алгоритмика

Международная
школа математики
и программирования

Computer literacy

Student profile

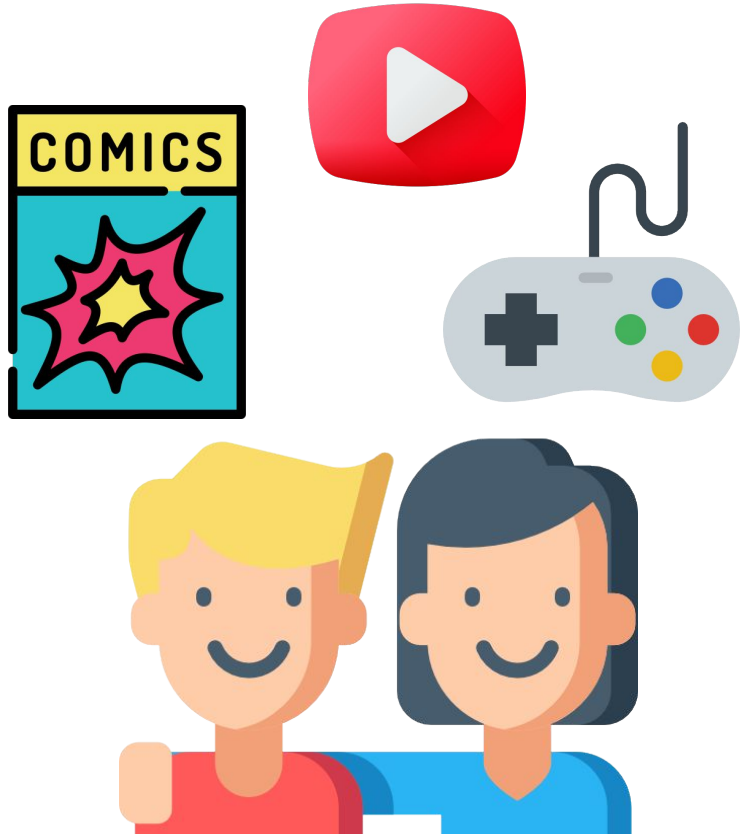
7-9 years old

Who will we be teaching?

Boys and girls **from 7 to 9 years old**.

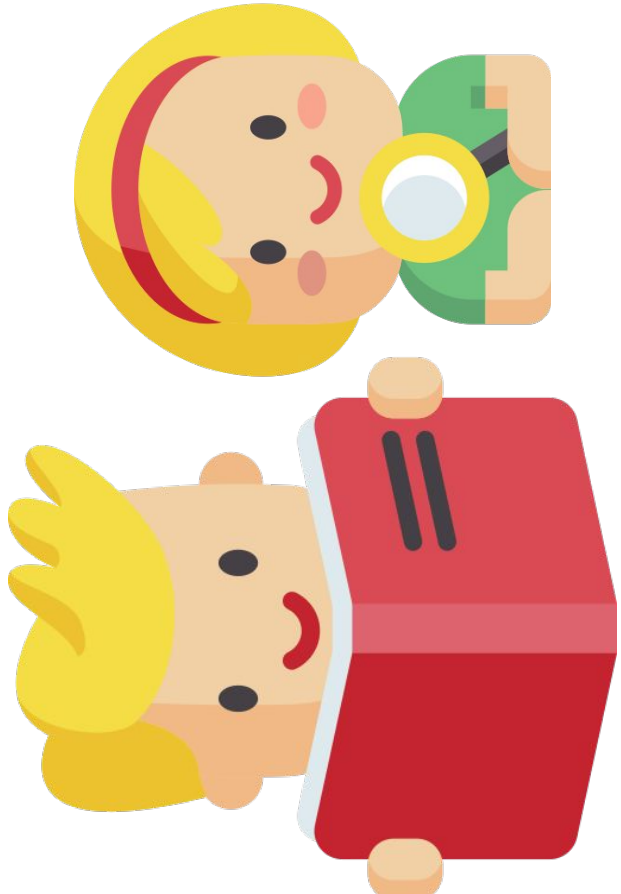
What kids of 7 - 9 years old love?

- play computer games;
- watch YouTube videos;
- read memes and short comics;
- play with friends - the more friends the better!
- talk about their interests;
- boast, demonstrate their achievements using photos and videos.

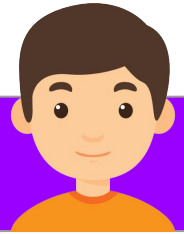


What kids already can do?

