Scratch:

Bring digital ideas to life

With the help of the flashcards you can discover Scratch on your own. You will get to know the program interface as well as the most important functions and commands.

Competences

› Understanding of algorithmic patterns and structures
› Basic understanding of the structure of a visual programming language

Prior knowledge: None

Flashcards
ca. 30 min.
9 Years+

We look forward to your feedback: info@coding-for-tomorrow.de

Coding For Tomorrow is an initiative of Vodafone Foundation Germany gGmbH in cooperation with JUNGE TÜFTLER gGmbH

www.coding-for-tomorrow.de
1 Open Scratch via your browser: scratch.mit.edu

2 Use the button „Create“ to start the programming interface.
The sprite that you are programming is always displayed here.
**TASK:** Pick a backdrop for your project

Click on the button „Choose a Backdrop“. It is located next to the sprite button.

Pick a backdrop.
Task: Pick a sprite for your project.

Click on the button „Choose a Sprite“ and select a sprite in the sprite library.

To delete a sprite click on the top right of the sprite.
Task: Add a sound to your project or create it yourself.

To do this you first have to be in the tab „Sounds“.

To get to the sound library, press the „Choose a Sound“ button at the bottom left.

Now you can pick a sound.

🏠 For creating your own sounds, use the „Record“ button and the following flashcard.
Task: Record your own sound for your project.

This is the home screen for the Scratch recording tool. Clicking on the red circle starts your recording.

Clicking on the red square ends your recording.

👉 Make sure to work in a quiet environment and speak slowly and clearly.

Before you save your recording, you can trim it to the right length. To do this, move the red sliders to the correct position.
Task: Save your project on your laptop.

Find the „File“ button top left.

Select the sub-item in the menu „Save to your computer“.

If you have an online account, your programs will be saved automatically (using AutoSafe).
Task: Open a saved project from your laptop.

Look for the „File“ button again.

Select the sub-item in the menu „Load from your computer“.

циальн With an online account, you can access your project via the folder symbol in the top right corner.
**Task:** Think about what the commands mean. Combine them with other commands and see what happens.

Here you will find some of the most important command blocks from the „Events“ section.

Events are command blocks with which your program or just certain parts of it can be started.

- `when`
- `clicked`
- `when` `space` `key pressed`
- `when this sprite clicked`
- `when backdrop switches to` `backdrop1`
- `when` `loudness` `> 10`
- `when I receive` `message1`
- `broadcast` `message1`
- `broadcast` `message1` `and wait`

You can use the message blocks to connect sprites from your program with one another. One character can thus control the action of another.
**Task:** Think about what the commands mean. Combine them with event commands and see what happens.

Here you will find some of the most important command blocks from the „Motion“ section.

![Command Blocks]

- `move 10 steps`
- `go to x: 49 y: 12`
- `glide 1 secs to x: 49 y: 12`
- `go to random position`
- `glide 1 secs to random position`
- `change x by 10`
- `change y by 10`
- `if on edge, bounce`
- `set y to 12`
- `point in direction 90`
- `turn 15 degrees`
- `point towards mouse-pointer`
- `turn 15 degrees`

With these commands sprites can

- ... move on the stage.
- ... be placed on the stage.
- ... turn into a direction.
**Task:** Think about what the commands mean. Combine them with event commands and see what happens.

Here you find some of the most important command blocks from the „Look“ section.

With the code blocks above you can change the look of sprites or backdrops.

With the code blocks below you can write texts, or rather organize or hide and show sprites.
**Task:** Think about what the commands mean. Combine them with event commands and see what happens.

Here you will find some of the most important command blocks from the „Control“ section.

You can use these code blocks to repeat actions. They are called loops.

You can use these code blocks to influence the flow of your program.

Especially with the commands “if - then” your sprites can do different things.
Task: Program a conversation between two characters (dialogue).

The code block "stop" ends your program. You have to be careful if and where you insert it.
Task: Bring the bat to the colored dots. Which values / numbers do you have to provide?

Scratch uses a coordinate system with two orientations.

The X-axis is used for all horizontal movements (right / left).

The Y-axis is vertical for all movements (up / down) used.

The center (X: 0 / Y: 0) is in the center of the stage.

When you move a sprite across the stage, Scratch automatically adjusts the new values in the motion blocks.
CHANGED MENU BAR FOR ACCOUNTS

Menu Bar

Untitled-2

Here you can give your project a project name.

Share

Here you can share projects with others.

See Project Page

Here you can edit the page on which your project is shown.

You need an overview of your projects or information about your account? Then use these two buttons.