

## **Abstract**

For most primary and secondary schools in the Czech Republic, outdoor education, despite its long-emphasized benefits, presents a challenge in overcoming various organizational, safety, and methodological obstacles, making it difficult to integrate into the curriculum. The main goal of this project was to create and validate an outdoor education program for teaching botany in secondary school. This program focuses on angiosperm herbs and their well-known poisonous representatives, aiming to popularize botany and increase awareness of the dangers of poisoning by toxic plants. The outdoor education is designed as a detective game and is set in the Prokop Valley in Prague. The theoretical part briefly outlines the basic principles of outdoor education, suitable teaching methods, and general didactic principles for its design. It also includes data on the representation of poisonous plants across textbooks for elementary and secondary schools. In the practical part, materials for outdoor education were developed, such as worksheets, a botanical key, plant picture cards, and laminated plants, along with an author's solution to the worksheet and guidelines for its use in teaching. These materials can be adapted for use in most schools in the Czech Republic or incorporated into standard biology lessons. The conclusion presents research conducted with students from a selected elementary school using pre-tests and post-tests, evaluating the effectiveness of the proposed outdoor education and the teaching methods employed. The results show that the implemented education had an impact on students' knowledge of and interest in botany, while the influence of students' place of residence and nature programs on television was not demonstrated.

## **Keywords:**

botany, outdoor education, worksheets, botanical key, toxic plants, primary and secondary school