DIGITAL DRAWING USING SKETCHPAD

BRIDGE COURSE

GRADE-4

PRIMARY PREVIEW

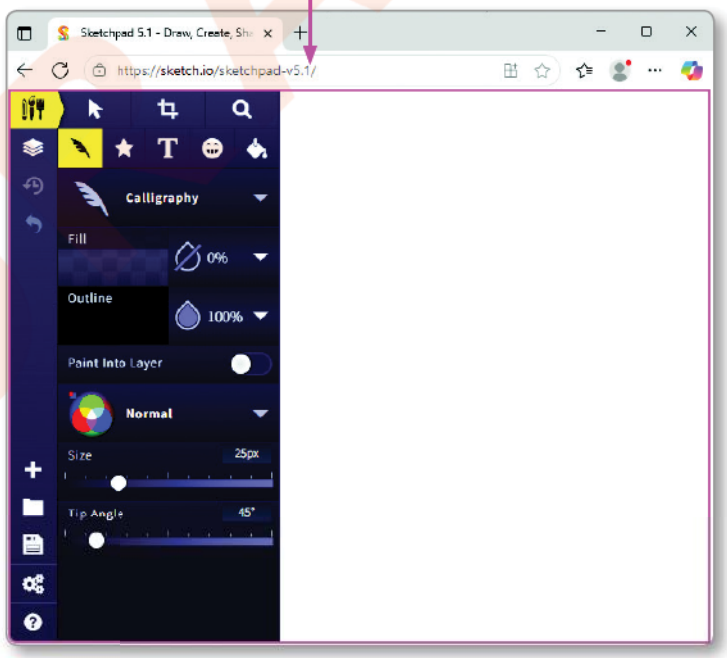
- Starting Sketchpad
- Tools
- Fill Colours
- Adding Text
- Components of Sketchpad Window
- Creating a New Canvas
- Drawing Shapes
- Saving the Canvas

STARTING SKETCHPAD

To open the Sketchpad, follow the given steps:

1 Open the Microsoft Edge web browser.

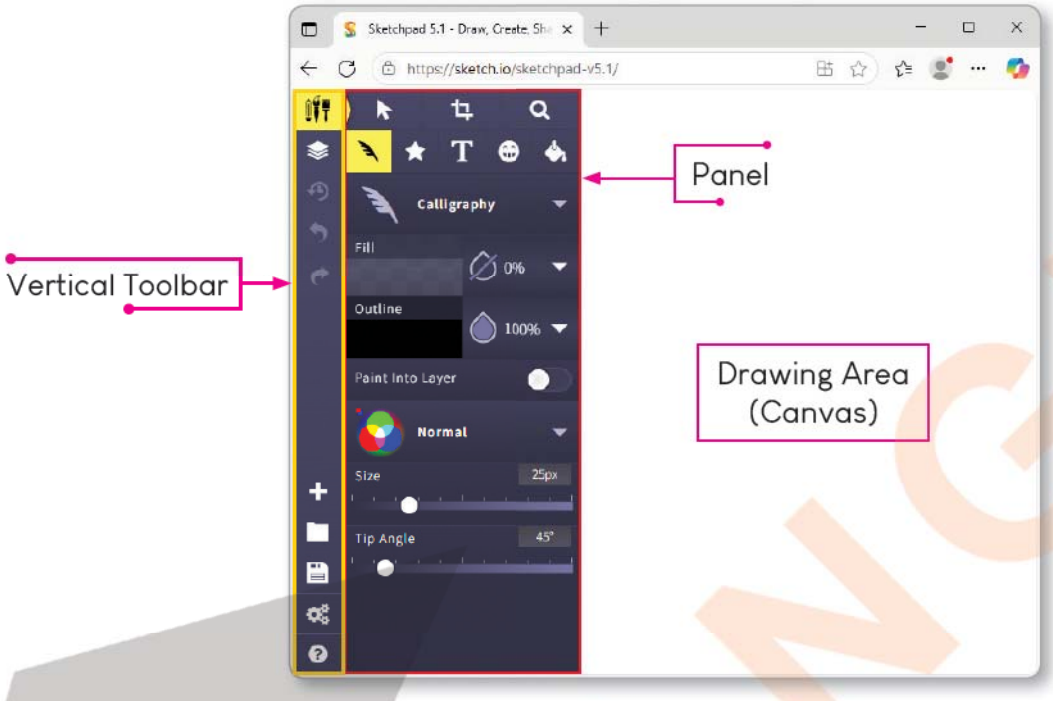
2 Type https://sketch.io/sketchpad-v5.1/ in the address bar and press the Enter key.



COMPONENTS OF SKETCHPAD WINDOW

When you open Sketchpad, the Sketchpad window will appear on your screen, providing a canvas where you can start drawing and designing.

Tools like pens, colours and shapes are available for creating and editing your drawing.



The main components of a Sketchpad window are as follows:

- **Vertical Toolbar:** It is located on the left side of your Sketchpad screen. The tools under the Vertical Toolbar are as follows:

Tool Name	Icon	Description
Tools		It contains various tools for drawing and colouring pictures, helping you create and edit your artwork.
Layers		It shows different parts of the drawing in the form of layers, allowing you to organise and manage your work more easily.
History		It keeps track of everything done while drawing. To go back to old work, click on it.
Undo		It is used to reverse the last action.
Redo		If anything is undone, use Redo to do it again.

Tool Name	Icon	Description
New		It is used to open a new canvas to start a fresh drawing.
Open		It is used to open saved drawings.
Export		It helps to save, share or print the drawing.
Settings		It saves the files on Google Drive and changes the language or theme of Sketchpad.
User Guide		It guides you on how to use Sketchpad's tools.

- **Drawing Area (Canvas):** It is a blank white area where you can draw, sketch, create shapes and experiment with different colours and designs.
- **Panel:** When you click a button in the vertical toolbar, a panel will appear. This panel has different options for the button selected from Toolbar.

TOOLS

The **Tools group** contains different tools for drawing. When you click it, a panel appears. It contains brushes, shapes, clipart, zoom, select, text and more. Some of these tools are as follows:

Tool Name	Icon	Description
Brushes		It is used to for freehand drawings. The default brush in Sketchpad is Calligraphy.
Eraser		It is used to erase or remove unwanted parts of a drawing.
Shapes		It is used to draw shapes such as stars, squares and circles. The default shape in Sketchpad is a star.
Text		It is used to add text to a drawing.
Fill		It is used to fill areas of a drawing with colours or patterns. It is of two types – vector fill and pixel fill.
Clipart		It is used to insert ready-made pictures, shapes and illustrations into a drawing.

