



МОСКОВСКИЙ
МЕЖДУНАРОДНЫЙ
САЛОН ОБРАЗОВАНИЯ
MOSCOW INTERNATIONAL
EDUCATION FAIR

MODERN ICT IN RUSSIAN EDUCATION

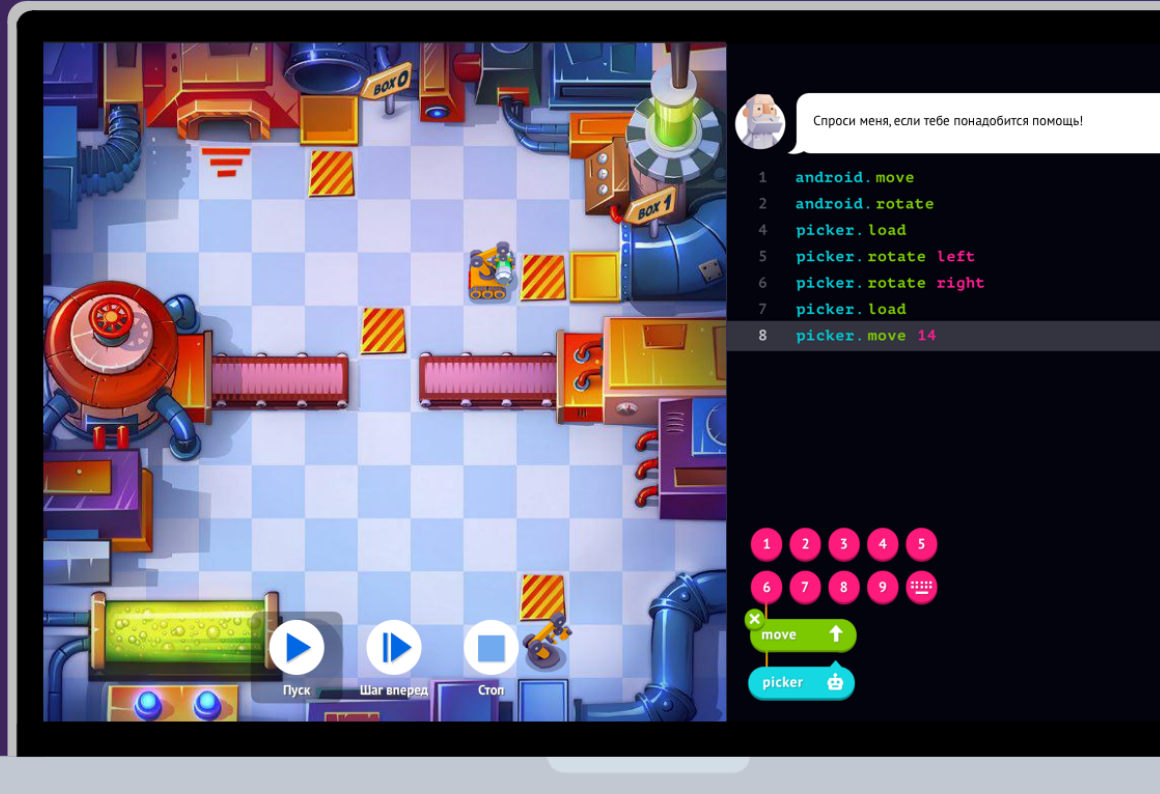
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CEO of Codewards

| About CODEWARDS

Educational product aimed at introducing basics of programming to primary school learners through both computer and non-computer based activities.

This complex approach gives learners an opportunity to develop not only universal programming skills, but also vital soft skills valuable in their everyday life



Six main elements of our educational tool kit:

- ▶ Online platform with individual access
- ▶ Set of materials for teachers
- ▶ Workbooks for learners
- ▶ Training session for teachers
- ▶ Technical support
- ▶ Professional teaching courses

| Learning outcomes



LOGICAL THINKING

1. Generalization
2. Making analogies and classifying
3. Building cause and effect relations
4. Logical reasoning
5. Making conclusions
6. Designing action plan



BASIC PROGRAMMING SKILLS

1. Typing
2. Operating with numbers, basic mathematical concepts
3. Simple measurement in different ways
4. Visual representation of data
5. Dividing object into parts, comparing and understanding the difference in size and location
6. Vision of the "picture" of the solution, understanding code structure
7. Compiling algorithms, applying optimal concepts



PROBLEM SOLVING

1. Primary analysis
2. Comprehension of goals and objectives
3. Understanding goal and results correlation
4. Application of problem solving methods, determining the best way of solution



COMMUNICATION SKILLS

1. Grasping new concepts
2. Creating concepts
3. Analysis and reflection on your own actions
4. Expressing your point of view
5. Making dialogue with peers and adults
6. Understanding and tolerating someone else's point of view

| Online platform

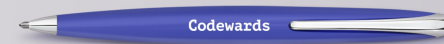
Computer based learning is performed by completing the tasks of the lessons in special programming interface.

