Literacy with ICT

A Textbook for Class 4

Royal Education Council

Literacy with ICT A Textbook for Class 4

Guiding Principles

- Rationale for ICT Education
- Developmental Appropriateness
- Gross National Happiness Values
- Effective Pedagogy
- 21st Century Skills
- Life long learning

KNOWLEDGE SOCIETY

- Technology Operations and Concepts
- Communication and Collaboration
- Computational Thinking
- Digital Citizenship

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Literacy with ICT

A Textbook for Class IV

Royal Education Council
Paro

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28 September 2016

Foreword

Over the years, Information and Communication Technology (ICT) has greatly impacted all aspects of our lives. With the emerging new technologies, the world has become more connected and information more digital, greatly influencing the way people learn, live, work and communicate. Learning in and for the 21st century requires today's students to be discriminating users of information, creative problem solvers, skilled creators of knowledge, and effective communicators. Literacy with ICT is increasingly becoming an essential skill to participate productively in the 21st century knowledge society, in addition to the conventional literacy of reading, writing, and numeracy.

The existing ICT curriculum in schools was introduced in 2002 to equip students with knowledge and skills relevant for the world of work then. The needs have, however, changed over the years but the curriculum has not been able to maintain pace with the change, especially in the area of emergent and immersive technologies such as social media.

The development of new ICT curriculum has been in progress since 2014 to address the curricular gaps mentioned above. Drawing ideas and inspiration from various international educational technology standards and best practices, the ICT Curriculum Framework for Classes IV to XII was developed in 2014. Based on the framework, the writing of textbooks from classes IV to XII was initiated from 2015.

The approach adopted in the new textbooks is a departure from procedure-oriented teaching and learning. The textbooks are designed with emphasis on "competencies" – being able to "do" than "know", thinking critically, being analytical, solving problems and creating knowledge by sharing and communicating with each other.

I am hopeful that the new curriculum will pave the way forward in our continuous strive to understanding the risks of the digital world as well as its opportunities to achieving the promises of technology to transform learning and living.

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Introduction

The present society is characterised by its focus on information, its creation, dissemination and utilization. It lays emphasis on knowledge to drive economy by fostering innovation and entrepreneurship. Information and Communications Technology (ICT) plays an important role in making the needed information and knowledge easily accessible. ICT has become an important enabling tool to create and share information in this 21st century society.

Increasingly, children will be exposed to ICT in their daily lives. Education also must move forward to bring essential ICT skills to classrooms so that children can participate effectively in knowledge society.

ICT education has moved from ICT literacy to literacy with ICT, from "demonstrating ICT skills to choosing, using and sharing ICT, responsibly and ethically, to support critical and creative thinking about information and about communication across the curriculum" (Literacy with ICT Across the Curriculum, 2006). This shift does not belittle the importance of ICT literacy. It still is an integral foundation of literacy with ICT.

Literacy with ICT provides our children with the skills and knowledge they need to take part in inquiry in knowledge society. Children learn to discern information critically, produce knowledge creatively, and collaborate with others. Being able to produce information is not enough. Using ICT responsibly and safely is a vital attribute of a good 'digital citizen' in the 21st century.

Although literacy with ICT will be taught as a separate subject, the emphasis is on applying the skills across the curriculum. Where possible, attempts have been made to integrate topics from other subjects to provide authentic learning to children.

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Using the Textbook

Each chapter starts with learning objectives to inform both students and teachers of content they are going to deal with. Student activities are interspersed in the chapters for students to link prior knowledge and skills with new content, or to practise new skills after demonstrations. Activities are of two types: **Try This On Machine,** which requires use of computer, and simply **Try This**, which generally involves individual or group work without the use of computers.

The main learning points covered in the chapter are summed up in **Now You Know**. The **Check Your Progress** at the end of chapter checks for the student's general understanding of knowledge and skills covered. Activities are mostly straight forward. There are another type of student exercises listed under **Explore Further** towards the end of the chapter. These exercises are designed to extend the knowledge and skills beyond what students learned in the chapter. Often the exercises are set in context of the content from other subjects to promote authentic, interdisciplinary learning. The idea is to use ICT as an enabling tool to explore learning across the curriculum.

Some secondary information related to the topic are shown in boxes as **Do You Know?**. **Caution** and **Tips** boxes are used to inform students of risks, and words of advice or useful information. Where there is a need to inform the teacher of preparation required, a **Teacher's Note** callout is provided in each chapter. There is also a section of web links given at the end of each chapter for teachers to check out on the chapter topics.

Finally, there is the **End Of Year Activity** which is similar to Explore Further exercise except that it requires children to apply the key skills they acquired over the year. Teachers may choose to create their own activity, modelled on the sample activity included in the book. Teachers could use this activity to test children's performance.

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The book is so designed that it can be covered in one year, with one class per week.

The table given below is an overview of the concepts, skills and values covered in each chapter.