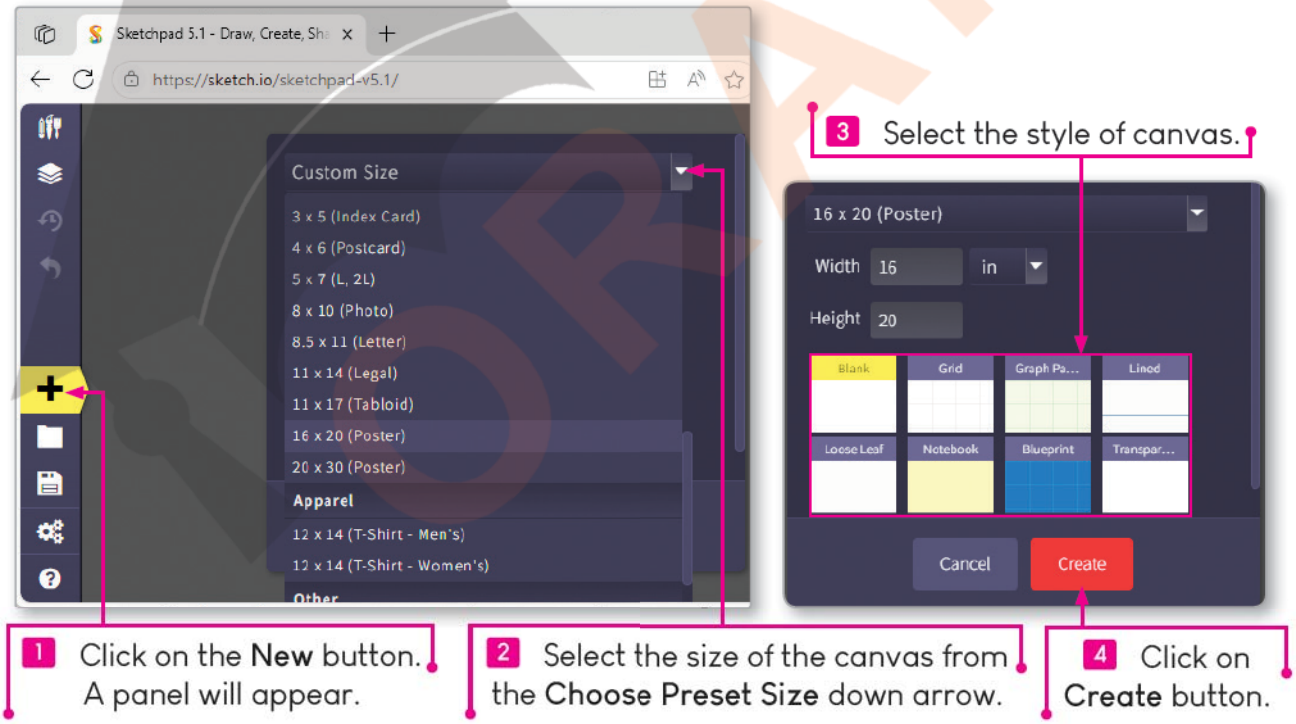
Tool Name	Icon	Description
Select		It is used to move, rotate, scale, delete and reorganise the layers of a drawing.
Crop & Resize		It is used to adjust the size of a drawing.
Zoom		It is used to zoom in for viewing small details or zoom out to see the entire picture.

RAPID RECALL Tick (✓) if you know this.

1. In Sketchpad, you can design your own posters.
2. The Tools group contains tools for drawing.

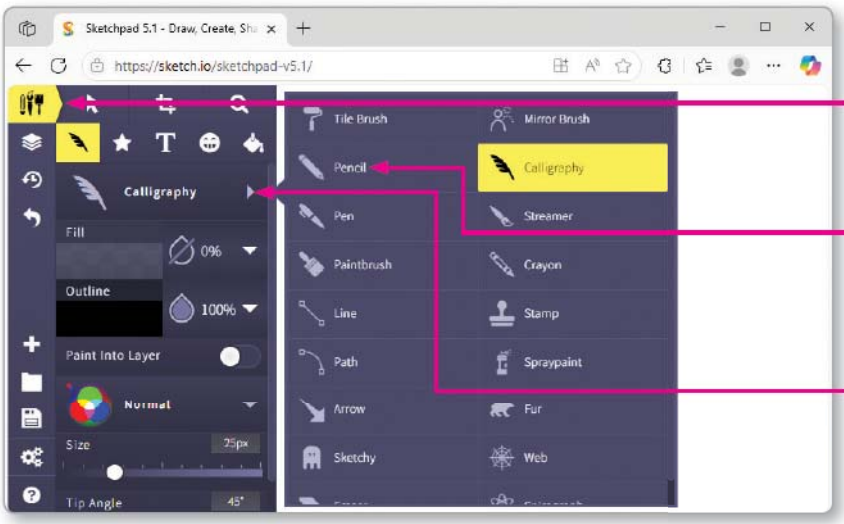
CREATING A NEW CANVAS

You can create a new canvas in Sketchpad as per your requirement. To create a new canvas, follow the given steps:



FREEHAND DRAWING

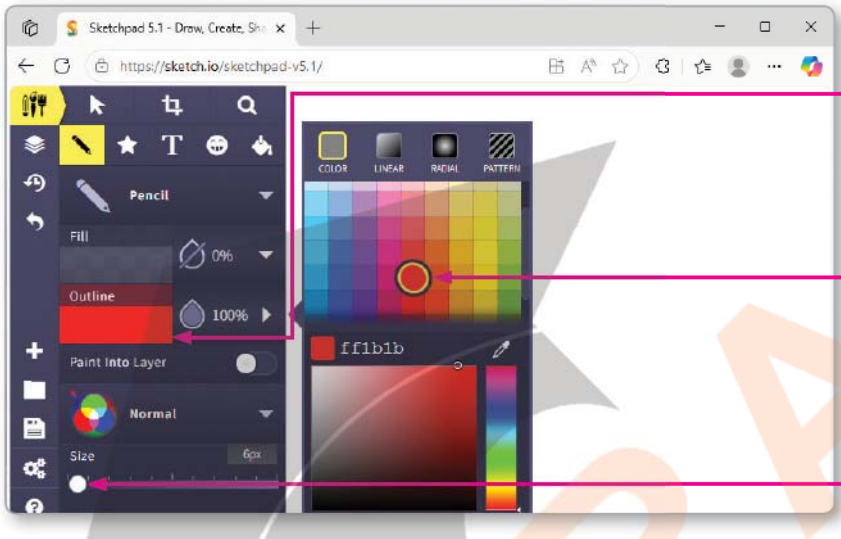
You can draw anything you like – trees, flowers, fruits, vegetables and much more – using the **Pencil Tool**. To draw a flower using the Pencil Tools, follow the given steps:



1 Click on the **Tools** option.

3 Select the **Pencil Tool** from the available options.

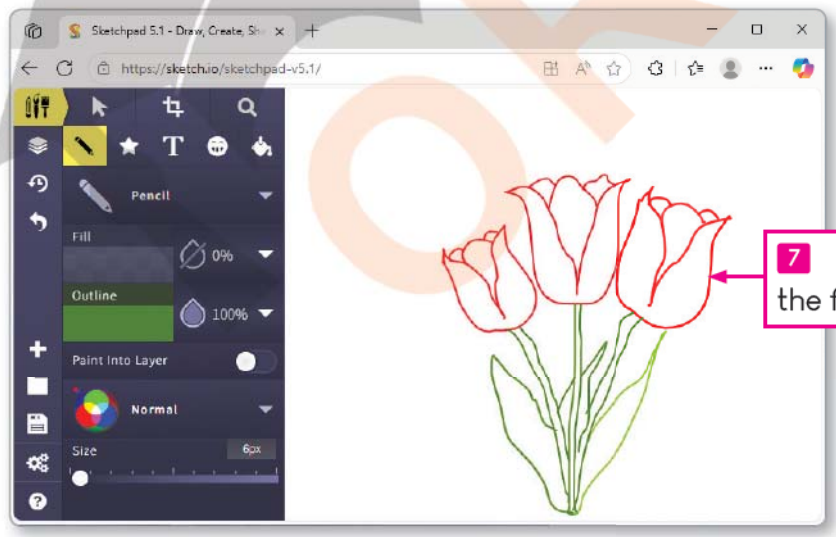
2 Click on the **Choose Brush** option. A sub-menu will appear with different brush options.



