THE PUBLISHING HOUSE " SHEMETSNEBA" PRESENTS YOU NEW TEXTBOOK AND GUIDELINES CREATED UNDER THE NATIONAL CURRICULUM IN NATURAL SCIENCES FOR PUPILS FROM I-VI FORMS.

OUR ENVIRONMENT

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OF THE MANUAL

The presented lesson topic, teaching aims activities, practice works, innovative electronic, exercises, multicolored visual aids, didactic cards and audio material respond to the modern pedagogical and psychological demands the newest methods of teaching and studying. The concept of manual, complete sets is based upon the 18- year experience of the authors. It is oriented on "teaching by discoveries" – a students learn how to observe things by means of experiments, they develop step by step as the material of the lesson is presented consistently from something familiar to the unknown, from simple to difficult. The issues are worked out multilaterally and profoundly, which helps the students to acquire the material by phases. The authors have worked out the exercises of various difficulties, which enable the students to check their own strength and possibilities, they start to believe in themselves, work out their self -assessment, stimulate their creative initiative, which stimulates them to start research of their own independently.

The lessons, delivered by the method of problem-research and the activities offered in the teacher's book, positively motivate students, makes the lessons in natural science more interesting and enjoyable.

The activities, presented in the manual, work books and electronic exercises enables the students to sum up the information, to express their impressions, received by their own experience and observations (e.g. by narration, drawing, making models, making notes, filling up tables, constructing diagrams, presentations). They will get used to analyzing and making decisions independently, working out cooperation in couples and groups.

The novelty, given both for the student and the teacher is presented in the innovative tasks, information and communication technologies (ICT) Our method can fit any operating system, it does not require any additional expenditure and special supply of the program

The structure of the manual is consistent, the structural elements are similar. Both the students' book and work books are divided into chapters. Each chapter of the lesson has the cover (the line of the adequate color), which is expressed in the content of the book. The lessons are numbered. Each lesson has two, rarely three or four pages.

In the presented series (I-IV and V-VI forms), each of the manual of the next form is based and develops the content of the previous form.

The innovation of our manual is that it has a lot of multilateral electronic resources, which comprises a lot of additional information, fills up and enriches the topic of the lesson and the principal point is, that it helps a student to comprehend the issue in a better way.

These are:

1. *The full electronic version of the student's manual, which can be downloaded in the book.*
2. *The electronic version of developing games for teachers.*
3. *Multilateral visual aids (posters, conventional signs, etc.)*
4. *Cards for cognitive games (a pack of 72 cards)*
5. *Audio material – the sounds of nature, the sounds of animals.*
6. *Useful links.*
7. *Innovative electronic tasks.*
8. *The samples of electronic presentation.*
9. *The additional reading material, connected with the topic of the lesson.*
10. *Various maps, among them contour maps.*

1st grade

Contents

2nd grade

Contents

1. Human
   - Living and nonliving
   - Human body
   - We move
   - Human growth
   - Human nourishment
   - Hygiene
2. Plants
   - Function of plant parts
   - Variety of plant parts
   - How to take care of plants
   - Leafy and needle trees
   - Leaves
   - Plant growth
3. Animals
   - Animal offspring
   - Animal Growth
4. Objects
   - Mobile and static
   - Types of motion
5. Habitat
   - Habitat
   - Life on land
   - Life in water
   - Birds habitat
   - Different habitats
   - Human habitat
   - Natural and artificial environments
   - Wood and human
   - Botanical garden and zoo park
6. Healthy life
   - Days of week and calendar
   - Wholesome products
   - Recreation and health
   - Sports and safety
7. Magnet
   - What is a magnet?
   - Properties of magnet
   - Form and shape of magnet
   - Poles of magnet
8. Materials
   - Objects
   - Different materials
   - Wood
   - Sand and clay
   - Metals
   - Glass
   - Resin
9. Water and land
   - Water and land
   - Mountains and its parts
   - Rivers and its parts
   - River banks and tributaries
   - Lake
10. Human and environment
    - Human and environment
    - Natural resources
    - Which of natural resources can be inexhaustible?
    - Water pollution
    - Pollution and recycling

3rd grade

Contents

4th grade

Contents

1. Earth
    - Water and land on earth
    - Maps and colors
    - What's horizon
    - Cardinal directions
    - Map
    - Poles and equator
    - Continents and oceans
    - Islands, peninsulas, straits
    - Georgia
    - Variety of nature in Georgia
    - Rivers, lakes and reservoirs in Georgia
2. Living world
    - Living world
    - Five kingdoms
    - Fungi kingdom
    - Plant kingdom
    - How do plants breed
    - Animal kingdom
    - How do insects breed
    - How do fish and frogs breed
    - How do birds breed
    - Plant habitat
    - Land plants
    - Water plants
    - Protect the nature of Georgia
3. Interactions between objects
    - Mobile and static objects
    - Fast and slow motion
    - Interactions between objects
    - What is force?
    - Why do objects fall?
    - Gravity
    - What is weight?
4. This amazing water
    - Object and matter
    - Structure of matter
    - State of aggregation
    - Changing state of aggregation
    - Water
    - Water cycle
    - Life under ice

5th grade

Contents

1. Solar system
    - Journey in outer space
    - Planets and their natural satellites
    - Journey on the moon
    - Solar system planets
    - Stars and comets
    - Eclipses
2. Structure of earth
    - Structure of earth
    - Composition of crust
    - Minerals
    - Crust
    - Tectonic shift
    - Earthquake
    - Volcanoes
3. Organisms and ecosystem
    - What is an ecosystem?
    - Biotic and abiotic factors
    - Soil
    - Temperature
    - Ecosystems of Georgia
    - Artificial ecosystems
    - Human and natural ecosystems

    - Pollution
    - The nature of Georgia is in danger!
    - Animal nutrition
    - Getting nourishment
    - Leaf types
    - Leaf fall
    - How organisms adapt to its habitat
    - Startle display
    - Warning coloration
    - Insect-eating plants
4. Motion of objects
    - Mobile or static?
    - Trajectory of motion
    - Measurement of distance
    - Measurement of time and velocity
    - Velocity
    - Transport means
    - Trajectory of animal motion and speed
5. Electricity
    - How we have light in our houses
    - This is dangerous!
    - How to create a presentation
    - Power source
    - What is an electrical circuit

6th grade

Contents

1. Heat and light
    - Earth rotation
    - Sun position at the horizon
    - Earth's motion in year
    - Heat zones
    - Rainforests and Antarctic desert
2. Relief of the earth
    - Continents
    - Oceans
    - Islands and peninsulas
    - Seas, straits and gulfs
    - Natural disasters
    - Natural and artificial barriers
    - Change of earth surface
    - Effects of rivers, glaciers and wind
3. Human
    - My body
    - My mind
    - Structure of body
    - Skeleton and muscles
    - How do humans breath
    - Blood flow
    - Skin, hair, nails
    - Digestion
4. Safety
    - Proper nutrition and exercising
    - Product due dates
    - What are microorganisms?
    - Vaccination
    - Safety signs
    - What is a laboratory?
5. Substance
    - Object and substance
    - Properties of substance
    - How do substances differentiate from each other?
    - Boiling and melting
    - What happens when a substance interacts with another substance?
    - What happens when you boil a substance?
    - How does a candle burn?
6. Substance and mixture
    - Substance and mixture
    - Homogenous mixtures
    - Heterogeneous mixtures
7. Energy
    - Sun energy
    - What is energy