Chapter	Knowledge	Skills	Values	Weeks
1. Introduction to Computer	* Parts of Computer * Computer a smart machine	* Start and Shut down computer correctly * Login to computer	* Taking care of computer * Safety	3
2. Computer and Health	* Right Body Posture	* Sitting in right body posture	* Following computer laboratory rules * Cleanliness	3
3. Introduction to Software	* Parts of Windows desktop * Mouse buttons and actions * Different types of keys	* Drawing with Mouse * Touch typing	* Importance of correctly handeling mouse and keyboard	4
4. File Management	* Files and filename	* Creating, saving and opening files	* Saving files for later use	3
5. Be An Explorer	* Internet * Web browsers * Address bar	* Opening websites		3
6. Fun with Scratch	* Computer Games * Scratch Window * Sprites and Backdrops * Motion blocks	* Play inbuilt computer games * Change and delete Sprites * Change Backdrops. * Use move and turn blocks	* Arranging blocks in logical order	4
7. Animate with Scratch	* Motion blocks * Sound blocks * Running scripts * Custom Sprites and Backdrops	* Use position and direction blocks * Use sound blocks * Running Scripts using Green Flag block * Creating Sprites and Backdrop	* Arranging blocks in logical order * Attention to details	4

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TABLE OF CONTENT

1 INTRODUCTION TO COMPUTERS

In this Chapter

Learning Objectives

1. Name basic computer components.
2. Describe functions of basic computer components.
3. Demonstrate correct procedures to use a computer.

1.1 Introduction to Machine

Machines are human-made things. We use machines to help us do our tasks quickly, easily and better. Using machines save time and energy. Some machines which are used in our country are shown in Figure 1.1.


Power Tiller

Digital Camera


Car


Mobile Phones

Machines


Electric Fan


Radio


Television


Refrigerator

Figure 1.1. Examples of machines

Try This

Work in pairs and list down a few things which are machines and not machines.

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1.2 Computer - A Smart Machine

A computer is called a smart machine because it can do many things as shown in Figure 1.2.

- It can be used to play games.
- It can work without getting tired.
- It can be used to draw pictures.
- It can perform tasks quickly and correctly.

- It can be used to write letters and stories.
- It can store lots of information.
- It can perform calculations.
- It can perform task without mistakes.
- It can be used to play music.

Figure 1.2. Computer system

1.3 Parts of Computer

These are various parts of a human body.

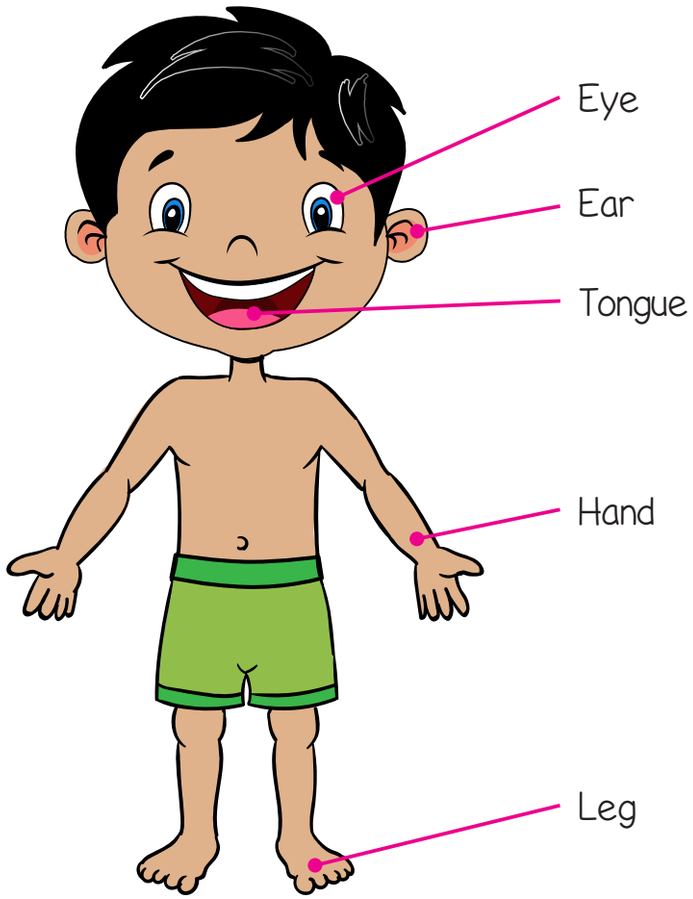

Figure 1.3. Parts of human body

Describe what each of the above body parts do.

Just like a human body, a computer has different parts. Each part of a computer has an important role to play.

The common parts of a computer are:

1. System Unit
2. Monitor
3. Keyboard
4. Mouse

System Unit

System unit (Figure 1.4) is the most important part of a computer. It contains the **Central Processing Unit** (CPU) which is like the brain of the computer. It makes all parts of computer work together.

Figure 1.4. System unit

Monitor

Monitor (Figure 1.5) looks like a television (TV). It displays texts, pictures and videos from the computer. It also allows the user to interact with the computer. It is also called **Visual Display Unit** (VDU).

Figure 1.5. Monitor

Keyboard

Keyboard (Figure 1.6) has many small buttons, which are called keys. Keys are used to enter text, numbers and other special characters. It is also used to give instructions to a computer such as shut down a computer, open, close and save a file.

Figure 1.6. Keyboard

Mouse

A computer mouse (Figure 1.7) looks like a real mouse. The long wire attached looks like the tail. The mouse usually has three buttons. It is used for pointing, selecting, dragging and clicking on the screen. It is also used to open and close

Figure 1.7. Mouse

programs, select text, scroll web pages, draw pictures, drag and drop objects and play games.

Keyboard and mouse can be without wires as shown in Figure 1.8. They are called Wireless Keyboard or Wireless Mouse.

Figure 1.8. Wireless keyboard and Mouse

Caution

Since computer runs on electricity there is a risk of electric shock. Avoid using broken switches, loose connections, open wires and sockets. Electric shock can be fatal.

Try This

Name the parts of computer.