4 Click on the **Outline** option. A colour palette will appear.

5 Select **Red colour** for the outline of the petals from the available option.

6 Set the size of the brush.



7 Drag the mouse to draw the flower in the drawing area.

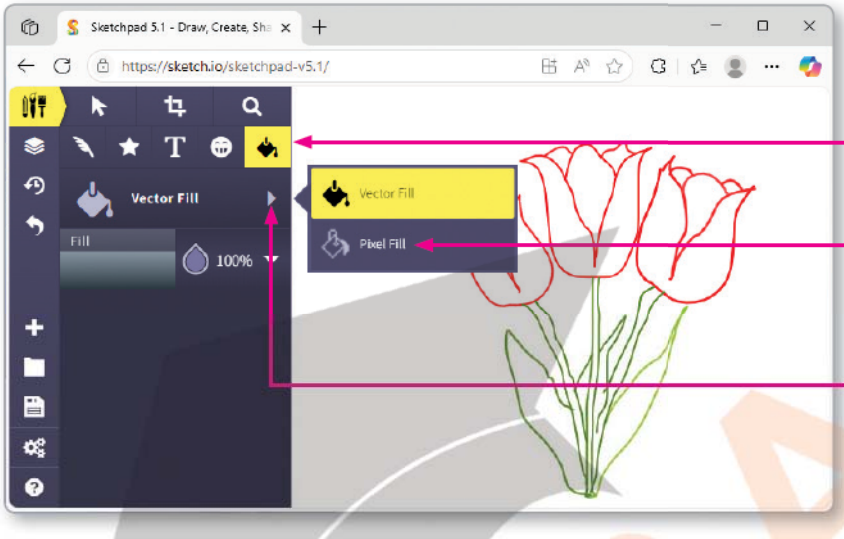
If you make a mistake while drawing, you can use the **Eraser** tool from the **Choose Brush** option to remove the unwanted part.

FILL COLOURS

You can enhance your drawing by filling colours in it. Colours makes your artwork more beautiful. In Sketchpad, you can do this using the Fill tool. There are two types of fill tools in Sketchpad: **Pixel Fill** and **Vector Fill**.

- **Pixel Fill** lets you colour hand-drawn pictures made using the pencil or brush tool.
- **Vector Fill** lets you add background, colours, patterns or gradients.

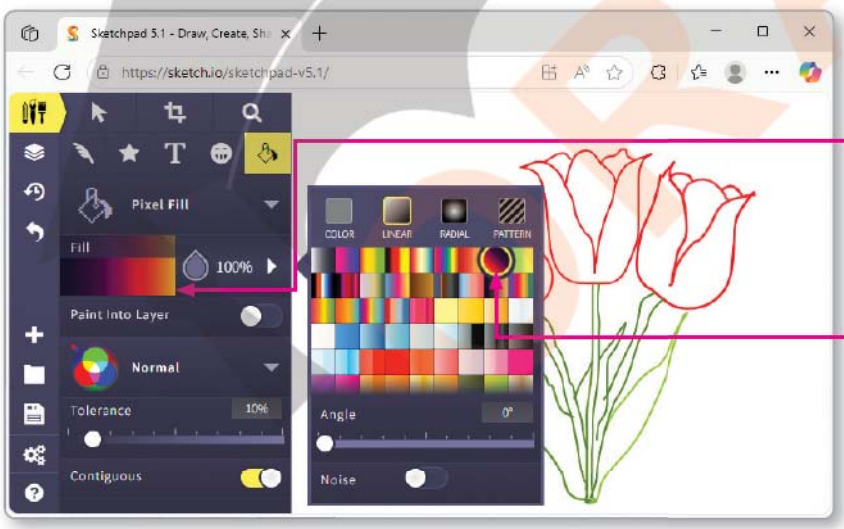
To fill colour in your drawing, follow the given steps:



1 Click on the **Fill** tool.

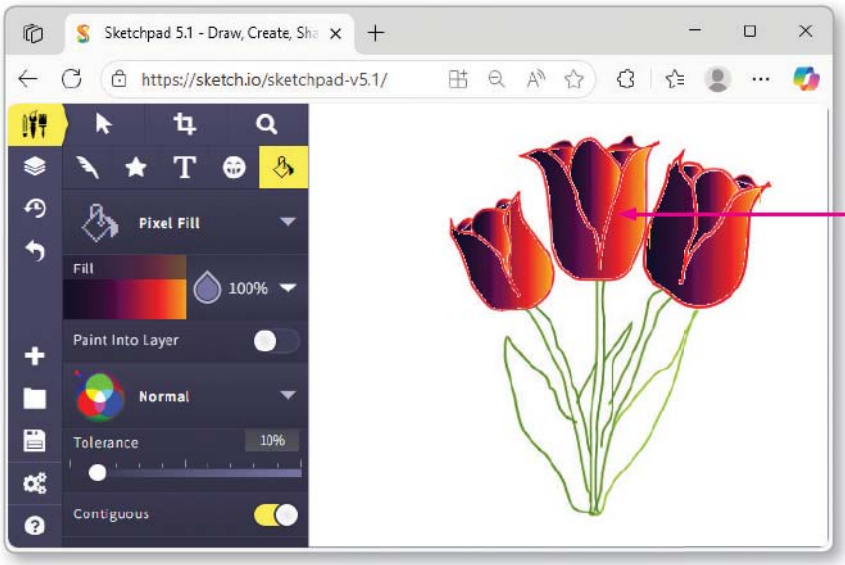
3 Select the **Pixel Fill** tool.

2 Click on the **Choose Fill Editor** option to select the fill type.



4 Click on the **Set Fill** option. A colour palette will appear with different fill options.

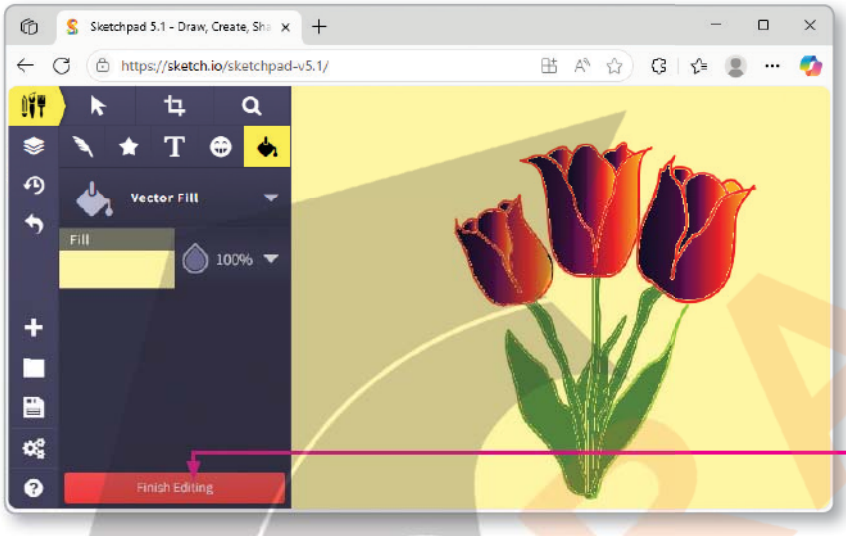
5 Select a **colour** of your choice to fill the flower.



6 Click on the flower to apply colour.

Similarly, fill the colour in the stem and leaves of your artwork.

You can follow similar steps to fill the background or canvas by selecting **Vector Fill** option instead of **Pixel Fill**.



LIVE LEARNING

Create a birthday card using Sketchpad and add a text message too.

7 Click on **Finish Editing** option to finalise your artwork.

Your beautiful artwork is ready.

Ask AI AGENT

Draw the sun setting or rising over the horizon, with shades of pink, purple and orange blending into the sky in Sketchpad.

