Algorithmics

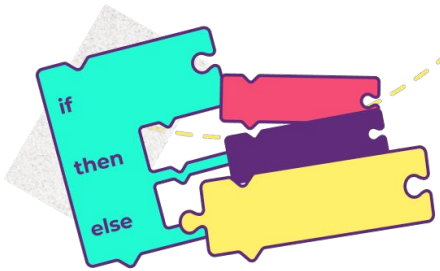
Visual programming

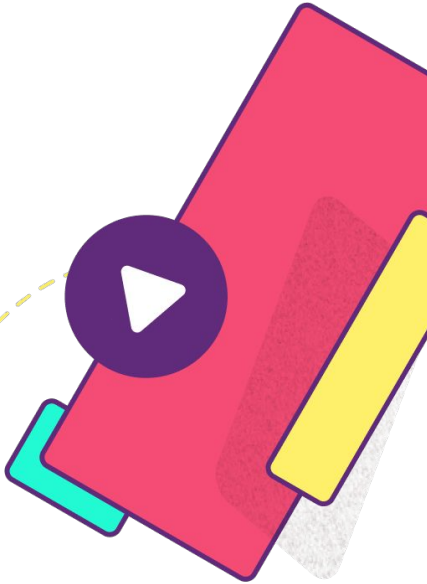
A course for kids aged 7-10

From their first line of code
to complete projects

Study. Play. Create.

The children learn programming basics in Scratch, a language designed for kids. Our students create original projects, from basic animations to real games and cartoons





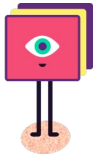
Everyone
will enjoy it!

We learn by having fun

A storyline about adventures in space helps us to retain the attention of students who find concentrating difficult

We nurture mathematical thinking

By studying the basics of programming and algorithms, we deepen students' knowledge of maths



We find their motivation

We don't do tests, instead we apply what we've learned in practice straight away, by creating projects and bringing our own little dreams to life

Your child will learn:

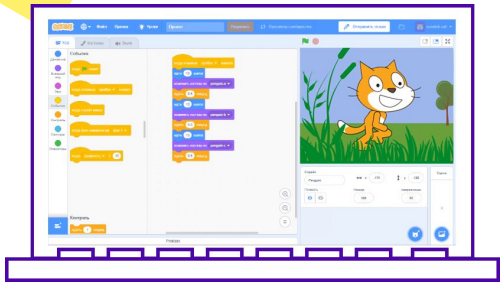
- About the basic concepts and practices involved in programming – from creating algorithms to correcting errors
- How to create cartoons and games in the block-based programming language Scratch, making their stories more sophisticated as their knowledge grows
- To apply the main principles of graphic design and vector graphics in practice

Your child will learn:

- To adopt a creative approach to solving problems, to experiment, and not to worry about making mistakes
- To work in a team: allocating tasks, searching for compromise, and expressing their ideas effectively
- To not fear public speaking and confidently present their projects in front of a live audience

What is Scratch?

Scratch is a visual programming language created specially for teaching kids:



Their first encounter with programming

In Scratch, programs are assembled using blocks, just like Lego: the child starts learning through play rather than memorizing complicated syntax

