

ABSTRACT

Cell biology is a rapidly developing complex field of science, the basics of which students in the second grade of elementary school often come into contact within the sixth grade. Due to the difficulty, the curriculum is often abbreviated, which can be confusing for students in later years. Since the subject matter is abstract, many students have problems understanding it. The goal of this diploma thesis was to create a didactic board game focused on the construction of an animal cell, which will serve as teaching material primarily in the 6th year of elementary school. The game was gradually modified in such a way as to best help fulfill the set didactic goals of the game: the student assigns functions to cell organelles, the student finds the learning activity fun, the student cooperates with others to solve a certain problem and helps to reach a common goal.

Throughout the game, the pupils get to know the construction of a cell on a wider scale than is usually the case in primary schools. They work together in a group, travel through the cell and collect building materials, for which they get cards with organelles. While playing the game, they discover that the cell contains a large number of parts, each of which has a clear role in the life of the cell. Students will learn more about the structure and function of the following organelles: cytoplasmic membrane, mitochondria, lysosome, endoplasmic reticulum, Golgi apparatus, ribosome, cytoskeleton, nucleus.

The result of the thesis are complete materials for the game *A Journey to the Cell*.

Keywords: didactic game, board game, cell biology, animal cell, organelle, motivation, cooperation