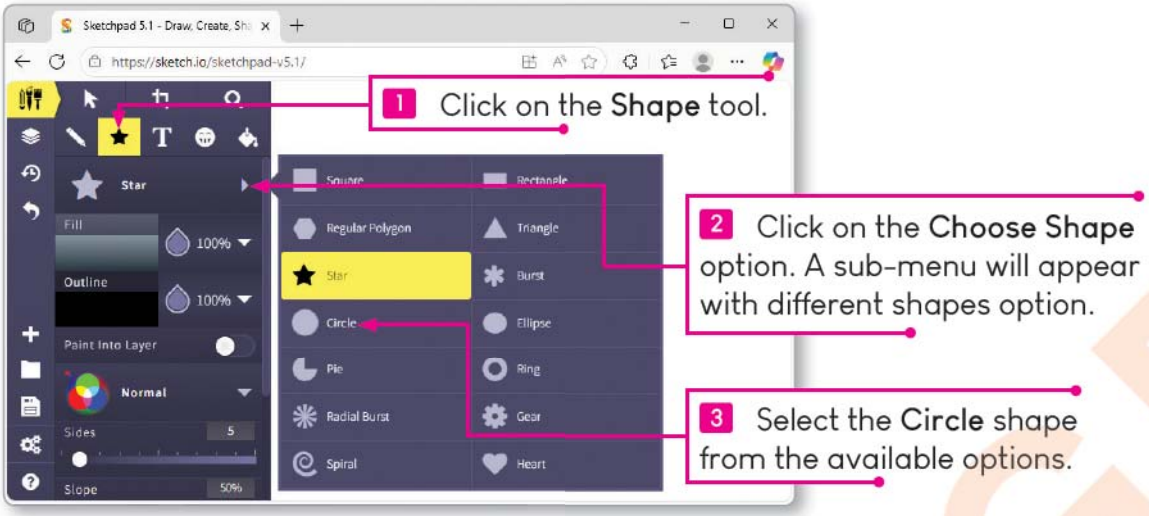
\+ | Study

Think Tank

What if you could build your dream house in Sketchpad? What special rooms and features would it have and who would live there with you?

DRAWING SHAPES

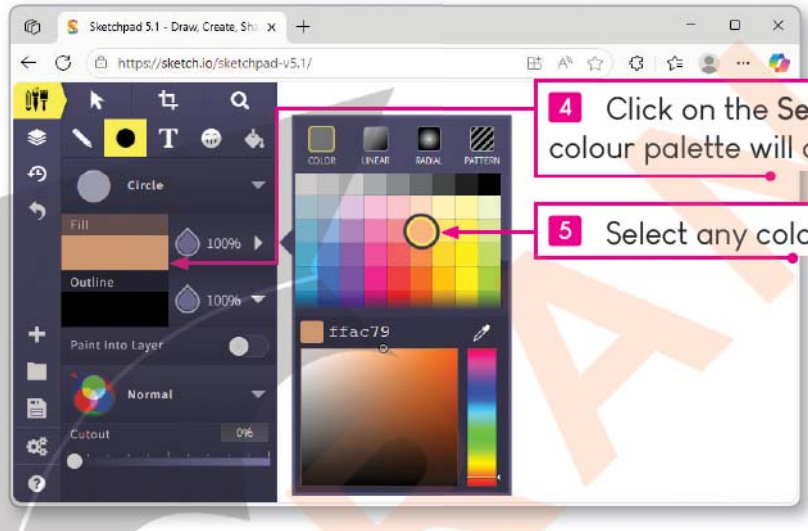
You can use the **Shape tool** to draw different shapes. It can be a rectangle, a circle, a pentagon, a star and much more. To draw a circle, follow the given steps:



1 Click on the **Shape** tool.

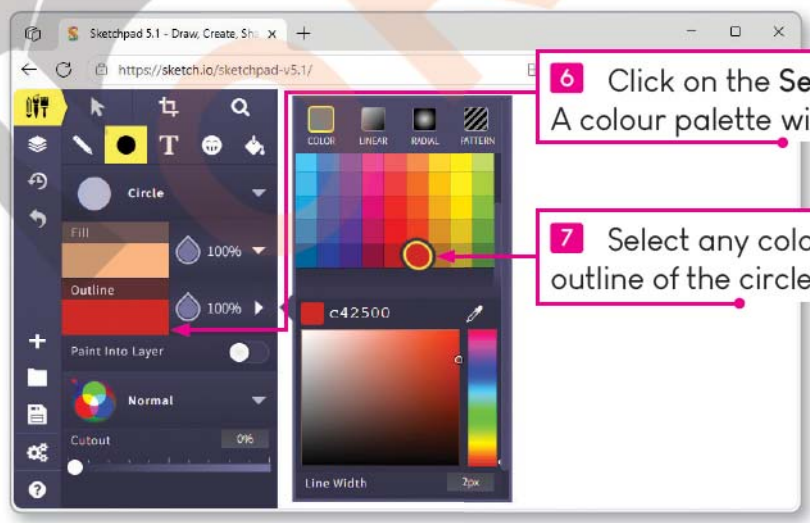
2 Click on the **Choose Shape** option. A sub-menu will appear with different shapes option.

3 Select the **Circle** shape from the available options.



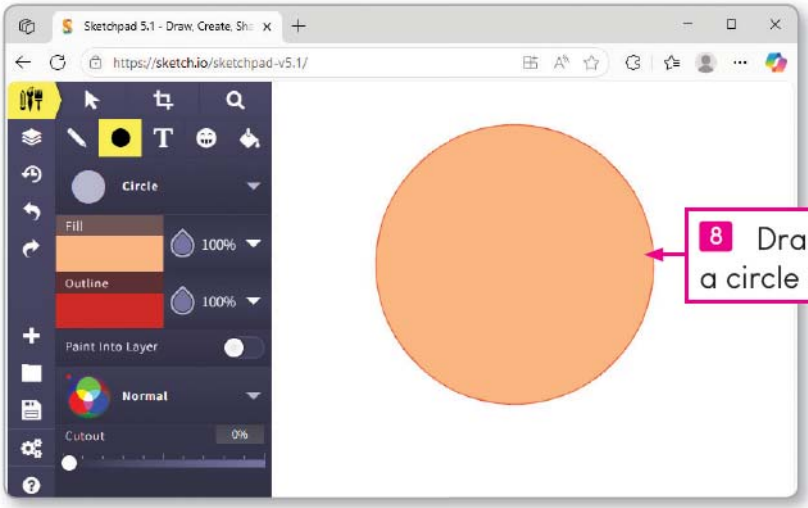
4 Click on the **Set Fill** option. A colour palette will appear.

5 Select any colour to fill the circle.



6 Click on the **Set Stroke** option. A colour palette will appear.

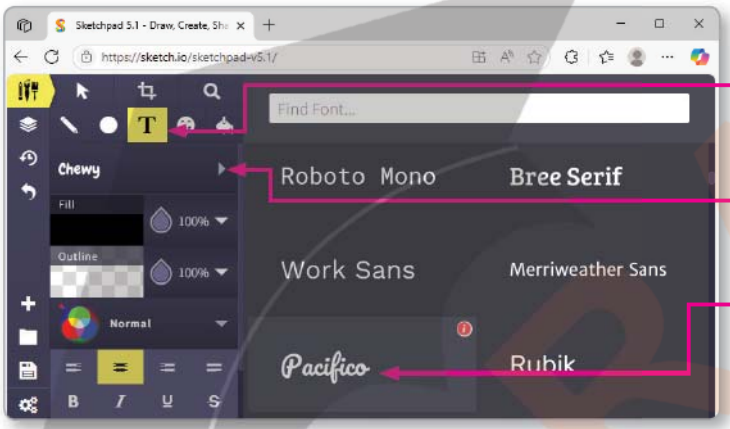
7 Select any colour for the outline of the circle.