In a virtual world of Codewards the learners become rescuers on a mission to save the underwater station and restore its broken control system.



| Workbook

To enhance e-learning outcomes the course is supported by a paper based workbook. Full of additional tasks for each lesson logbook helps learners to anchor the knowledge and skills obtained by working online.



| Teaching materials

Each lesson is supported by a detailed guide for the teacher on how to conduct the lessons on Codewards. Our approach meets all the regulation standards of the primary school teaching and learning.

Codewards offers
40 or 90 minutes
lessons

4. Why a dog isn't a robot, even if it can follow commands

Algorithms and executors. An executor's system of commands. The program.

- Lesson aims:**
1. Introduce the students to the terms «formal» and «informal» executor.
 2. Create a link between «formal executor» and «system of commands»
 3. To teach to identify and prove whether a statement is true or false.

- Terminology:**
1. Formal
 2. Informal
 3. Computer
 4. Loader with manipulators
 5. Engineer
 6. Command

Computer activity: Students will have to restore the damaged pipelines that are necessary for pumping water out of the cracked dome. The player will be operating a crane (using loaders with manipulators) with which he will remove the damaged pipes and substitute them with new ones. The objects gets two new functions (LOAD and PUT). Also, skills from previous lessons are practiced: movement, turns and orientation in space (coordinate system of the game object).

Commands: move, rotate, left, right, load, put

Object: crane

- Required materials:**
1. Computers with access to the Codewards system.
 2. A folder - the «logbook» (diary) of a young engineer-lifesaver.
 3. Printed geometric shapes.
 4. Pens, colored pencils, glue, scissors.
 5. Handwriting paper A4 (colored or thin cardboard)

Pages in the «logbook»: Page №4.1. Algorithmic tetris.
Page №4.2. What did we do today?

Homework*: Complete the assignments on pages 4.1 – 4.2 in the «logbook».

* It doesn't have to be homework

* If time permits, it can be completed at the end of the lesson or right afterwards in the free activities zone (if there is one).

| CODEWARDS in numbers

Codewards improving digital literacy in the Russian Federation

1500+

**Children
learn with CODEWARDS**

80% of the learners are willing to continue learning programming with Codewards after their first module.

100+

**Schools
teach with CODEWARDS**

70% of schools purchase the course after the trial. 90% of the usage is for additional education programs.

10+

**Partners
want CODEWARDS**

Our content is on high demand on international educational market. Learning content providers and edu related companies show strong interest in our product.

10 mln

**Children participated in
Codewards' Hour of Code**

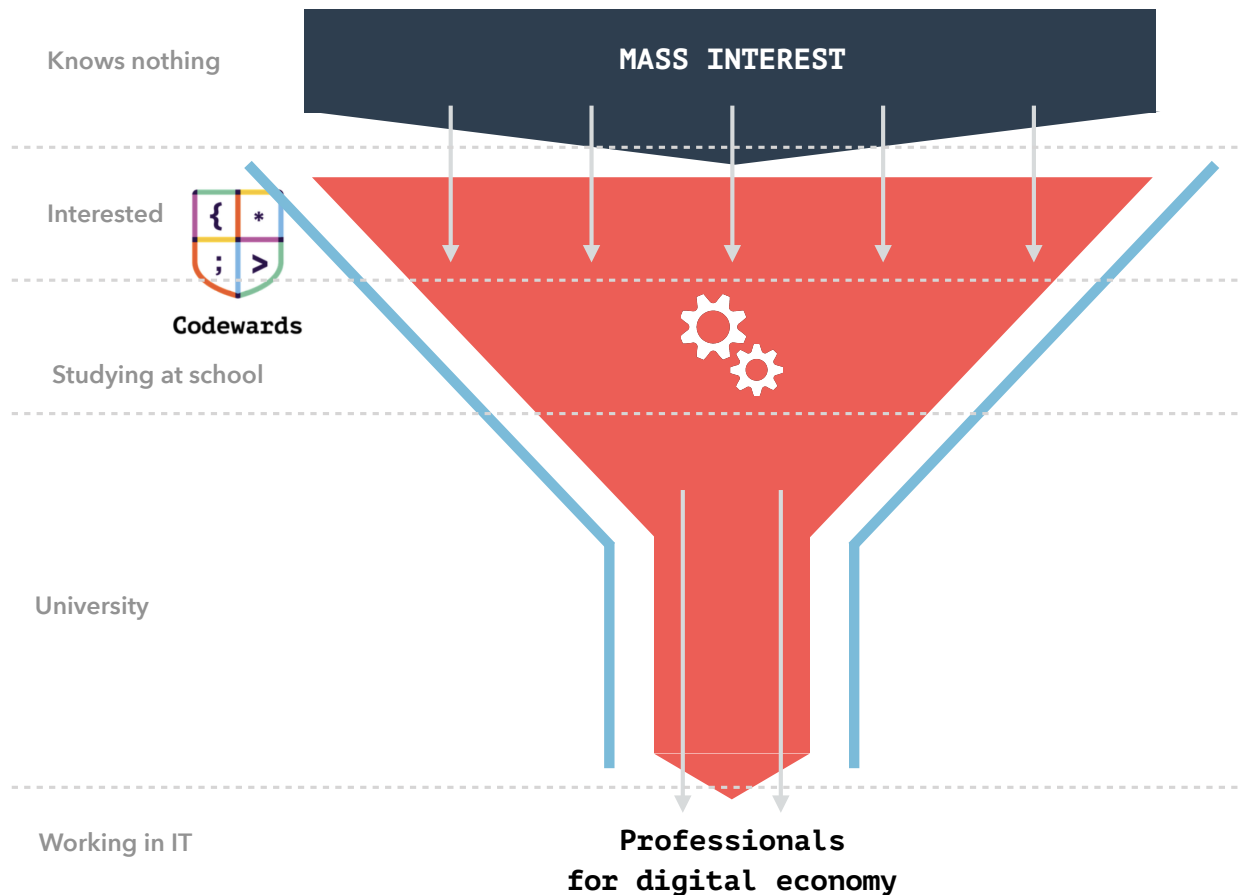
Codewards is a partner of Hour of Code in Russia along with Microsoft, ZeptoLab and Kaspersky Lab. In 2017 the training platform of HoC was developed by Codewards.

