

## Educational Area of Technology

Year 3–4

(140 or 175 hrs per year, 4 or 5 hrs per week, correspondingly)

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<b>1</b>	<p><b>Technical creativity and engineering</b></p> <p>Product making planning. Compliance with graphic images and diagrams in the process of modeling, design and manufacture of three-dimensional products from finished elements (boxes, packaging, independently made three-dimensional parts). Finishing of manufactured goods using known techniques and materials with beads, sequins, braid, ribbons, etc. according to one's own design. Scale modeling of products with erector set parts. General information about the methods of making moving models from paper and cardboard. Moldable materials for the manufacture of products (plasticine, clay, polymer clay, and salt dough). Three-dimensional products. Sequence of the production of three-dimensional products (a relief, a bas-relief) from moldable materials of one's own design. Scale modeling. Using fabric, threads, non-woven materials (flat and volume appliques on the basis of simple symmetric and asymmetric forms), natural materials and other materials (flat and three-dimensional products) in work. The sequence of actions in the manufacture of products in the “origami” technique. Cardboard and foam as an artificial material for scale modeling. Estimated objects of work: production and decoration of three-dimensional products (vehicles, houses, towers, robots etc.); scale modeling of products from erector set details; making of products from natural and moldable materials; production of paper models with moving parts; production of three-dimensional figures of animals, cartoon and fairy tale etc. heroes from moldable materials; creation of collective compositions from ready products; making a soft toy; crafts using “origami” technique; plot-based and subject-based appliques from paper, plasticine, natural materials; applique from paper, fabric, threads, non-woven fabrics, and natural materials; three-dimensional static models (figures) from plasticine, polymer clay or salt dough; three-dimensional products from paper, fabric, threads, non-woven and other materials. Proposed conditions: personal access of a pupil to the details of an erector sets, respective graphic images, schemes for the construction of simple models; and materials for the manufacture and decorating of the product.</p> <p><b>Technical creativity and engineering</b></p> <p>Product making planning.</p>

	<p>Compliance with graphic images and diagrams in the process of modeling, design and manufacture of three-dimensional products from finished elements (boxes, packaging, independently made three-dimensional parts).</p> <p>Finishing of manufactured goods using known techniques and materials with beads, sequins, braid, ribbons, etc. according to one's own design.</p> <p>Scale modeling of products with erector set parts.</p> <p>General information about the methods of making moving models from paper and cardboard.</p> <p>Moldable materials for the manufacture of products (plasticine, clay, polymer clay, salt dough).</p> <p>Three-dimensional products. Sequence of the production of three-dimensional products (a relief, a bas-relief) from moldable materials of one's own design. Scale modeling</p> <p>Using fabric, threads, non-woven materials (flat and volume appliques on the basis of simple symmetric and asymmetric forms), natural materials and other materials (flat and three-dimensional products) in work.</p> <p>The sequence of actions in the manufacture of products under the "origami" technique.</p> <p>Cardboard and foam as an artificial material for scale modeling.</p> <p>Offered objects of work: production and decoration of three-dimensional products (a vehicle, houses, towers, robots etc.); scale modeling of products from erector set details; the making of products from natural and moldable materials; production of paper models with moving parts; the production of three-dimensional figures of animals, cartoon and fairy tale etc. heroes from moldable materials; creation of collective compositions from ready products; making a soft toy; origami crafts; plot-based and subject appliques from paper, plasticine, natural materials; applique from paper, fabric, threads, non-woven fabrics, natural materials; three-dimensional static models (figures) from plasticine, polymer clay or salt dough; three-dimensional products from paper, fabric, yarns, non-woven and other materials.</p> <p>Proposed conditions: personal access of a student to the details of an erector sets, respective graphic images, schemes for the construction of simple models; materials for the manufacture and finishing of the product.</p>
<p><b>2</b></p>	<p><b>World of technology</b></p> <p>Tools and devices for the manufacturing of products from modern artificial materials. The sequence of manufacturing of simple products using plastic, foam rubber, synthetic winterizer, and synthetic wool.</p> <p>Collage. Quilling. Combining different materials to create a collage composition, products using the quilling technique; and sequence of actions.</p> <p>Elements of graphical science. Lines. Rules of line marking on the paper and cardboard.</p> <p>Using schemes for sequence of product manufacturing.</p> <p>Features of construction materials (types of cardboard, paper, and threads).</p> <p>Manufacturing three-dimensional products with the elements of recycled materials.</p> <p>Safe work with tools and appliances.</p> <p>Economical use of materials.</p> <p>Presentation of one's own (collective) activity.</p> <p>Estimated objects of work: making products from modern artificial materials; making plot-based collage composition according to one's own design; manufacturing of products using the quilling technique; three-dimensional static models (shapes) from plasticine, polymer clay or salt dough; three-dimensional scale models of products from artificial materials;</p>

