Imagine in educational projects for young children

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Abstract

Imagine Logo is a new kind of integrated educational software. It promotes the creative use of ICT. Imagine is designed to integrate and extend all areas of learning - and can be used by pupils of all ages and abilities. What is more, it is an educational tool for teachers. We have created many Imagine Logo Project files for primary school children of grades 1-3. These projects provide materials for teaching reading, writing, mathematics, music, arts and many others subjects. These projects are helpful for all teachers and pupils who use computers for in-class teaching and learning and for parents and children for learning at home.

Keywords

Logo, Imagine Logo, primary school

1. Introduction

Logomocja is a Polish edition of Imagine Logo. It is the successor of Logo Comenius, which has been used in Polish schools for 8 years. Imagine is a new, great microworld to develop creative teaching and learning. A new version of LOGO which has quite a long tradition in education.

Figure 1. Polish edition of Imagine Logo

In Imagine, object-oriented programming is applied. In a natural way one can implement classes, objects and inheritance, make event-control objects. One can give new shapes to the turtles, described in a drawing list. It is also easy to create animation. The designers of Imagine have included multimedia, the Internet and networking support.

In Poland, children start school, when they are 7 years old. For the first three years most of the time they spend with only one teacher and the lessons are not divided into subjects. It is called integrated teaching. The content is divided into subject rings which cover various areas of study. Thus, pupils naturally acquire literacy, maths, science, or arts. In the syllabus there is no such subject as computer science either.

Although computer skills are not included in the syllabus, some schools find computer literacy vital for the future success in education and add such lessons to their curriculum. The

organization of such lessons depends on the school. Classes are held mostly by computer science teachers or an integrated-teaching teacher with adequate qualifications for ICT. Additionally, at schools, there are optional afternoon classes and common room activities.

2. Imagine projects for small children

The tasks we have prepared are designed for eight- to ten-year-old children. The lessons are grouped in subject rings typical of early school teaching. Each lesson has a leading subject – there is a lesson about autumn, about a clock, about geometrical figures, etc. We try to ensure that each unit has a strong thematic relation to alternate a native language activity, that is Polish, or mathematics, or arts.

Imagine is made for the educational use and has many mechanisms to create multimedia projects. It is a good instrument to create open exercises, stimulate thinking and make one's own creative activity. Children, while coming through several tasks, build their own knowledge by having fun and making use of pre-prepared Imagine shows.

Inspired by exercises prepared by teachers, children reach for other instruments of ICT. To play and learn a child uses a word processor, a graphics editor, a presentation program and other useful instruments. We also introduce children to the world of programming by showing them the first steps in the Logo language.

3. Examples to use Imagine during the lessons

Now we present some ideas how to use Imagine during the lessons:

3.1. Lesson 1

At the beginning of the lesson „Figure play tricks" (in Polish "figraki figlaki") children read the text which is intended to introduced them into the subject of the lesson and do all exercises from a workbook. Next, they do the activities from the CD-ROM. First are anagrams – make words from letters of another word. In Polish, from the word "tricks" , you can make "graphics". Then, children have to compose pictures from pieces. The pieces are of different shapes like squares, triangles, circles.

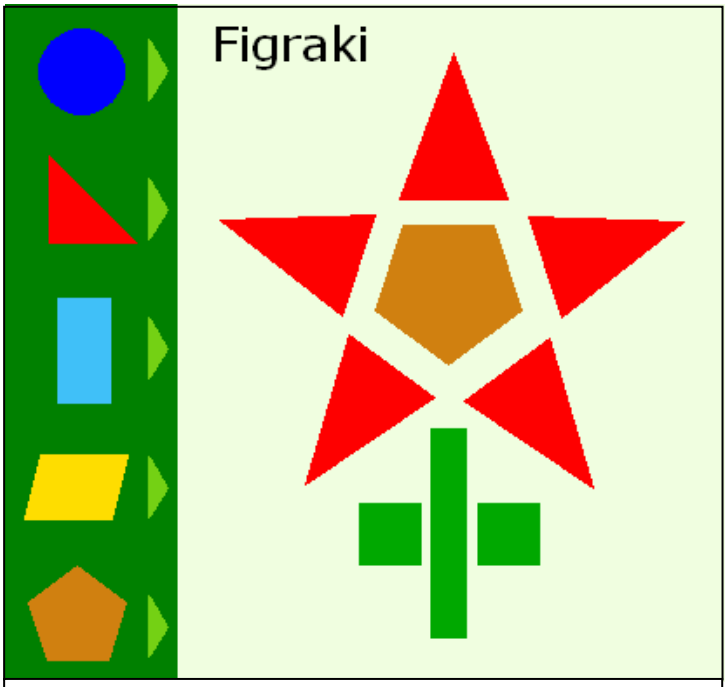

Figure 2. The lesson „Figure play tricks"

Having some practice children move on to the graphic editor called Paint. By using it they also try to make beautiful pictures of different shapes and colours. At the end of the lesson, we suggest doing tangrams –mathematical exercises.

