

Instructor's Guide Scratch (6-8yo)

Our Learning Philosophy

Develop Mindsets

Fearless Exploration: Encourage them to explore and discover solutions on their own

Perseverance: Encourage them to try, experiment, and praise their success

Collaboration: Teach them to respect different opinions, and start by respecting theirs

Creative Expression: Encourage them to break the boundaries of the assigned challenges

Be Honest

Don't pretend to know something that you don't. It's ok to say "I don't know, let's find out".

Don't pretend to not know something that you do. It's also ok to say "I know, but I'll like you to try yourself."

Learn Together

There are no experts. Only learners. You're not there to provide answers, you're there to help them find their own.

Have Fun

Even if all everything fails, let's have fun failing!

MONDAY

1 Hour

Programme

Getting Started

- Explore Scratch
- Share what you've found!

Objectives

Instill the courage to explore, discover, and try new things without hand-holding.

Activities

- Introduce yourself. Keep it short. You'll do this again later in more details.
- Discuss class rules with kids.
- Introduce Scratch Slide 2.

- Show the students how to login. (Slide 3)
- Distribute the login ID and password. Students may use their own account if they already have.

- Encourage the students to go wild! Assure them that nothing is gonna to break.
- Move around, ask the students to show you what they've discovered. Challenge them to to discover more. (eg. if they made the cat move, challenge them to make it speak and sing).
- Get selected students to showcase what they have discovered. Don't leave the showcase to the end; it'll get too long and boring. Spread it out.

2 Hours

Programme

Showcasing You!

- Introduce yourself and a friend with Scratch
- Actions and Sequencing

Objectives

Ice-breaker. Get to know others. Basic sequencing and events in Scratch.

Activities

- Introduce yourself again. This time using Scratch. (Intro.sb2)
- Show the students your Scratch program. Explain how it works. You may use slides 5 to 11.

- Ask them to get to know each other. They should find at least 2 friends (...can be more) and find out at least 1 interesting things about each of them.
- They should then create a Scratch program that introduce 3 interesting thing about themselves, as well as introduce their 2 (...or more) friends. Allow 2 mins per student.

2 Hours
Programme
<p>Coming to Life</p> <ul style="list-style-type: none"> - Directors and Actors - Movements - Sound - Animation
Objectives
<ul style="list-style-type: none"> - Understand that algorithms are just instructions and it doesn't just apply to computers - Understand the importance of being clear in your instructions - Understand that there are many ways to achieve the same outcome
Activities
<ul style="list-style-type: none"> - Play a real-life game. Nominate one student as the "Director" and another as the "Actor". - The actor will be blindfolded, and the director will give instructions to the actor to move and retrieve an object (...the actor won't know what the object is). Play a 2 - 3 rounds (...or until they start to look bored). - Explain that when we program a computer, we are giving it instructions, and that it must be clear. - Demonstrate Scratch program. Let them try it out, then issue the challenges. <ul style="list-style-type: none"> - "Day 1-1 (Meet and Greet 1).sb2" - "Day 1-2 (Meet and Greet 2).sb2" - "Day 1-3 (Mouse Pen).sb2")

TUESDAY

1 Hour

Programme

Interaction

- Learn about events
- User controls

Objectives

- Understand the concept of “events” and how they trigger something to happen.
- Understand that the above concept don’t just apply to computers.

Activities

Start with a simple game.

- Get everyone to gather in an empty area and form two groups. Each group should nominate one “director” and one “actor”.
- The “actor” must draw a shape on the whiteboard, but only the director knows what is the correct shape.
- The group is given 5 mins to discuss how they director and actor can communicate, but verbal communication is not allowed!
- Demonstrate Scratch program. Let them try it out, then issue the challenges.
 - “Day 2-1 (Basic Controls).sb2”

2 Hours

Programme

Raining Cats and Dogs

- Conditions and loops
- Parallelism

Objectives

- Learn how to use “if ... else ...” and loops to control a program.
- Understand that multiple scripts are running simultaneously.

Activities

- Demonstrate Scratch program. Let them try it out, then issue the challenges.
 - “Day 2-2 (Cats and Dogs 1).sb2”
 - “Day 2-3 (Cats and Dogs 2).sb2”

2 Hours
Programme
<p>Story Telling</p> <ul style="list-style-type: none"> - Using the image editor - Create and tell your own story - Sharing, critique, improvements
Objectives
<ul style="list-style-type: none"> - Collaborate, respect each other, accept criticism. - Use image editor
Activities
<ul style="list-style-type: none"> - Demonstrate how to use the image editor to edit background and sprites. - Group the students in groups of 3 to 4. - Each student should write the first part of a story. They can have any characters and any storyline, but only have 15 mins to create it. - The students should then rotate seats within their group, watch the story created by their team mate, and add on to the story. The previous student should not dictate what the new student should do, and the new student should not delete what the previous student had done. - Rotate until the students are back to their own seats. - Randomly select students to present their collaborative story. - Ask viewers to comment... <ul style="list-style-type: none"> - What can be improved. - What was confusing about the story. - What do you like about the story. - Remind students that there are no right answers. Everyone will have a different opinion on what works and what don't.

WEDNESDAY

1 Hour

Programme

Keeping Track
- Variables

Objectives

- Understand the concept of variables, and how one thing can represent another

Activities

- Demonstrate Scratch program. Let them try it out, then issue the challenges.
- “Day 3-1 (Cats and Dogs with Hearts).sb2”

2 Hours

Programme

Catch the mouse
- Movement and interactions
- Keeping score

Objectives

- Control sprites using mouse.
- Practice programing sprites movement and interactions
- Practice using variables

Activities

- Demonstrate Scratch program. Let them try it out, then issue the challenges.
- “Day 3-2 (Catch the mouse).sb2”
- “Day 3-3 (Catch the mouse with Taco).sb2”)

2 Hours
Programme
Working Together - Learning to collaborate - Interprocess communication
Objectives
- Collaborate, respect each other, accept criticism. - Communicate between sprites using “Broadcast”
Activities
<ul style="list-style-type: none"> - Demonstrate how to use broadcast to communicate between sprites. <ul style="list-style-type: none"> - “Day 3-4 (Broadcast).sb2” - Group the students in groups of 3 to 4. - Students should work together to plan out a story using pen and paper. - They should then work together on a single computer to create the story. - Each student may program only one sprite. - Randomly select students to present their collaborative story. - Ask viewers to comment... <ul style="list-style-type: none"> - What can be improved. - What was confusing about the story. - What do you like about the story. - Remind students that there are no right answers. Everyone will have a different opinion on what works and what don’t. <p>If there is sufficient time, do the review in the middle of the session, and let the students improve on their story after receiving comments.</p>

THURSDAY

1 Hour

Programme

~~This AND That?~~ (Amended)

Jump straight into the “Darkest Dungeon” game.

Objectives

- Practice the learned skills using a complex and full featured game.

Activities

- Demo each stage of the game, but don't show how it is done.
- Show the challenge slide and let the kids figure it out themselves.
- Encourage them to be creative in creating their maze and game characters.

2 Hours

Programme

Darkest Dungeon I

- Combining everything into a complex game

Activities

- Continue with darkest dungeon game

2 Hours

Programme

Darkest Dungeon II

- Improving the game with traps and monsters

Activities

- Continue with darkest dungeon game
- Remind students to think about what they want to create tomorrow..