	<p>modeling and creation of products using recycled materials; creating development drawings of a rectangular shape from paper or cardboard.</p> <p>Proposed conditions: pupil's personal access to materials, process maps (diagrams) required for the manufacture of products, tools and devices, reference books (books with illustrations to works of art, sets of drawings to cartoons, etc.).</p> <p>Organization of tours to enterprises, viewing and discussion of video films about production.</p>
<p><b>3</b></p>	<p><b>World of crafts</b></p> <p>Performing simple technological operations of traditional and modern crafts in creating and decorating simple products using the template and one's own design.</p> <p>The methods of weaving of ribbons, thick threads, and ropes. Main methods of work and manufacturing of products with the weaving technique.</p> <p>Finishing products using the embroidery technique. Materials, tools and devices, main methods of work, and the process of manufacturing of products using the embroidery technique.</p> <p>Painted Easter egg as one of the symbols of Ukraine. Ornament. Decorating Easter eggs.</p> <p>Estimated objects of work: the manufacture of products using the technique of weaving (motanka dolls, book-marks, souvenirs etc.); decorating products with "needle forward" and "needle backward" seams (clothes parts, napkins, cards, paintings, etc.); making Easter egg appliques using the known techniques; decorating a painted Easter egg.</p> <p>Proposed conditions: pupil's personal access to products made by traditional and modern crafts; access to materials, tools and devices, catalogs, photographs, etc.</p> <p>An tour (real or virtual) to the workshops of folk craftsmen, museums of decorative and applied arts, school workshops, workplaces, and production facilities dealing with traditional folk crafts.</p>
<p><b>4</b></p>	<p><b>Everyday life</b></p> <p>Organizing one's own life.</p> <p>Solving practical household tasks.</p> <p>Clothes and footwear. Decorating clothes and footwear. Techniques, materials, tools and devices for decorating clothes and footwear. The sequence of actions for decorating products with buttons.</p> <p>Planning and executing the simplest work actions using the known methods (mending toys, books, taking care of plants, pets; cooking simple meals using recipes; keeping the clothes and shoes tidy).</p> <p>Calculation of materials and expenses for the simplest tasks.</p> <p>Estimated objects of work: finishing scale models of models (templates) of clothes and footwear made of cardboard using the previously mastered techniques; table setting; simple dishes: sandwiches, tea, etc.; simple mending of books, toys and so on.</p> <p>Suggested conditions: pupil's personal access to materials, tools and devices; objects (toys, books, plants, etc.).</p> <p>Views and discusses films (cartoons) covering the simplest actions referring to independence in everyday life.</p>



## **Mandatory academic results (based on the State Standard for primary education).**

### **Pupil:**

- selects the object of labor and predicts the final result of their own activities; independently plans the sequence of technological operations in the manufacture of products;
- reads and analyzes graphic images; draws simple geometric images and is guided by them in the process;
- selects materials and technologies for manufacture of a product;
- models, constructs and manufactures a product from prefabricated elements; produces and decorates a product with the help of known technology;
- presents the result of their own and collective activities and tries to evaluate it;
- performs simple technological operations of traditional and modern crafts independently;
- independently creates a product using technology of traditional and modern crafts;
- with the help of adults or independently calculates the estimated cost and the amount of materials for manufacture of a product;
- uses materials efficiently; sorts wastes according to certain rules;
- plans and performs actions in their own life;
- safely uses simple devices at home; independently organizes the workplace in accordance with the defined needs and objectives;
- adheres to safe methods of work when using tools and devices.