3.2. Lesson 2

The lesson about time starts with a few words about a clock and the time in the past and nowadays. Next, pupils do the exercises in the workbook. The example is shown below.

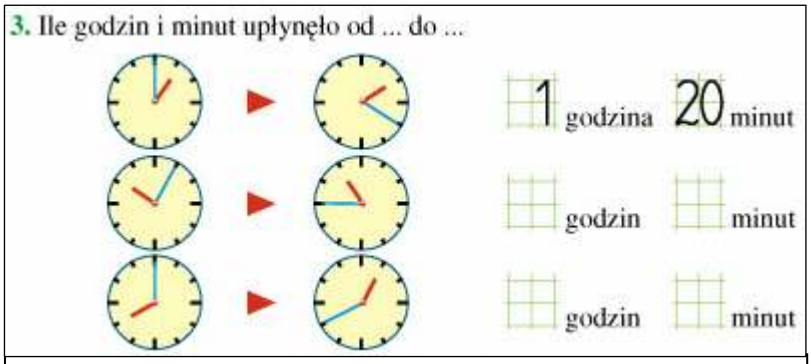

Figure 3. The lesson about time

Some of the tasks are also prepared to do with the use of computer. The following activities in this lesson refer to days of week, names of months and calculation connected with the time flow. In the last but one activity children read a story of a boy called Antoś and after reading they set the time. There are six clocks. The pupils have to set the time of the actions that Antek (another diminutive form of a name Antoni) took did at a specific time.

All exercises are corrected by the program and children can see if they did well. If the answer is right, there is a small prize, and if it is wrong, she or he must check it once again. At the end of the lesson children can play a memory game, that is, they uncover two cards and try to find cards that match. For example, the name of the month and its number.

Figure 4. The lesson about time

3.3. Lesson 3

Two units are about programming in the Logo. We find them important because children can do the first step in programming. They can easily learn how to solve some difficult problems.

Pupils have a microworld, where they can control the way a turtle moves. They start from uncomplicated drawings. In this microworld they can go forward, backward, turn right, left and change the colour and width of the pen. They have to click on a button and the turtle goes on. The next step is to drag and drop Logo instructions to make a list of commands. Pupils learn how to create their own procedures. At the end of the lesson children write commands in the command line.

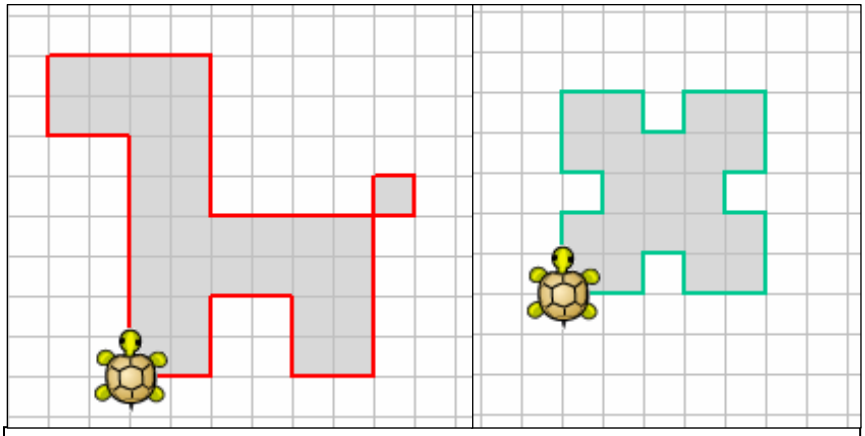

Figure 5. Some tasks for lesson about programming in the Logo

4. Summary

The lessons for small children are different in various schools. We have taken it into consideration and did our best to make our project universal. We expect that the project can be realized in one- or two-year time. The prepared microworlds are open, so teachers can see how students work, make their own improvements and adjust to their particular needs. We also expect that parents can use this project as well.

5. References

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