, aviation and tourist academies for students, workshops for professional school teachers, airport trade fairs, special events, online lessons. CEL also means new ideas and technologies used in education: a VR simulator, a flight simulator, a humanoid robot or a space rocket panel. By introducing you to the secrets of the airport's operation and its organization, CEL educates and opens up opportunities for your own development through career planning in the aviation industry.

What will be presented

In the game, a total of 120 participants took part in two age groups: K1-K3 and K4-K5. On the poster, we will present the entire narrative of the game, the tasks performed by the participants at each point, divided by age groups, and the final solution of the riddle. We will also include the participants' feedback on the game itself as well as the opinions gathered from those conducting it.

The main purpose for participants was to solve a couple of riddles, after solving each of them the participants received one letter. Finally all of them formed the name of one of the first scientists' – Archimedes. After the field game all of the children attended the lecture about his life and achievements, with an explanation of the origin of the famous Eureka slogan.

References

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