A fast start

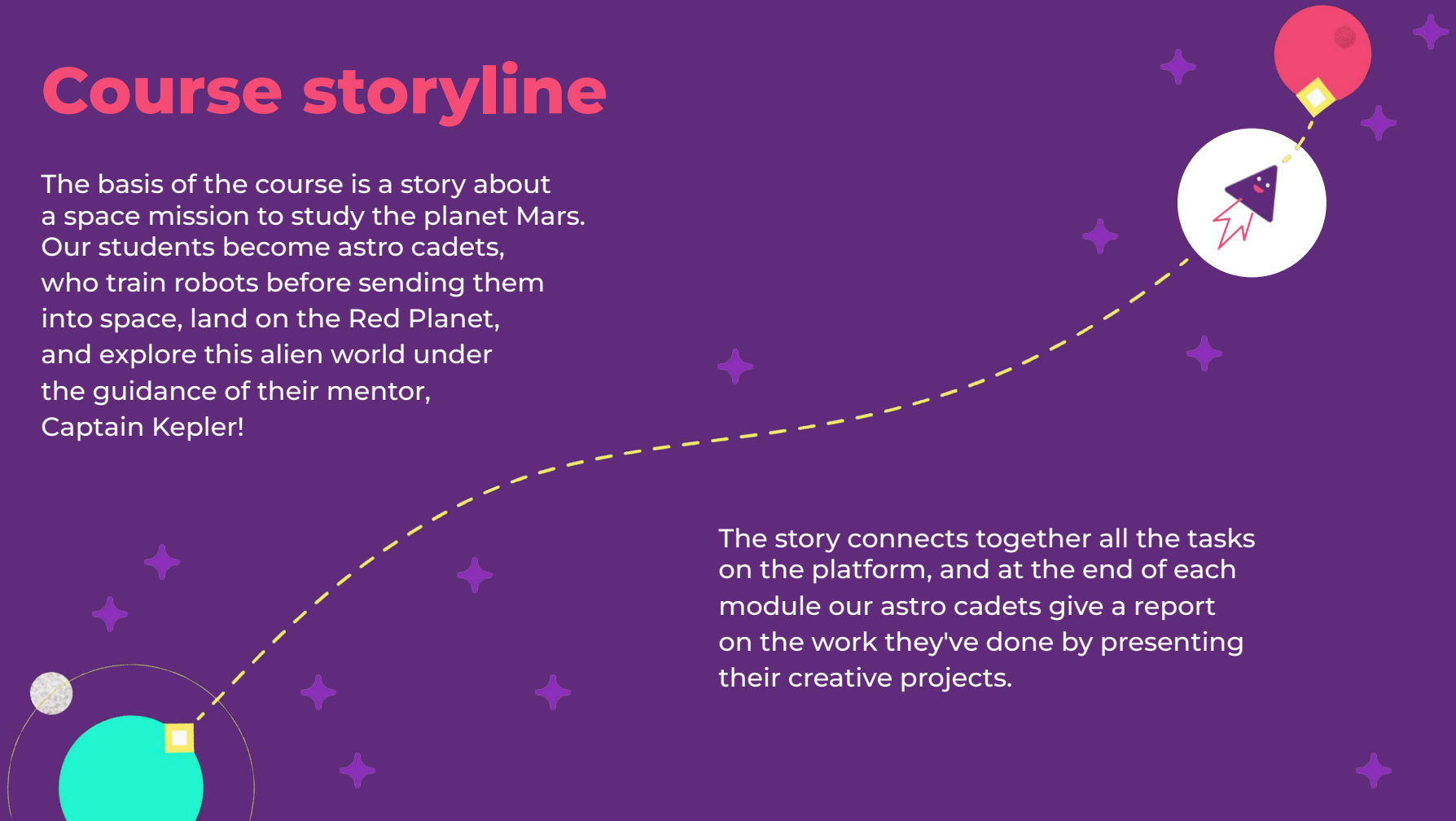
Thanks to Scratch, children can progress quickly from generating ideas to launching their first program, without losing their interest and motivation

Developing algorithmic thinking

Scratch offers the best way to train algorithmic thinking, which will help your child not only in programming, but in their wider studies, career and everyday life

Course storyline

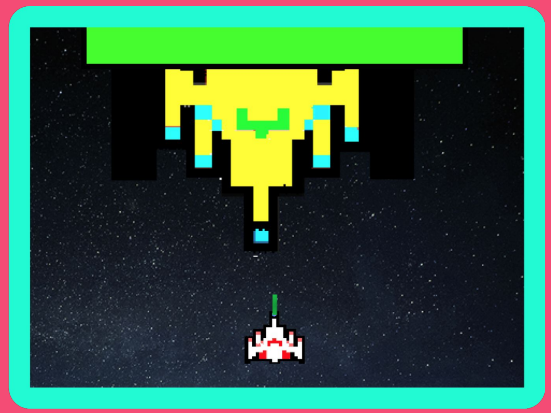
The basis of the course is a story about a space mission to study the planet Mars. Our students become astro cadets, who train robots before sending them into space, land on the Red Planet, and explore this alien world under the guidance of their mentor, Captain Kepler!



The story connects together all the tasks on the platform, and at the end of each module our astro cadets give a report on the work they've done by presenting their creative projects.