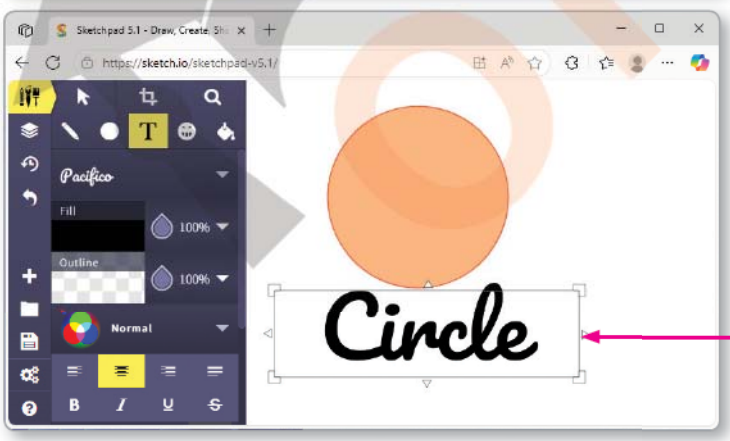


Similarly, you can draw other shapes as well.

ADDING TEXT

You can add words or messages to your drawing using the **Text tool**. It lets you place text anywhere on the canvas – just like stickers. Sketchpad offers a wide range of fun fonts to choose from. To add the text, follow the given steps:





SHORT SIGN

To make text bold:
Ctrl + B
To Italicise the text:
Ctrl + I

FACT File

Sketchpad offers over **800 fonts** to add stylish text.

RAPID RECALL Tick (✓) if you know this.

1. You can use the Eraser tool to remove unwanted parts. ◯
2. The Shape tool can be used to draw different shapes. ◯

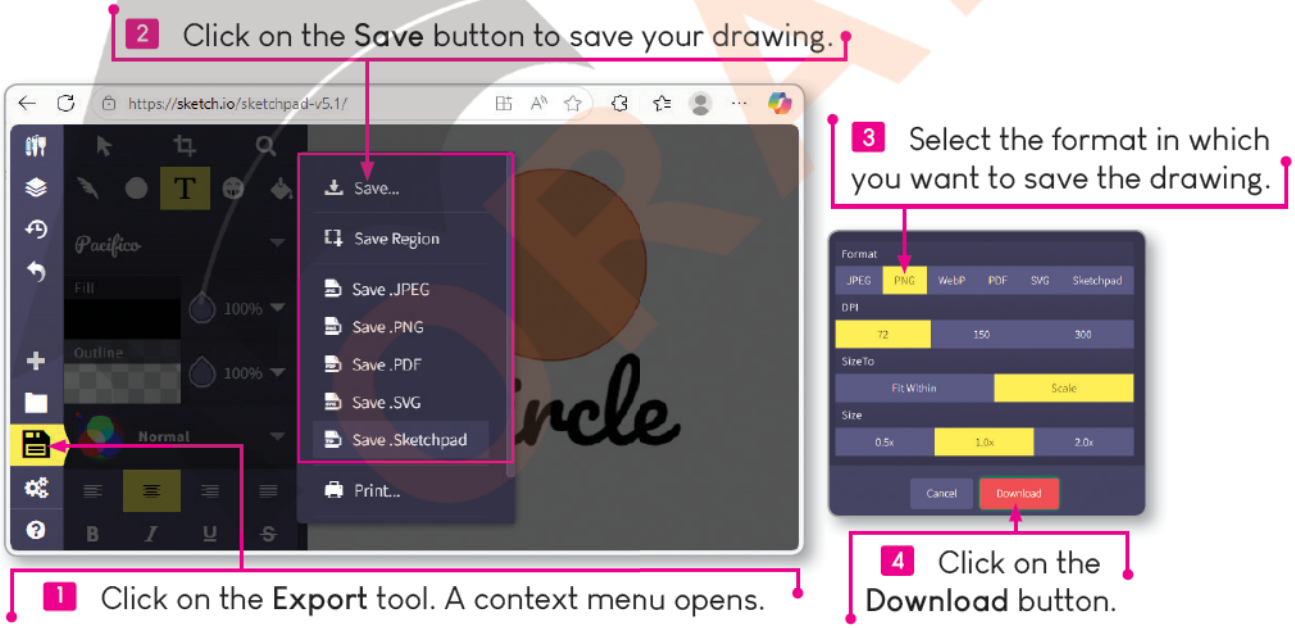
SAVING THE CANVAS

Sketchpad lets you save your artwork in many formats like – **JPEG, PNG, PDF, SVG** and even as a reloadable Sketchpad file. You can also print your artwork or share it with others. You will find all these options are found under the Export tool.

HINTS & HACKS

You can organise your artwork using layers for easier editing in Sketchpad.

To save your drawing follow the given steps:



ART INTEGRATION ACTIVITY

21st Century Skills #Creativity

Create a custom label on Sketchpad by writing your name and school name inside a shape. Add decorations and save your work to share with the class.

TECH TERMS

- **Colour palette:** A range of colours available for use in a design or artwork, often organised for easy selection.
- **Freehand:** Drawing or writing done without the use of guides or tools, relying solely on hand movements.

REWIND RUN

- The Tools group contains different tools for drawing.
- Canvas is a blank white area where you can draw, sketch and create shapes.
- The Fill tool gives you lots of colour choices! You can choose a solid colour, a pattern or even use linear and radial gradients to make your artwork look amazing.
- The Shape tool is used to draw different shapes like star, squares, circle and more.
- Sketchpad lets you save your artwork in many formats, such as JPEG, PNG, PDF, SVG and more.

SAY HELLO TO SCRATCH 3

BRIDGE COURSE

GRADE-4

PRIMARY PREVIEW

- Introduction to Scratch
- Components of a Scratch Window
- Adding a Sprite and a Backdrop
- Saving a Project
- Getting Started With Scratch
- Blocks in Scratch
- Creating a Scratch Project
- Opening an Existing Project

INTRODUCTION TO SCRATCH

Scratch is a free and fun way to learn coding. You can make your own stories, games and cartoons by snapping colourful blocks together. It's easy to use and helps you see how computers follow instructions without needing to type words.

FACT File

Scratch was created by **Mitchel Resnick** at the **MIT Media Lab** in 2007.

ADVANTAGES OF SCRATCH

Scratch is the preferred language for young learners for the following reasons:

- Commands are block-based, so there is nothing to remember.
- Blocks can be dragged and snapped to build programs.
- They fit together like puzzle pieces.
- Each block has its own colour and group for easy finding.
- Projects can be shared with others.

