

science, but also has a positive impact on the formation of students' cognitive interest and learning motivation [2].

Plants in the educational process find the most versatile applications. They have many qualities necessary to work with them in a school setting. The most valuable of them are: the availability of growing on large areas, conducting experimental work throughout the year, the speed of obtaining the results of ongoing experiments, the possibility of demonstrating living plants in the classroom.

**Conclusion.** Thus, the use of plant objects is, first of all, accessible to all educational institutions, and is safe for students. In the process of experimenting with plant objects, children activate their thought processes, as it is constantly necessary to compare, classify and generalize the data obtained. In this activity, the moment of self-development is clearly represented: as a result of transformations, objects reveal new properties, which, in turn, allow the child to build new, more complex transformations. Experimentation stimulates the search for new actions and promotes courage and flexibility of thinking. Independent experimentation gives the child the opportunity to try out different methods of action, while removing both the fear of making a mistake and the constraint of thinking with ready-made schemes of action.

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### **INFOGRAPHICS: ADAPTING GEOMETRY MATERIAL FOR THE VISUAL-SPATIAL LEARNING**

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Keywords: education, infographic, geometry, spatial learning, multiple intelligence.

Infographic is a graphic way of presenting information and knowledge, which contains small in volume, but meaningful and properly designed information. "Clip thinking" become more common among modern students. It is a phenomenon when students are not able to memorize large volumes of text, but can remember separate vivid objects that students see in textbooks or the Internet. Moreover, William G. Allyn Professor of Medical Optics pointed out "More than 50 percent of the cortex, the surface of the brain, is devoted to processing visual information". These facts confirm the need for devising, improving, and using infographics in school learning.

Basic principles of creating infographics include rational use of text, clear structure and logic, proper use of colors (amount number is not more than 4), and using the same style for all products in one series. One of the most important principles is using different elements. Each one must make sense. Otherwise, we should delete it. We also have to search for a balance between an oversaturated infographic and having full and correct information. Only a well-thought-out and structured infographic can help in the

education process. At the same time, poorly made products can lead to not only waste of time, but also to the wrong perception and memorizing information.

The paucity of quality infographics led us to the purpose of our research, i.e., devising infographics for teaching geometry in the 9th grade.

**Material and methods.** There are a few types of infographics: static, interactive, and video-infographic. We chose the first one because it is the most convenient for using on the lessons since it does not require a computer or the Internet. Moreover, it can be printed for each student without losing quality.

For the platform, after a few tests, we chose *Canva*, because it has the easiest understanding interface and you are not required to have special knowledge for using it. At the same time, *Canva* has rich functionality and library elements even in the free version.

Based on the research of P.M. Gorev "Methods of working with infographics in the educational process of a secondary school" we emphasized few different ways of infographics application.

The first case is when teacher demonstrates infographic to students as a finished product. It can be done either after each topic or after the whole section as information summarized from few topics or chapters. Infographics after each topic will help students memorize new material and after that students will be able to use it during individual work. Summarized infographic can include material from previous topics or even additional material which can help in solving hard and unusual problems.

The second case is when teacher constructs infographic with students together in real-time. It can be used at the end of each lesson, as a reflection and repetition of new material. Or it can be used during the special lesson before the test or exam, for example. The main advantage of this method is the individualization of infographics; children understand exactly which elements are on it and why. However, it has a big disadvantage as well: teacher has to be well-prepared for the different scenarios and has a lot of preforms to put the children`s elements correctly and quickly.

**Findings and their discussions.** The best example of both cases we can demonstrate on infographic "Polygons" (Figure 1).

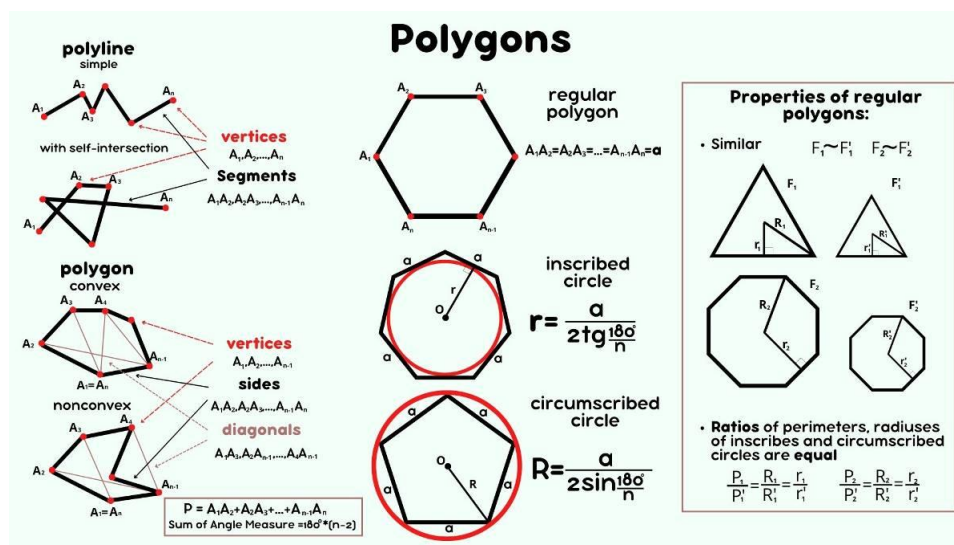


Figure 1 – Infographic “Polygons”

There we put material from the Chapter "Polygons". If we watch from the left side to the right, we will find all topics from that chapter in order, so it can be used as a summarizing infographic. At the same time, it shows how we can use infographic for the 2nd case. It is very easy to change it based on students' opinions and expectations. For example, the first topic of the Chapter is "Polyline". At the end of the lesson, teacher can suggest students apply new terms on the infographic. In this case, students can choose, where it will be, what polyline, how many segments it will have, etc. Best variant is if every student has his/her own paper or file on a computer, so that they will be able to do it by themselves in real-time while teacher does it on the desk as an example. Additionally, in this case, education will not promote standard thinking (for instance, that only triangles or octagons can be similar), because every student will have an opportunity to put their own similar polygons on infographic.

**Conclusion.** Infographic is a modern way for learning a large amount of information. We devised 7 infographics for 9<sup>th</sup> grade students. Infographics had an expert assessment of teachers from the university. In the future, we are going to test our products during working at school and change them taking into account feedback from students and other teachers. After that, we will present our results in the next articles.

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## PSYCHOLOGICAL COMPONENT OF THE ADAPTATION PROCESS

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**Keywords:** psychological adaptation, adaptability, adaptation period, adaptation, social group.

In modern science the term "adaptation" is polysemantic, manifested at all levels of human life, structural-functional, spiritual-practical formation. It belongs to the category of interdisciplinary scientific concepts in the field of philosophy, biology, sociology, psychology and pedagogy.