1.4 Using a Computer

You have read about the parts of a computer and their uses. Now let us learn the correct way of starting and shutting down a computer.
It is important to start and shut down a computer properly to avoid damaging the computer.

Note for the Teacher

Set simple password before starting the lesson.

A. Starting a Computer

Start a computer by following the steps given below and in Figure 1.9.

1. Switch on the power outlet.
2. Switch on the stabilizer.
3. Switch on the UPS if available.
4. Switch on the System unit ⏻.
5. Switch on the monitor ⏻.
6. Type the password on the Login screen. Logon is also used instead of Login.

Figure 1.9. Steps to start a computer

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B. Shutting down a Computer

Computer must be shut down properly. Follow the steps given below to shut down the computer.

1. Click on Start as shown in Figure 1.10.

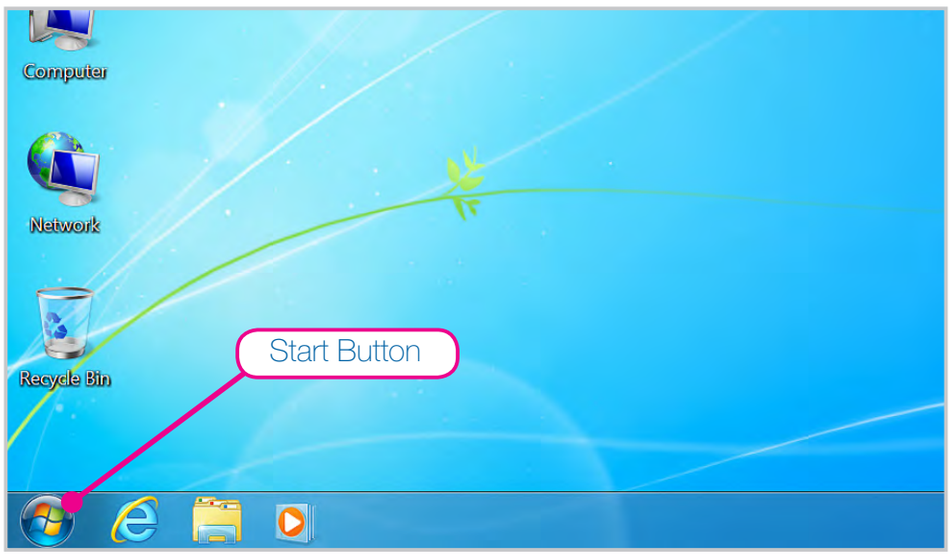

Figure 1.10. Start button

2. Click on Shut down as shown in Figure 1.11.

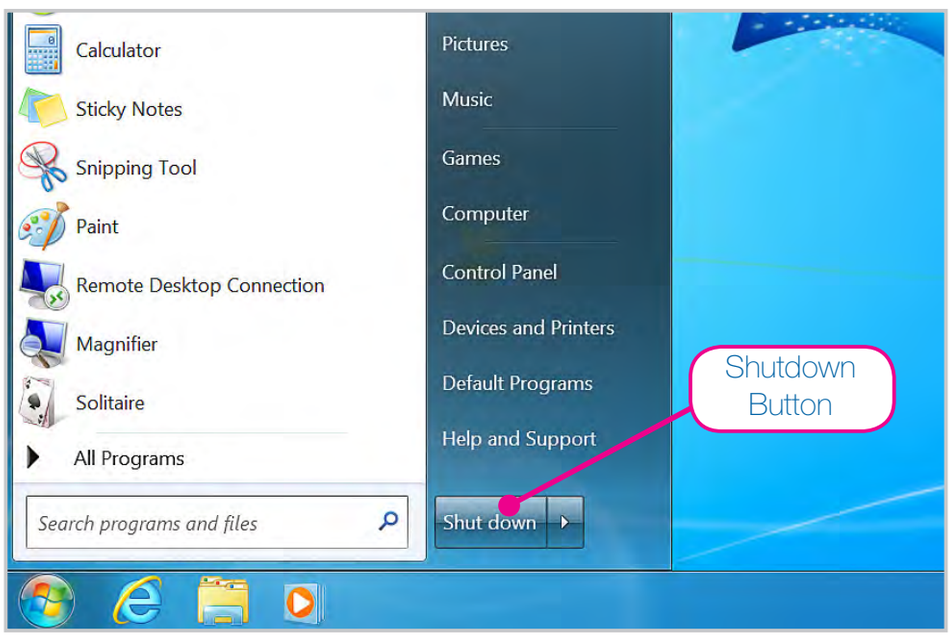

Figure 1.11. Shutdown button

3. Switch off the UPS and stabilizer.
4. Switch off the power outlet.

Try This On Machine

Start and shut down the computer following the correct steps.

Now You Know

1. Computer is a smart machine. It can be used for doing many things.
2. The computer is made up of four common parts: system unit, monitor, keyboard and mouse.
3. There are correct steps to follow in starting and shutting down a computer. These steps are necessary to avoid damage to the computer.
4. Password is used in login screen to get into the computer.

