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TECHNOLOGIES FOR CREATING 3D MODELS AND USING THEM IN THE EDUCATIONAL PROCESS

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ABSTRACT:

3D is derived from the English language and comes from the word 3 demension - three-dimensional. Based on this concept, surface, volume and volumeless geometric figures with three dimensions are understood. Solid geometric figures include solids, surface geometric figures include surfaces, and non-volumetric geometric figures include spatial curves.

KEY WORDS: 3D models, geometric figures, visual images, bodies, three-dimensional graphic information, graphic system.

Today, 3D models mainly consist of two types of geometric models: solids and surfaces. Figures with exactly the same geometric structure can consist of a body or a surface. A geometric figure consisting of a non-hollow volume, a closed set is called a body, and a volume consisting of a hollow shell or non-volume geometric figures with only a surface is called a surface. For example: spheres, cubes, prisms, if they are hollow shells, they are considered surfaces, otherwise they are considered solids. It can be concluded that 3D models belonging to both categories are built on the basis of the same geometric principles. Visualization of real existence serves as the basis for the emergence of three-dimensional graphic information and the improvement of their processing technologies. Such information serves the development of the society, the discovery of new aspects

of science, and the members of the society feel the existence as a whole. Visualization of real existence serves as the basis for the emergence of three-dimensional graphic information and the improvement of their processing technologies. Such information serves the development of the society, the discovery of new aspects of science, and the members of the society feel the existence as a whole. Teaching the theoretical foundations, mathematical apparatus, methods and methodologies of three-dimensional modeling:

- visual representation of three-dimensional real existence with the help of mathematical and software equipment and teaching them digital processing methods;

- to develop the skills of analyzing real objects through visual images;

- to create practical problems and find their solutions using modern practical software tools;

- consists in forming the skills of analyzing information about visual images, processing information and drawing conclusions.

1. Design and artwork

2. Mass media and polygraphy

3. Animation

. Cinematography

5. Design automation

- Animation;

- Visual communication;

- Graphic editor; - Commercial graphics;

- Graphics device driver;

- Image; - Information model;

- Three-dimensional model; - Metadata;

- Graphics tablet.

Before synthesizing an image of an object, it is necessary to enter information about its structure (topology), geometry, texture (structural structure), visual properties and relationships between surrounding objects (location in space) into the graphic system. . These data form the geometric model of the object. Through abstraction, ideas about their appearance and condition are formed from their internal structure and interactions. Such representations can be called a visual-state information model.

Summary

During the pedagogical practice of the 12th school of the Furqat district, we directly participated in the Informatics classes and got acquainted with the state of teaching computer graphics to students in educational activities. In particular, we were convinced that the innovative methods used in the teaching of various relevant departments of computer graphics in the course of training in this school can be developed based on the above recommendations and suggestions..

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