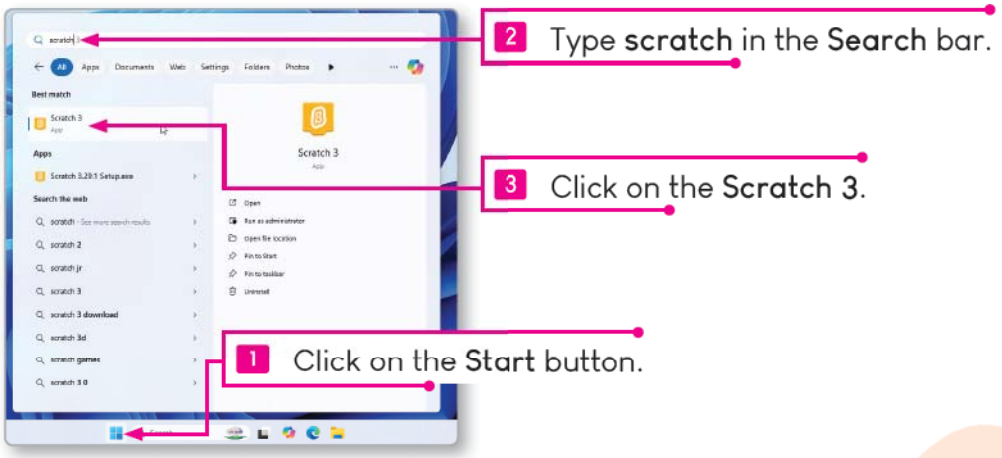
Think Tank

Suppose, you have to code an environmental conservation game in Scratch where players work to protect endangered species and preserve ecosystems. What environmental challenges would they tackle and how would they make a positive impact?

GETTING STARTED WITH SCRATCH

To begin creating stories, games and animations, open Scratch.

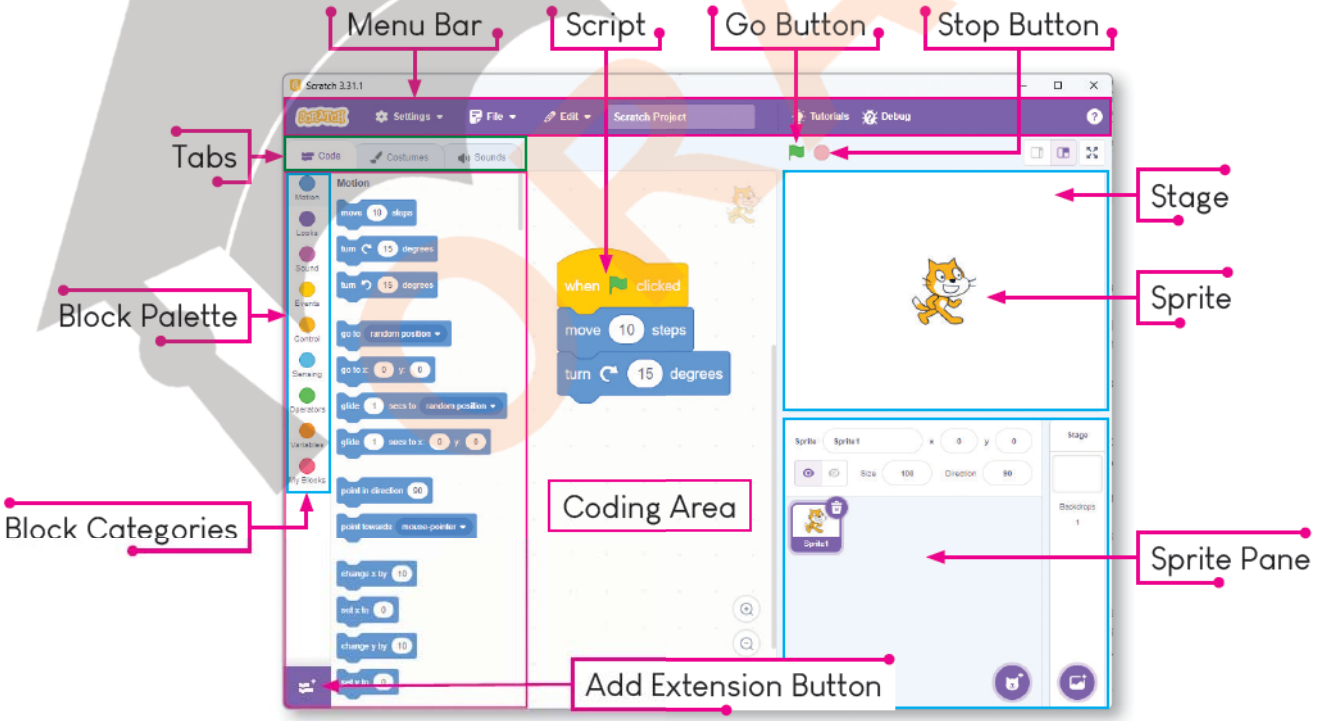
To open Scratch, follow the given steps:



You can also use Scratch online by visiting the website https://scratch.mit.edu/.

COMPONENTS OF SCRATCH WINDOW

When Scratch is opened, the main window appears with the workspace. It has different components. Each of these components has a different role in creating projects.



Let us learn about the components:

- **Menu Bar:** This bar shows options like Settings, File, Edit, Tutorials and Debug. The **File** option is used to save or reopen your project. Tutorials gives video lessons to learn from.
- **Tabs:** Three tabs are available:
  - **Code:** It contains the block categories and blocks.
  - **Costumes:** It is used to change the appearance of sprites and backdrops.
  - **Sounds:** It is used to add or change sounds.
- **Block Palette:** It is the area where all coding blocks are found.
- **Block Categories:** It contains the groups of blocks sorted by their function.
- **Sprite:** It is the character in a project. The default sprite is a cat.
- **Script:** It is a set of blocks joined together to tell a sprite what to do.
- **Stage:** This is the place where projects run, like a theatre stage with sprites and backdrops.
- **Sprite Pane:** It shows details of sprites and backdrops. Sprites can be added, deleted, resized or renamed here.
- **Coding Area:** Space where blocks are dragged and joined to make a program.
- **Go Button and Stop Button:** These are the buttons to start or stop a program.
- **Add Extension Button:** It provides extra blocks and tools beyond the basic set.

QR QUEST

Visit the given link to learn more about Scratch Window:

https://www.youtube.com/watch?v=CEnEq4FIxPA

Answer the given questions:

1. Name two components of the Scratch window.
2. What is the purpose of the Scripts Area in Scratch?

RAPID RECALL

Tick (✓) if you know this.

1. You can create your own stories and games in ScratchJr.
2. The characters in your project are called sprites.

BLOCKS IN SCRATCH

Blocks in Scratch are like jigsaw puzzle pieces. They connect vertically to create code. Each block has a unique shape and slot. Simply drag them into the coding area to build a script.

MOTION BLOCKS

Motion blocks let you control a sprite's movement on the stage, allowing it to move, turn and change direction. They are blue in colour.

Some basic motion blocks used in Scratch and their descriptions are as follows:

This block makes the sprite move forward and backward, allowing it to travel in both directions.

For example: Move 10 steps moves the sprite forward by 10 steps or Move -10 steps moves the sprite backward by 10 steps.

This block makes the sprite turn to the right (clockwise), rotating in a circle.

This block makes the sprite turn to the left (anticlockwise), rotating in the opposite direction.

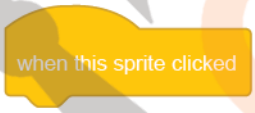
EVENTS BLOCKS

Events blocks run the script on the stage and control the start of scripts. Without an Events block, no program will run. They are light yellow in colour.

Some of the commonly used Event Blocks with their description are as follows:

This block starts the script when the green flag is clicked. It is used to begin a project.

This block starts the script when a chosen key on the keyboard is pressed.

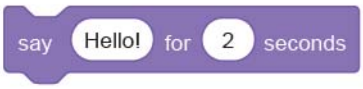


This block runs the script when the sprite is clicked.

LOOKS BLOCKS

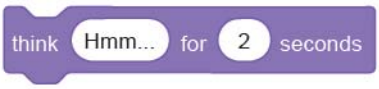
Looks blocks changes how a sprite looks or what it says on the stage. They are purple in colour.

