

## Aktivnost v Scratchu

### Kaj je Scratch in kako ga lahko prenesete?

Scratch je programski jezik, ki ima svoje samostojno razvojno okolje. Je brezplačen in enostaven za uporabo. S pomočjo Scratcha se lahko učenci seznaniijo z različnimi vrstami programiranja, kot so:

- **Paralelno programiranje:** Programi, ki se izvajajo vzporedno.
- **Objektno usmerjeno programiranje:** Vsak objekt se programira posebej, na primer liki ali ovire.
- **Programiranje na podlagi dogodkov:** Objekt se premika na podlagi dogodkov, na primer ob pritisku na gumb.

Scratch lahko uporabljate na spletu ali kot samostojno aplikacijo na računalniku/tablici.

Spodaj so navedeni načini prenosa ustreznega programa:

- **Spletna različica:** Scratch lahko uporabljate na povezavi:

<https://scratch.mit.edu/projects/editor/>

- **Namizna aplikacija:** Scratch lahko prenesete na svoj računalnik s povezave:

<https://scratch.mit.edu/download>

Sledite navodilom za vaš operacijski sistem.

Aplikacijo lahko prenesete tudi iz Microsoft Store ali Mac App Store.

- **Mobilne naprave (telefon/tablica):** Scratch lahko prenesete iz trgovine Google Play ali App Store na svoji napravi. (**Google Play**, **App Store**, itd.).

### Program pripovedovanja o ženskah v znanosti

#### Cilji aktivnosti

Učenci:

- bodo sodelovali v skupinah,
- bodo spoznali osnove programiranja,
- bodo razvijali algoritmično razmišljanje,
- bodo razumeli, kako lik lahko govori,
- se bodo naučili poiskati dejstva na spletu.

#### Orodja in materiali, ki jih potrebujete

- Tablica ali računalnik (prenosni/namizni) z že nameščeno aplikacijo Scratch.
- Internetna povezava za iskanje informacij na spletu ali knjige s ključnimi informacijami. Učenci lahko informacije poiščejo tudi doma za domačo nalogo pred izvedbo aktivnosti.

#### Opis aktivnosti

## Uvod

- Učence uvedite v temo z vprašanji, kot so: *Katera znanstvenica ti je znana iz zgodovine?*
- Predstavite učencem program Scratch.

## Aktivnost

**Cilj te aktivnosti je ustvariti program pripovedovanja zgodbe o znanstvenici (ženski na področju znanosti ali tehnologije). Primer temelji na zgodbi o Marie Curie.**

- Učenci se razdelijo v skupine po dve do štiri osebe, vsaka skupina izbere eno znanstvenico (Marie Curie, Grace Hopper, Katherine Johnson, Hedy Lamarr, Ada Lovelace, itd.)
- Najprej poiščejo dejstva o izbrani ženski.
- Poiščejo lahko sliko ali lik, ki ga bodo uporabili kot pripovedovalca zgodbe.
- Lahko dodajo slike kot ozadje za svojo zgodbo (ni obvezno).
- Uporabijo lahko gibanje za bolj interaktivno pripoved (ni obvezno).
- Lahko ustvarijo ozadje z navdihujočim citatom izbrane osebe (ni obvezno).

Osnovni program lahko najdete na spodnjih slikah.

## Navodila za lik pripovedovalca v Scratchu:

The script is designed for a character to tell the story of Marie Curie. It begins with a 'when clicked' event, followed by a 'go to x: 155 y: -35' block and a 'point in direction 90' block. The character then 'show's and 'switches backdrop to Warsaw'. A series of 'say' blocks with 8-second durations follow, containing the following text: 'Hello! My name is Maria Skłodowska-Curie. You may also know me as Marie Curie. I was born in Warwaw, Poland in 1867.', 'From a young age, I was fascinated by science, but as a woman, I was not allowed to attend university in my own country.', 'To pursue my education, I moved to Paris, where I studied physics and mathematics at the Sorbonne.', 'In Paris, I met Pierre Curie, a brilliant physicist. We shared a love for science, and soon, we married and worked side by side in our research.', 'My greatest discovery came when I studied a mysterious energy that some materials emitted.', 'Through my experiments, I discovered two new elements: polonium, which I named after my homeland, and radium.', 'I was the first woman to ever win a Nobel Prize—in Physics, in 1903, alongside Pierre and Henri Becquerel.', 'Later, in 1911, I won a second Nobel Prize, this time in Chemistry, for my work on radium and its properties.', and 'To this day, I remain the only person to have won Nobel Prizes in two different sciences'. The script then 'switches backdrop to Lab', 'glides 2 secs to x: 0 y: -35', and continues with 'say' blocks: 'During World War I, I developed mobile X-ray units, called 'Little Curies', to help doctors treat wounded soldiers on the battlefield.', 'My research paved the way for many medical advancements, including cancer treatments using radiation therapy.', 'I devoted my life to science, and though my exposure to radiation ultimately harmed my health, I do not regret my work.', 'I believed that science should be used to benefit humanity, and that knowledge belongs to everyone', 'To young women in science, I say:', 'Be curious', 'Be determined', and 'and never let anyone tell you that you cannot achieve greatness'. Finally, it 'switches backdrop to υπόβαθρο2' and 'hide's the character.

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when clicked
go to x: 155 y: -35
point in direction 90
show
switch backdrop to Warsaw
say Hello! My name is Maria Skłodowska-Curie. You may also know me as Marie Curie. I was born in Warwaw, Poland in 1867. for 8 seconds
say From a young age, I was fascinated by science, but as a woman, I was not allowed to attend university in my own country. for 8 seconds
switch backdrop to Paris
glide 2 secs to x: -155 y: -35
point in direction -90
say To pursue my education, I moved to Paris, where I studied physics and mathematics at the Sorbonne. for 8 seconds
say In Paris, I met Pierre Curie, a brilliant physicist. We shared a love for science, and soon, we married and worked side by side in our research. for 8 seconds
switch backdrop to Lab
say My greatest discovery came when I studied a mysterious energy that some materials emitted. for 8 seconds
say Through my experiments, I discovered two new elements: polonium, which I named after my homeland, and radium. for 8 seconds
switch backdrop to Nobel
glide 2 secs to x: 0 y: -35
say I was the first woman to ever win a Nobel Prize—in Physics, in 1903, alongside Pierre and Henri Becquerel. for 8 seconds
say Later, in 1911, I won a second Nobel Prize, this time in Chemistry, for my work on radium and its properties. for 8 seconds
say To this day, I remain the only person to have won Nobel Prizes in two different sciences for 8 seconds

switch backdrop to Lab
glide 2 secs to x: 155 y: -35
point in direction 90
say During World War I, I developed mobile X-ray units, called 'Little Curies', to help doctors treat wounded soldiers on the battlefield. for 8 seconds
say My research paved the way for many medical advancements, including cancer treatments using radiation therapy. for 8 seconds
say I devoted my life to science, and though my exposure to radiation ultimately harmed my health, I do not regret my work. for 8 seconds
say I believed that science should be used to benefit humanity, and that knowledge belongs to everyone for 8 seconds
say To young women in science, I say: for 8 seconds
say Be curious for 2 seconds
say Be determined for 2 seconds
say and never let anyone tell you that you cannot achieve greatness for 5 seconds
switch backdrop to υπόβαθρο2
hide
  
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