Hour of Code in Russia

Codewards is
official partner



| TOWARDS THE DIGITAL ECONOMY THROUGH SCHOOLS



TASK

To **promote the interest** for children in the development of various areas of the digital economy

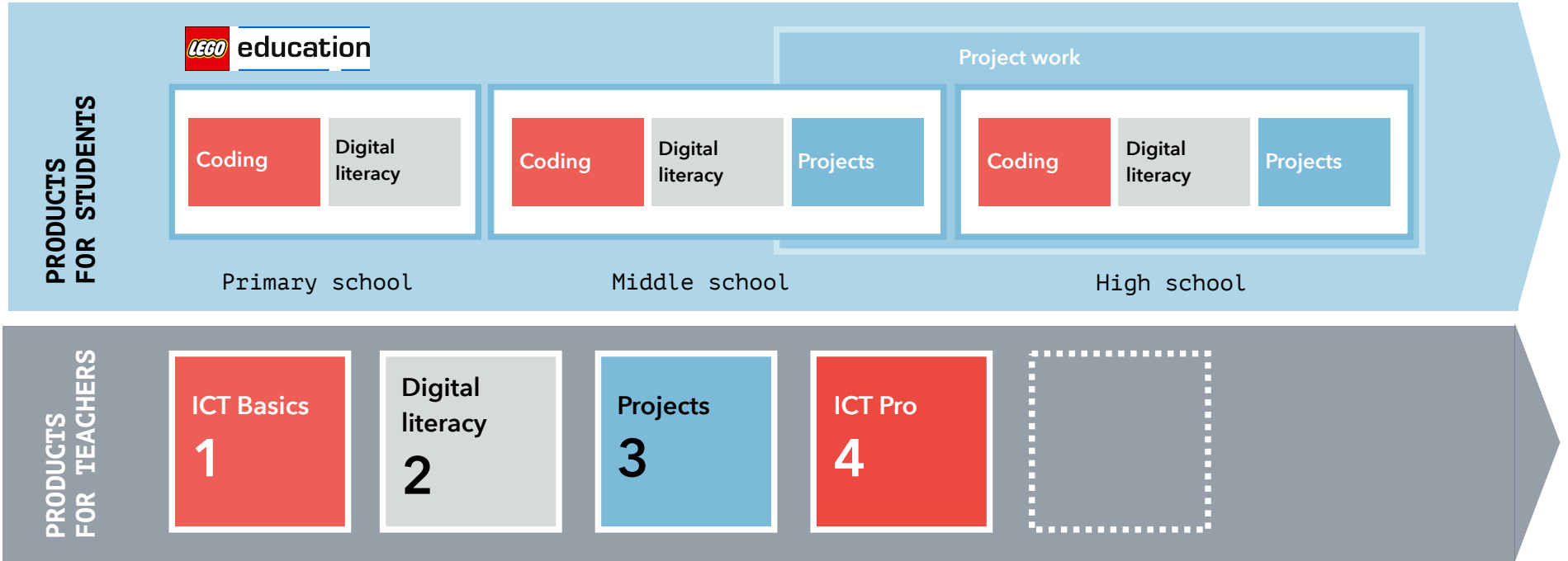
TOOL

Teachers who **involve students into the digital activity** and digital creativity, helping to develop them in the right direction

TARGET

Increasing the number of professionals ready for the digital economy

CODEWARDS EDUCATIONAL ECOSYSTEM



| TARGET

Implementation of ecosystem products Codewards in the educational infrastructure of the region will cover the key areas of the transition to the digital environment

5 000

Students

100

Digital
teachers

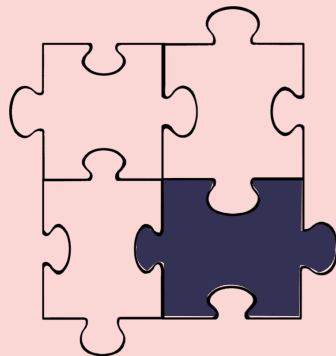
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Schools

2

Educational
events

**Educational
infrastructure**



Codewards

40 000

Students

100

Schools

500

Digital teachers

10

Educational events

Worldwide experience