Check Your Progress

1. Crossword puzzle.

Across

3. It is a pointing tool.

Down

1. It is the part of computer you look at.
2. It is used to enter letters and numbers into a computer.

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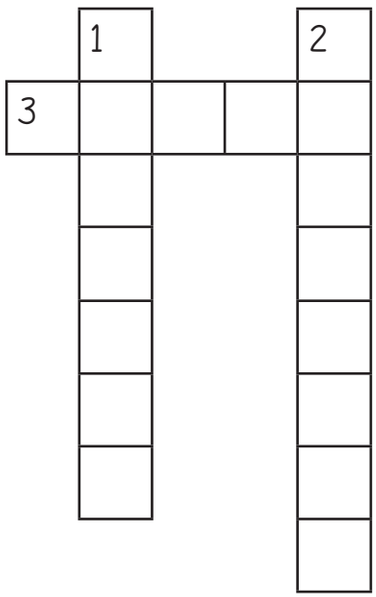


2. List five tasks that a computer can do.
3. Arrange the steps in correct order to start the computer.
   (a) Type password on the login screen.
   (b) Switch on the power outlet.
   (c) Switch on the stabilizer and UPS.
   (d) Switch on the monitor.
   (e) Switch on the System Unit.
4. How can a computer help you in your studies?
5. List the correct steps to shut down a computer.

Explore Further

1. Find out about different types of computers from your parents or teachers.
2. List some places where computers are used.
3. What else can a computer do besides what is covered in this chapter?

Weblinks

1. **Basic Parts of a Computer.**
   www.gcflearnfree.org/computerbasics/5

2 COMPUTER AND HEALTH

In this Chapter

Learning Objectives

1. Exhibit correct sitting, hand, arm and finger position while using computer.
2. Frame computer laboratory rules.
3. Practice computer laboratory rules.

2.1 Right Body Postures

Try This

Look at Figure 2.1 and answer the question following it.

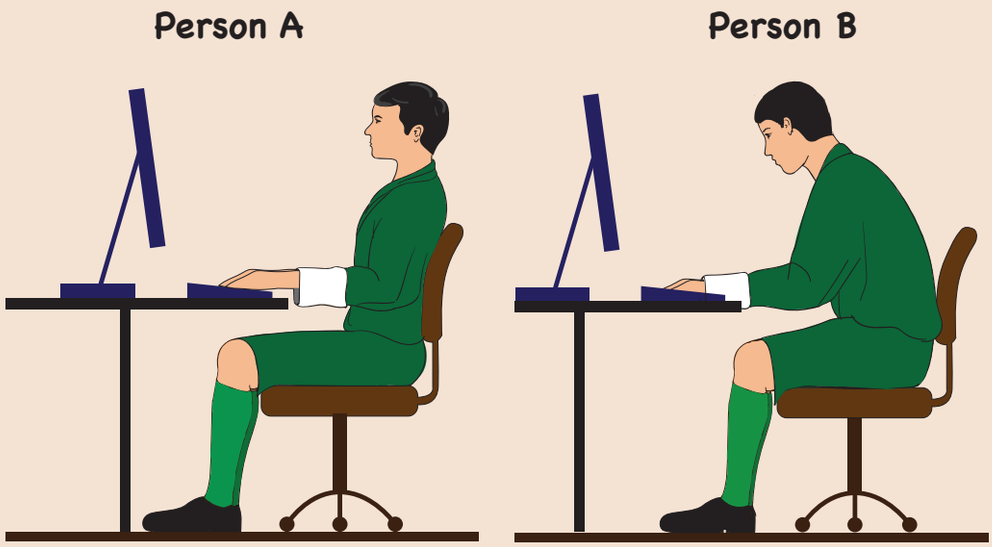


Figure 2.1. Body posture

Who do you think is sitting in the right posture? Why?

Let us now look at some of the correct body postures.

It is also important to know about placing monitor, keyboard and mouse in right positions. Placing computer parts in right position can help to reduce pain in the neck, shoulders, eyes, wrists and back.

Let us now look at the right position of the computer parts.

a. Place the monitor at an arm's length from you. The top edge of the monitor should be at your eye level as shown in Figure 2.2. This posture minimizes stress on your neck.

Figure 2.2. Position of monitor

b. Place the keyboard just above your lap so that your elbows are bent at least 90 degree angle (Figure 2.3). While typing, your wrists should not be resting on the table. Your arms should be kept free to move while typing. This will prevent unnecessary pain in your wrists and arms.

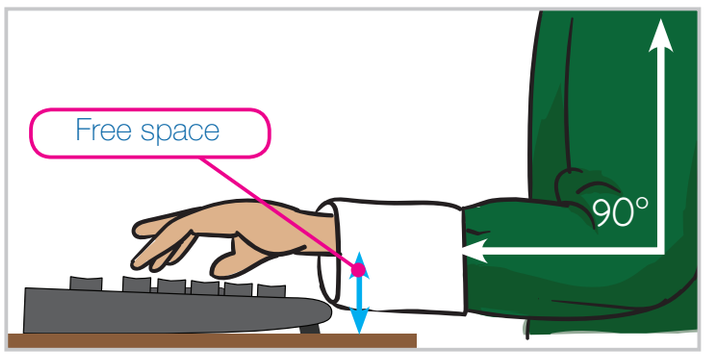


Figure 2.3. Position of keyboard

c. Place the mouse at the same level as the keyboard (Figure 2.4). This will prevent pain in your fingers, wrists, arms and shoulders.

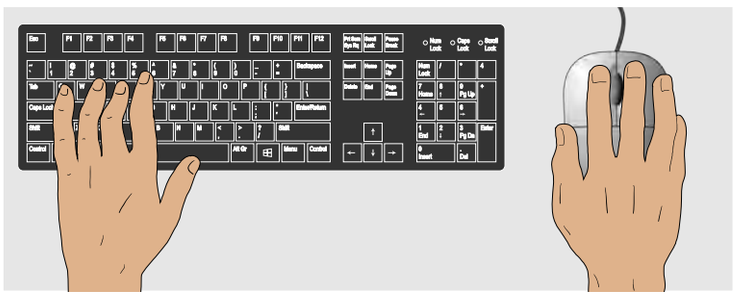


Figure 2.4. Position of mouse and keyboard

Therefore, it is important to follow right posture while using the computer as shown in Figure 2.5. Sitting in a wrong posture for long period can harm our health. One should also place the equipment in appropriate positions.