Some commonly used Looks blocks and their descriptions are as follows:



This block makes the sprite say something in a speech bubble for a set number of seconds.

This block makes the sprite say something in a speech bubble.



This block makes the sprite show a thought bubble with the given text for a set number of seconds.

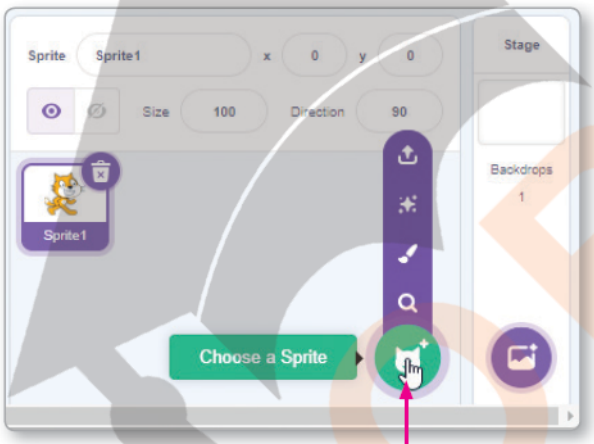
ADDING A SPRITE AND A BACKDROP

Sprites and backdrops are key parts of a Scratch project. They make the project look lively and interesting, help in telling a story and keep the viewer engaged. Let's learn how to add a sprite and backdrop.

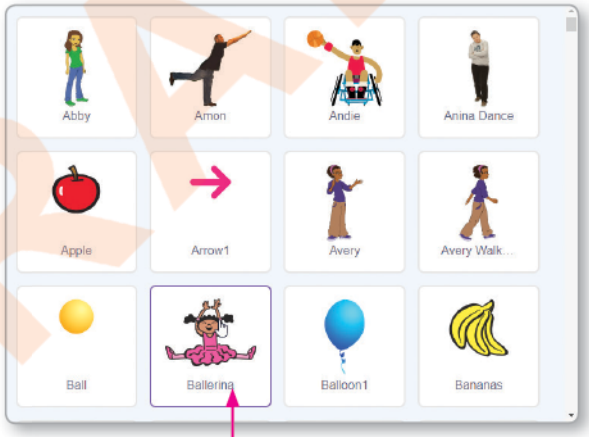
ADDING A SPRITE

Adding a sprite means placing a character, object or element into the project. After adding it, use code blocks to modify its looks, movement and behaviour.

To add a sprite, follow the given steps:



1 Click on the **Choose a Sprite** option.



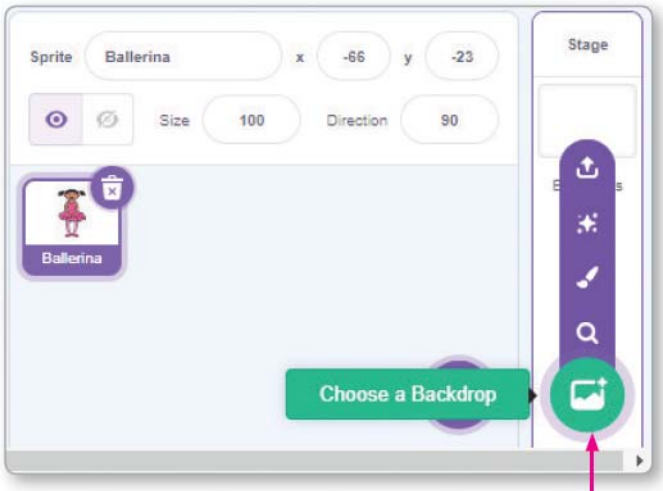
2 Select the desired sprite from the library.

HINTS & HACKS

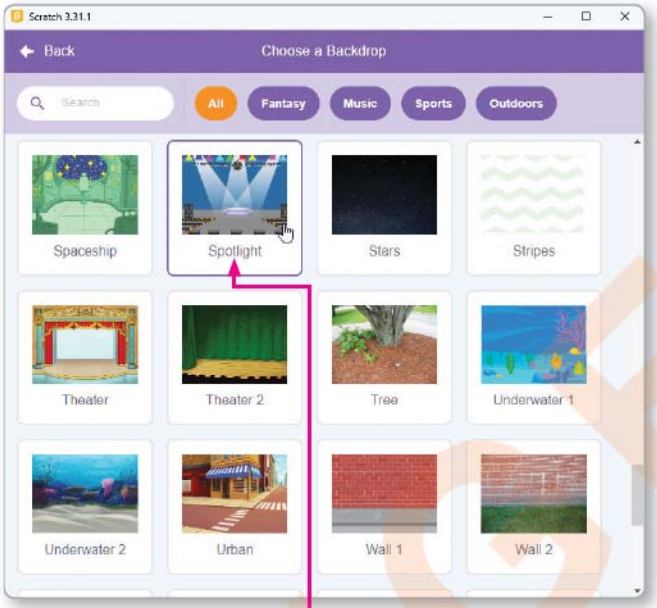
To change the size and direction of the sprite, enter the desired values in the **size** box and **Direction** box in the **sprite Info pane**.

ADDING A BACKDROP

Placing a background image or scene to the project is known as adding a **backdrop**. The backdrop creates the scene or setting in which sprites can interact. To add a backdrop, follow the given steps:

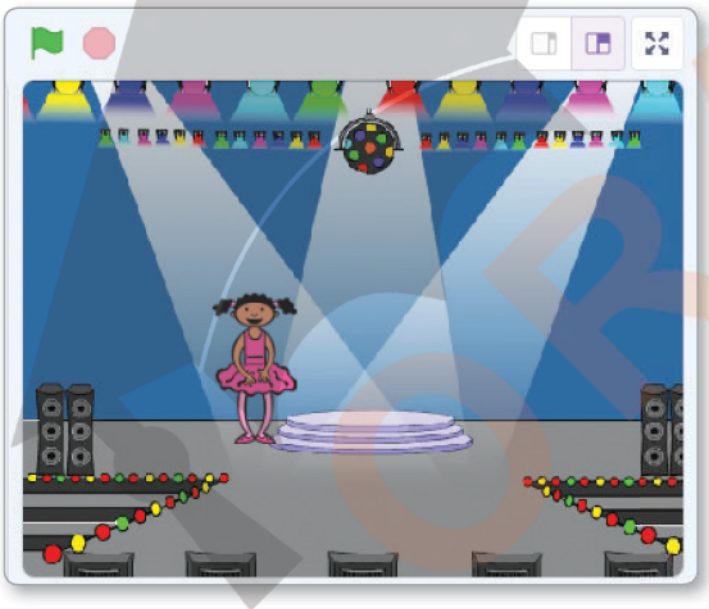


1 Click on the **Choose a Backdrop** option.



2 Select the desired backdrop from the library.

Your stage will look like this:



HINTS & HACKS

You can also set your image as the background using the **Upload Backdrop** option.

LIVE LEARNING

Open Scratch and add a sprite of a chick and a hen in a farm backdrop.

RAPID RECALL

Tick (✓) if you know this.

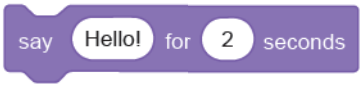
1. Motion blocks are blue in colour.
2. Looks block are purple in colour.

CREATING A SCRATCH PROJECT

To create a city night scene in Scratch, follow the given steps:

Step 1 Drag 

block from the **Events** block category.

Step 2 Drag and snap 

block from the **Looks** block category.

Step 3 Drag and snap 

block from the **Motion** blocks category.