A project-based approach

- Our children create mini-projects right from their first lessons, applying the knowledge they've gained in practice
- Kids share their projects with their classmates directly in the platform, and learn to give and receive feedback
- At the end of each module, they present a full individual or group project



What are our classes like?

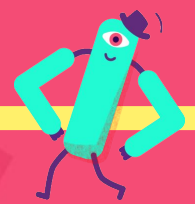
- **Online** or **at the Algorithmics** school in your city
- In groups of **up to 6** online or up to **12** offline
- Classes last for **90 minutes** with a break in the middle
- **1-2 times a week**, at a time and on a day that's convenient to you

The teacher explains the material in an interesting way and **gets the kids interested in the new topic**

Your child won't ever fall behind in the program: **any classes they miss can be taken on the platform,** 24/7

You won't need to check any homework: at Algorithmics, **there are no obligatory homework tasks**

You'll be given **access to the platform** and will be able to follow your child's progress



Course structure – 3 Levels

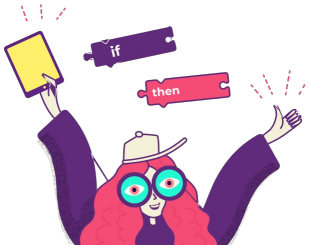
Beginner

Module 1. Introduction

- Linear algorithmic
- Loops
- Initial arrangement
- Events
- Creating interactive business cards. Project

Module 2. Space

- Coordinates
- Turns and direction
- Rotation and degrees
- Messages
- Creating a cartoon. Project



Intermediate

Module 3. Creating a game

- Conditions and selection statements
- Changes to coordinates
- Procedures
- Planning a game
- Testing
- Presenting a game

Module 4. Logic

- Logical operators AND/OR/NOT
- Conditional loops
- Random numbers and ranges of values
- Coordinate areas
- Multi-level games. Group project
- Multi-level games. Project presentation

Advance

Module 5. Variables*

- Variables and loops
- Types of data
- Counters in games
- Variables as parameters
- Games with conditions for characters. Project

Module 6. Clones*

- Clones
- Local and global variables
- Project using the programming tools studied on the course

*Only in the full version of the course

Why do people choose Algorithmics?

- The curriculums for all our courses are developed by a team of professional **educators, pedagogues and psychologists**
- Algorithmics' **teachers** talk to the kids in understandable language, love their subject and know how to captivate children
- Our **IT learning platform** is 3 in 1: it's a smart task book, an environment for creating projects, and a community of shared interests

Algorithmics

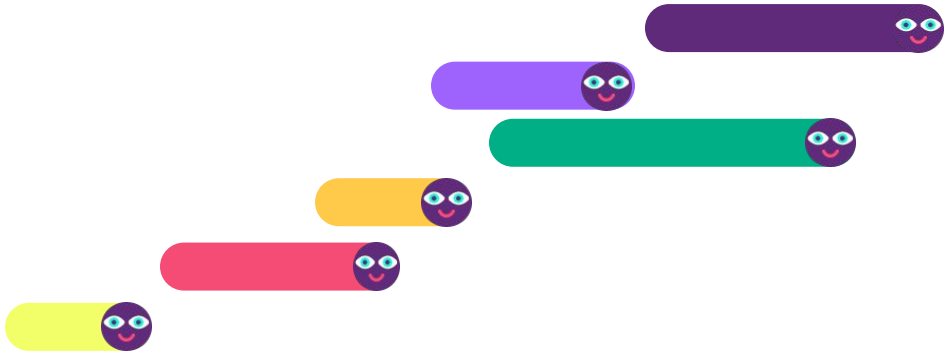
International School of Programming
for children aged 6 to 17

- 860 000 graduates
- 80 countries
- 450 partners

Courses for kids aged 6-17

Kids can start studying at Algorithmics at any age. At the end of the course, students can move straight on to the next one to continue studying in the new academic year

Course name Age:	5 – 6	7 – 9	10 – 11	12 – 13	14 – 15	16 – 17
Python Pro (2 years)						
Python Start (2 years)						
Game Development on Unity						
Game Design						
Visual Programming						
The Coding Knight						



Algorithmics

Book a place in one of our groups

http://algorithmicschool.nl/