Note for the Teacher

Ensure students practise correct posture while using computer in the computer laboratory.

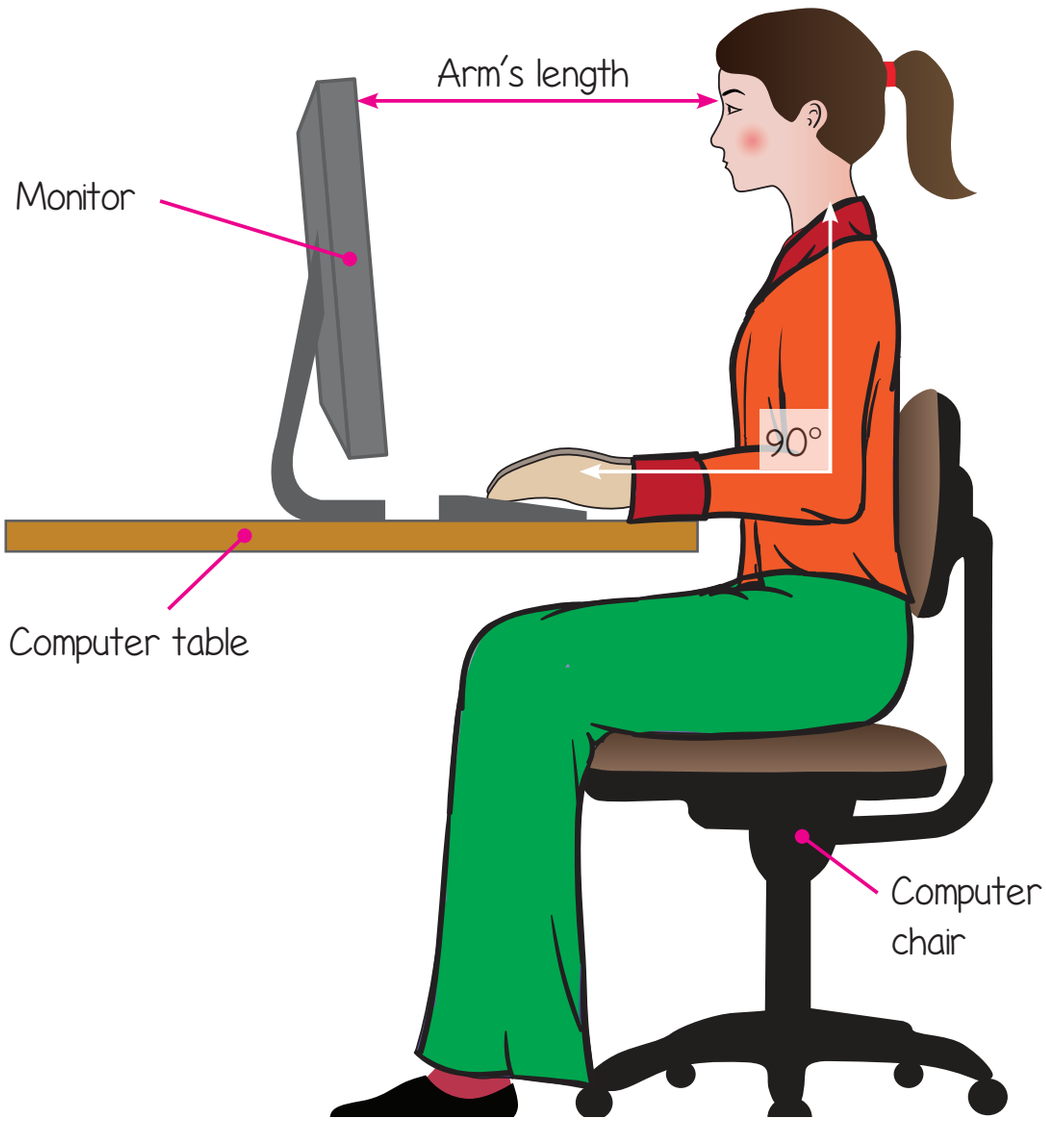


Figure 2.5. Sitting posture while using computer

Try This On Machine

Work in pair and practice sitting in the right posture. Adjust the computer parts if necessary. Use the checklist given below to check your partner's body posture.

Sl. No.	Body Posture	Tick
1	Feet rested flat on the floor.	
2	Knees bent at approximately 90 degrees angle or slightly more.	
3	Keyboard at elbow level.	
4	Viewing distance to the computer monitor is at least 18-30 inches (at arm's length).	
5	Top of the computer screen is at or just below eye level.	
6	Mouse is at the same level and next to keyboard.	
7	Back and neck approximately vertical and in-line.	

2.2 Computer Care

Computer is an important machine that helps us to work quickly and in a better way. It also costs a lot of money. Therefore, we must take good care of computer so that we can use it for a longer time. One of the ways of taking care is to follow a set of rules while using a computer in the computer laboratory or at home.

Before we discuss the computer laboratory rules, let us look at some of the rules in our school.

Try This

In group, list down some rules you follow in your school.

1. .....
2. .....
3. .....