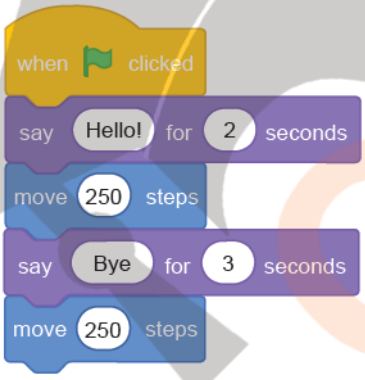
Step 4 Drag and snap 

block from the **Looks** block category.

Step 5 Drag and snap 

from block the **Motion** blocks category.

Step 6 Click  to run your program.



Ask AI AGENT

Create a scratch project with a ball as a sprite and a spotlight in the background.

+ | Study

ART INTEGRATION ACTIVITY

21st Century Skills #Creativity

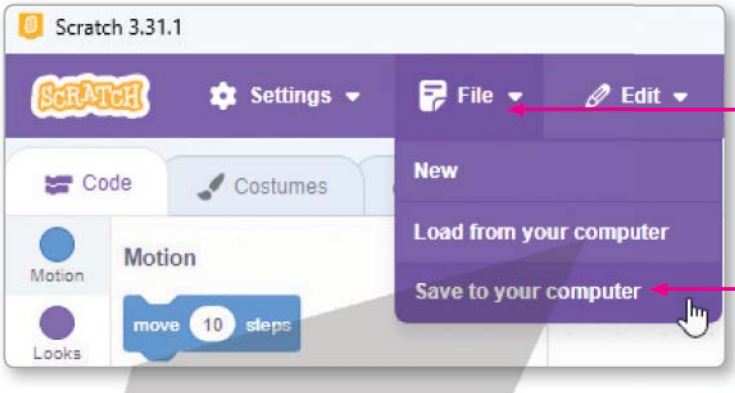
Take a sheet of paper and a pencil and draw your own sprite.

SAVING A PROJECT

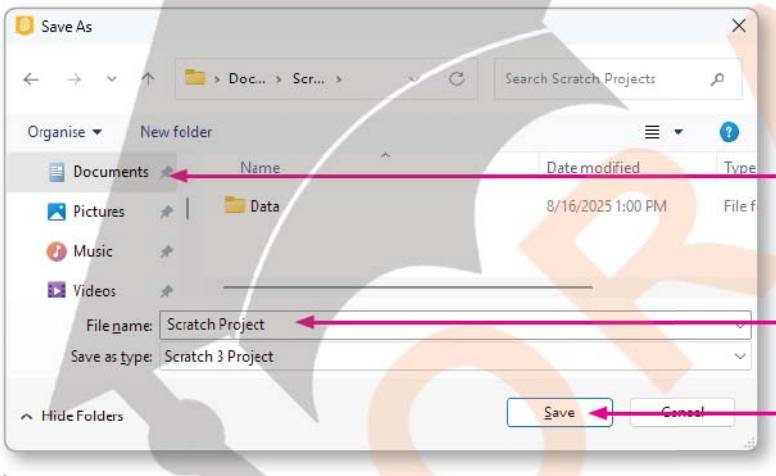
You can save a project in Scratch to keep it safe. Saving makes it possible to open the project again and continue working on it later. To save the project, follow the given steps:

FACT File

The extension of a Scratch project file is **.sb3**.



1. Click on the **File** menu.
2. Select **Save to your computer** option.

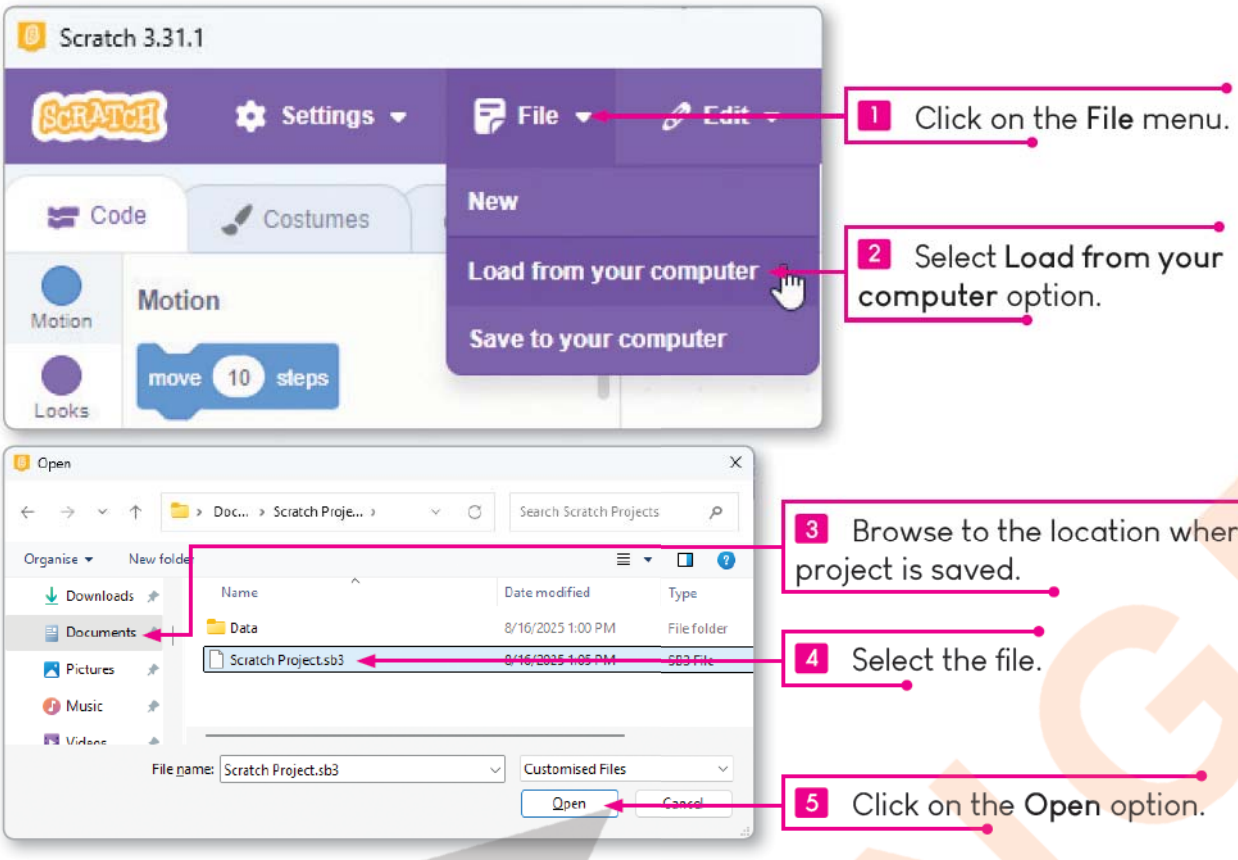


3. Select the folder where you want to save your project.
4. Type your project name in the **File name** box.
5. Click on the **Save** option.

OPENING AN EXISTING PROJECT

The previous project can be continued by opening the saved file.

To open an existing project, follow the given steps:



PRIVACY PRACTICES

Stay safe while sharing projects online. Never include any personal information.

TECH TERMS

- **Program:** A set of instructions.
- **Backdrop:** Background image or scene in a Scratch project.

REWIND RUN

- Scratch is a free, easy-to-use programming language designed just for kids.
- Sprites and backdrops are important parts of your Scratch project.
- Adding a sprite means placing a character, object or element into your project.
- Placing a background image or scene into your project is known as adding a backdrop.
- You can save your project in Scratch to keep your work safe.