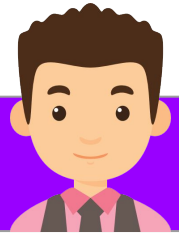
- read and count;
- navigate in space (right/left, top/bottom, upper right corner, etc.)
- perform comparison tasks (find 5 differences);
- perform tasks by example and idea (draw, tell)



At the same time, the level of mastering these skills may differ a lot according to the age!



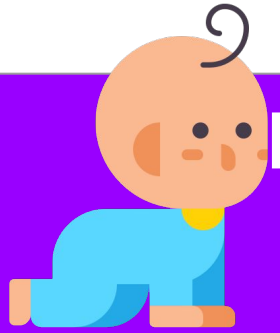
7 years old



9 years old

- read rate 25 char/min	- read rate 90 ch/min
- no text analysis skill	- make a plan, headline the text, arrange pieces of text in the right order
- mental arithmetics within 10. Know how to add and subtract numbers.	- mental arithmetics within 100. Know how to add, subtract, multiply and divide numbers.
- thinking is a lot of ways similar to the thinking of preschoolers - they perform tasks by example.	- initiate abstract logical thinking.

And they are also kids with different initial levels of computer literacy!

Didn't use a computer at all	 Played and watched videos
- do not know how to turn a computer on and run programs;	- turn the computer on, launch the browser, use the quick launch browser panel to go to Youtube and Alice to search for games on the Internet. - start the game using an icon on the Desktop;
- not able to use keyboard and mouse	- can type with 1 finger, can use a mouse

Is it easy for them to do tasks on the computer?
(Do they know how to work or it causes huge difficulties)

Students follow the teacher's instructions: navigate on the keyboard, in the program interface, and use the mouse on the principle of mathematical dictation for kindergarten. They don't catch the essence (you need to work out a conscious interaction with the interface), but they are ready to do what they are told.

A child who is not allowed to use a computer at home	**A child who uses a computer at home.**
- At first, it is difficult to use the keyboard and mouse. They need constant participation of the teacher. The first tasks should be aimed to develop the skill of using the keyboard and mouse and to develop motor skills. And only then proceed to the subject tasks.	- Already knows how to use the keyboard and mouse, in some way orients on the desktop and can run programs. They can immediately move on to subject tasks.
If the tasks are gamified and isolated on the platform and students need to perform approximately the same actions, both categories are mastered quickly enough.	
Complete tasks more slowly	Complete tasks more quickly

Group characteristics

1. Students may differ in reading speed (reading standards for 7 and 9 years old differ by 3 times)
2. Different attention span (tasks for analysis will be difficult for a 7-year-old student)
3. Different computer skills (some do not have any, some can type and use search)
4. Different levels of spatial thinking (some confuse right and left, some do not)
5. Different levels of speech development, vocabulary and range of interest.

Children interests

Why it is vital to know the interests of children:

Children's interests are constantly changing. Often, children give up their interest in the moment when it is necessary not just to want, but to do something on a daily basis. If you ask this question directly, the answers of the same child may differ depending on who asked and who is nearby.

Interests must be tracked:

- follow the trends of YouTube, TikTok, etc.;
- conduct surveys among children in each group
- ask how the week went (at briefings)
- suggest thinking about their favorite character when working on a project

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Difficulties: - it is difficult for an adult (with others) to dive into the nuances of children's interest - this is a separate big job.

Risks: it's possible to lose credibility by missing an approval for a specific game.

Possibilities: you can build a discussion in such way that the children themselves will tell you all the details

Who are we teaching? Let's sum up:

7-9 years old

What they can do

- Openly express their opinion
- Mechanically read and count
- Play games on their phones, use messengers
- Watch videos
- Ask for help and wait for it
- Complete tests
- Draw and colour based on an example and their own design.

What they do not know how to do and cause great difficulties and anger:

- Monotonous actions
- Lack of result
- Type on a keyboard
- Schedule actions
- Write a lot
- Read long texts
- Analyze texts

What they want to learn:

Easily create their own blogs, shoot and edit videos, i.e. they want to learn how to be popular *without making an effort*.

“Idol”

- Bloggers
- Computer games

What they do with pleasure:

- play games on their phone and computer;
- play Lego;
- play with adults;
- communicate with friends;
- watch videos

Additional comment:

- They learn quickly within the framework of their interest, but simply repeat complex actions after the teacher, without diving into the essence of the task
- Do not deal with mistakes: act by rote - repeat after the teacher