Rules are important because they are guide to what to do and not to do. Rules helps us to stay safe and focused all day.

Try This

1. In small groups, discuss some rules for your computer laboratory.
2. Agree on common set of rules under the guidance of your teacher.
3. Create a poster of agreed rules.
4. Display the poster in computer laboratory.

Now You Know

1. Practicing correct body postures prevents health risks related to using computer.
2. Placing of computer parts in correct positions prevents neck, arm, back, eyes and wrists pain.
3. Following computer laboratory rules can help keep computers clean and safe.

Check Your Progress

1. Fill in the blanks by choosing the correct words from the given list.
   dirty, clean, harm, help, keyboard, monitor, flat, rough, near, away

   (a) Always keep the computer room .....
   (b) Sitting with wrong posture will ..... your health.
   (c) The ..... should be kept at your eye level.
   (d) It is better to keep the mouse on the ..... surface.
   (e) Keep computers ..... from sunlight.

2. Write TRUE or FALSE against each statement given below:
   (a) Always handle your computer with wet hands.
   (b) Do not eat or drink near your computer.
   (c) Sitting with your back straight is the right posture while using computer.
   (d) Computer uses electricity.
   (e) Keeping the monitor too close to your eyes is a correct posture.
   (f) Computer laboratory rules are made only for the teacher.

Explore Further

1. There are people who watch television every day. Do you think they need to follow correct body postures while watching television programs? Find out some correct body postures for watching television programs.

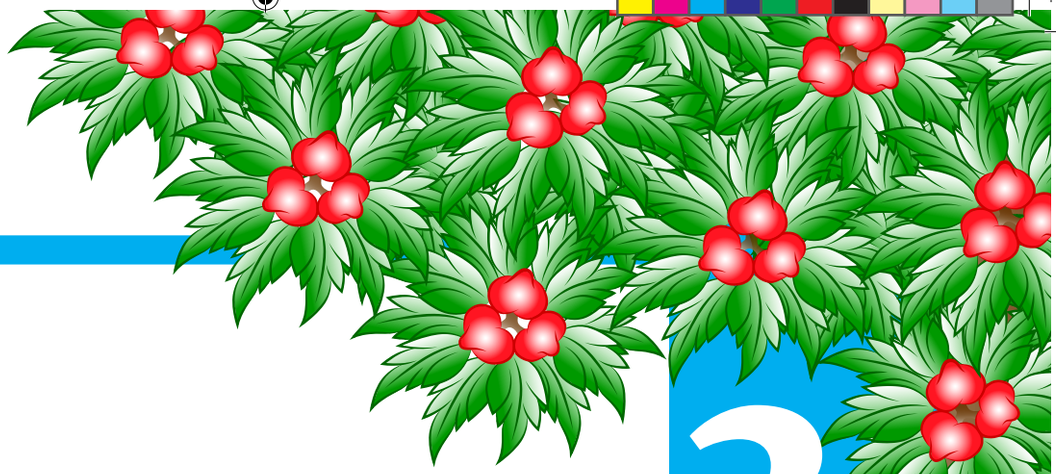
Weblinks

1. Safe use of computer for kids

- http://www.allaboutvision.com/parents/children-computer-vision-syndrome.htm

2. Learn about body posture

- http://www.computingcomfort.org/educate1.asp
- https://sites.google.com/a/whitehallcoplay.org/gerancher/home/computer-lab-etiquette
- http://www.edudemic.com/school-computer-lab-rules/
- http://oakdome.com/k5/computer-lab-rules/



3 INTRODUCTION TO SOFTWARE

In this Chapter

Learning Objectives

1. Identify basic parts of Windows Desktop.
2. Use appropriate software to develop mouse and keyboarding skills.

3.1 Operating System – Windows

Computer does not work on its own. It needs instructions to carry out tasks. A set of instructions used for a particular task is called a **computer program** or **program**. One program or a collection of programs is called **software**. Some examples of software are operating system, typing tutor, browser, Notepad and Paint.

Computer needs an **operating system** (OS) to function. It is the first software which runs when the computer is turned on. Windows, Linux and Mac OS are examples of operating system. Now we will look at Windows operating system. The first screen we see after login is called the **Windows desktop** (Figure 3.1).

Figure 3.1. Parts of windows desktop

It has the following parts:

Desktop — It is the area of the screen where icons and the taskbar appear.

Taskbar — It is the bar at the bottom of the screen where programs which are currently used are shown.

Icons — They are small pictures on the Desktop which represent different programs.

System tray — It is a part of the taskbar where date and time are shown.

One icon you will use quite a lot is Documents (Figure 3.2). It is like your own school bag where you put your textbooks, notebooks, instrument box, school diary and prayer book.

In the same way, Documents is the place where you will keep your pictures, songs, stories, poems and drawings.

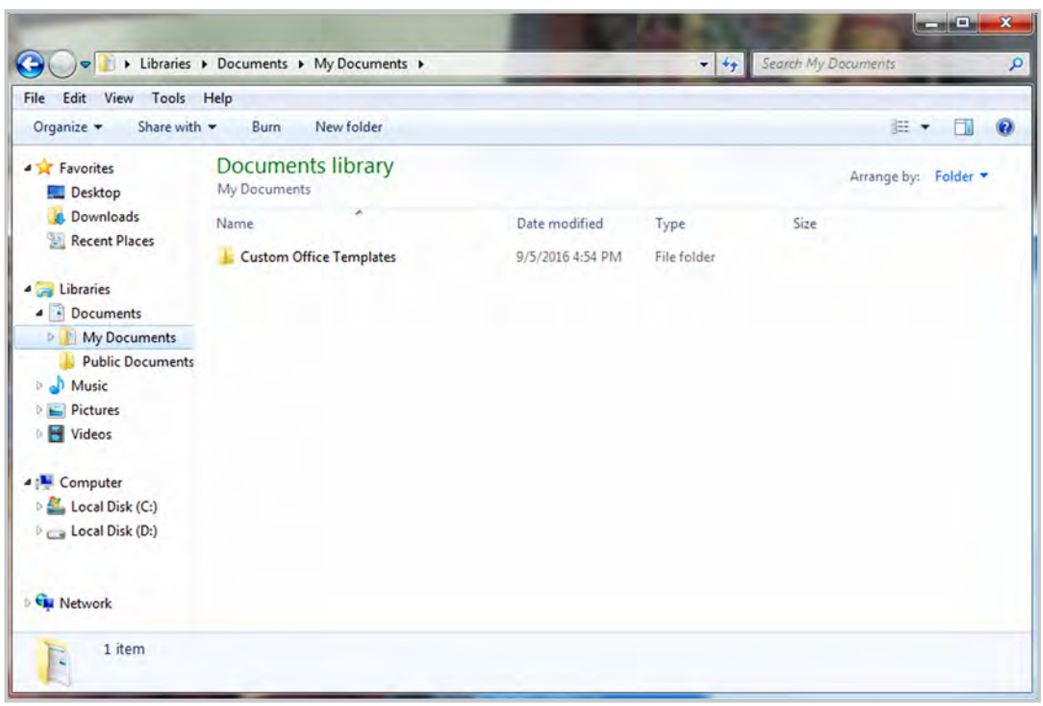


Figure 3.2. My document

Try This On Machine

1. Click on Start button to display the start menu.
2. Click on Documents.
3. Click on  at the top right hand corner of the window. What happens?
4. Repeat the activity with  ,  and  .
5. Try the above activity with other programs like Notepad and Paint.

3.2 Drawing with Mouse

a. In chapter 1 you learnt about mouse as a part of computer. A mouse usually has three buttons: a left button, a right button and a scroll button (Figure 3.3)

Figure 3.3. Buttons on mouse

A. Mouse Actions

The buttons on the mouse are used to give commands to the computer. The four common actions of the mouse are as follows.

Click ☞ Press and release the left mouse button (Figure 3.4). This selects an icon on the screen.

Figure 3.4. Click

Double Click ☞ Quickly press and release the left mouse button twice (Figure 3.5). This action will select and open a program.

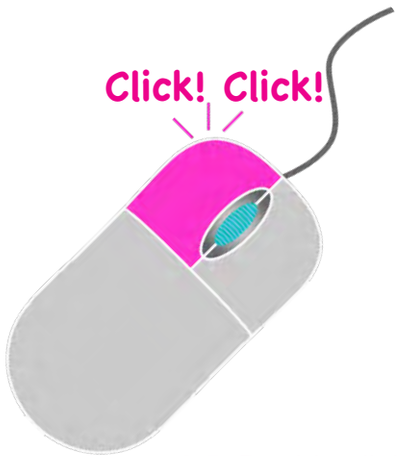


Figure 3.5. Double click

Right Click ☞ Press and release the right mouse button (Figure 3.6). This action will show a list of options from where you can choose to carry out a specific task. Figure 3.7 shows a list of options you will see when you right click on a desktop icon.

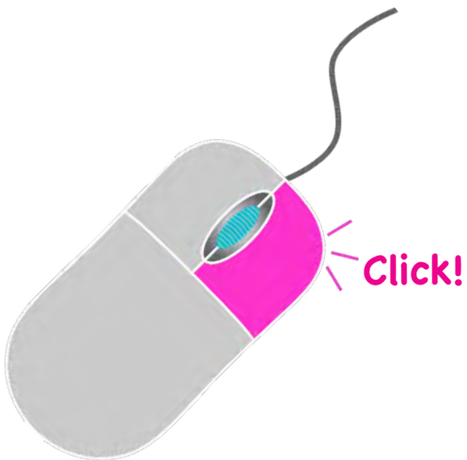


Figure 3.6. Right click

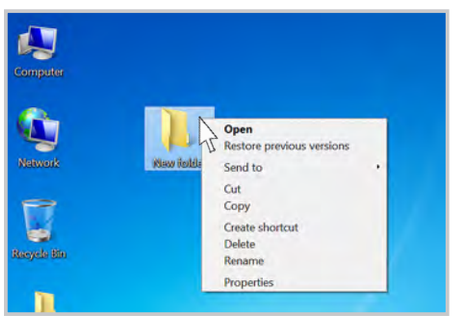


Figure 3.7. List of options on right click

Drag and Drop ☞ To drag and drop an object, take the mouse pointer over an icon. Then click and hold down the left mouse button as you move the object to where you want to place it. To drop the object, release the button (Figure 3.8).

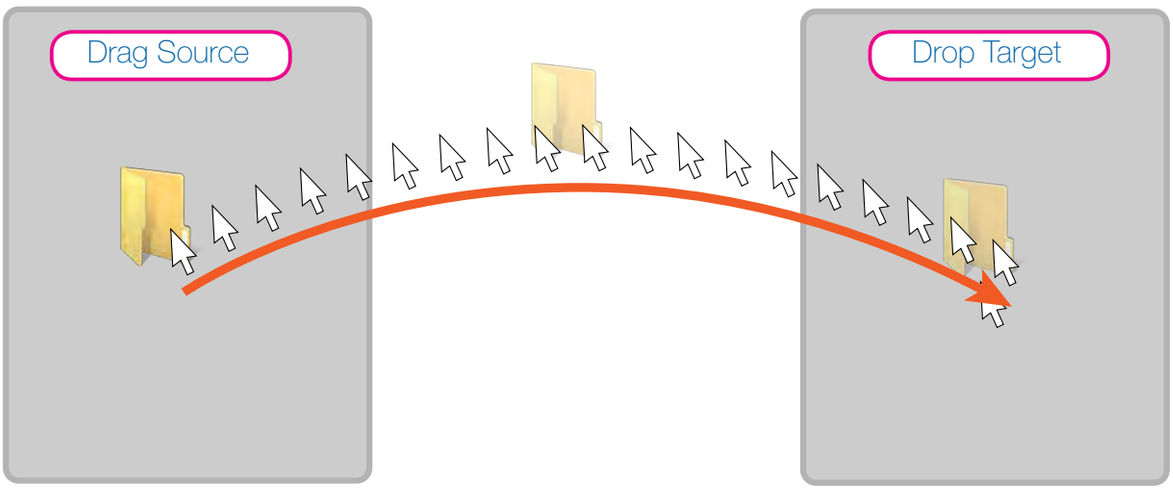


Figure 3.8. Drag and drop

B. Paint

Paint is a simple program used for drawing and painting. We use mouse to draw and paint. We can even add text to the drawing. Follow the steps given below to open Paint program.

- Start > All Programs > Accessories > Paint
- Paint window appears as shown in Figure 3.9.

Your teacher will demonstrate how to draw, color and label a potted flower using paint. Follow the steps and draw your own flower.

1. From the Tool group select either Pencil or Brush.
2. Place the pointer on the Workspace where you want to start drawing.
3. Click and hold down the mouse button. Drag the mouse to draw.
4. Release the mouse to stop drawing.

❺ Colour and label your flower.

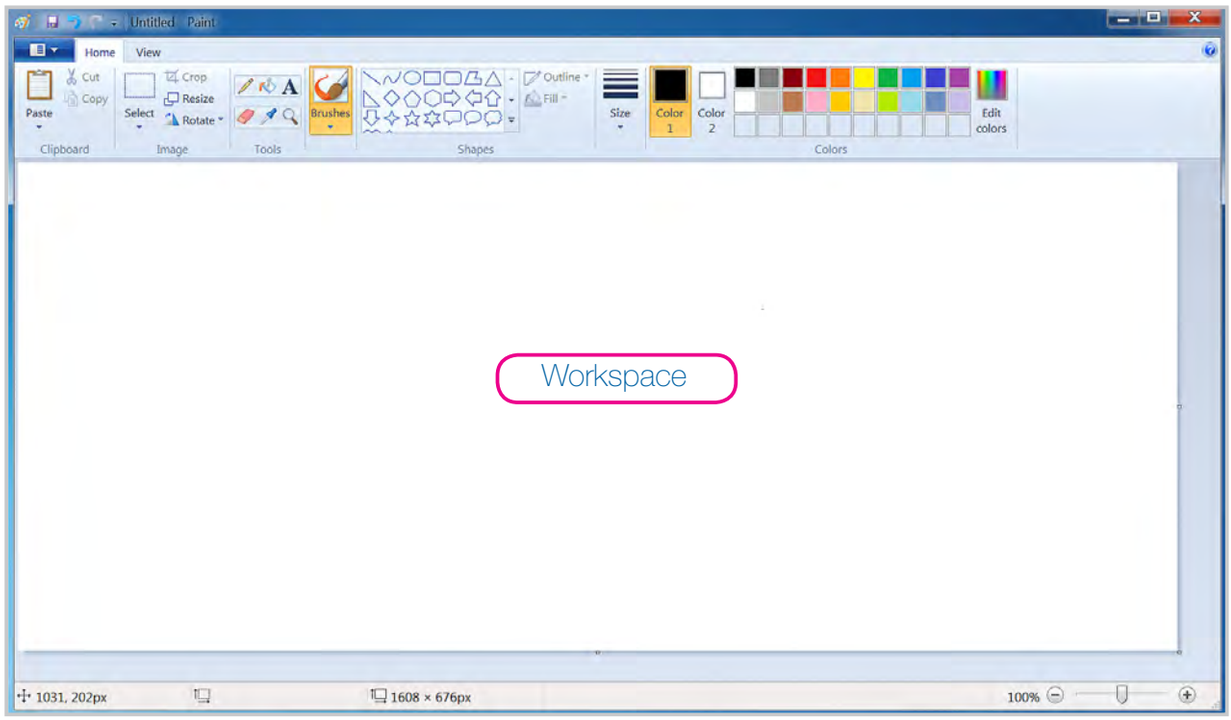


Figure 3.9. Paint window

Try This On Machine

Draw and colour a picture of an object which you see in and around the classroom. Write your name and class below your picture.

3.3 Using Keyboard

Keyboard is an important part of a computer. It has different types of keys. A key is a button on the keyboard. Keyboard is generally used to type letters, numbers and punctuation marks. Alphabet keys can be used to type letters, number keys to type numbers and punctuation keys to type punctuation marks.

The way the keys are arranged on the keyboard is called keyboard layout. Figure 3.10 shows a common keyboard layout for English.

It also has other keys like Spacebar, Enter, Shift, Backspace and Caps Lock.

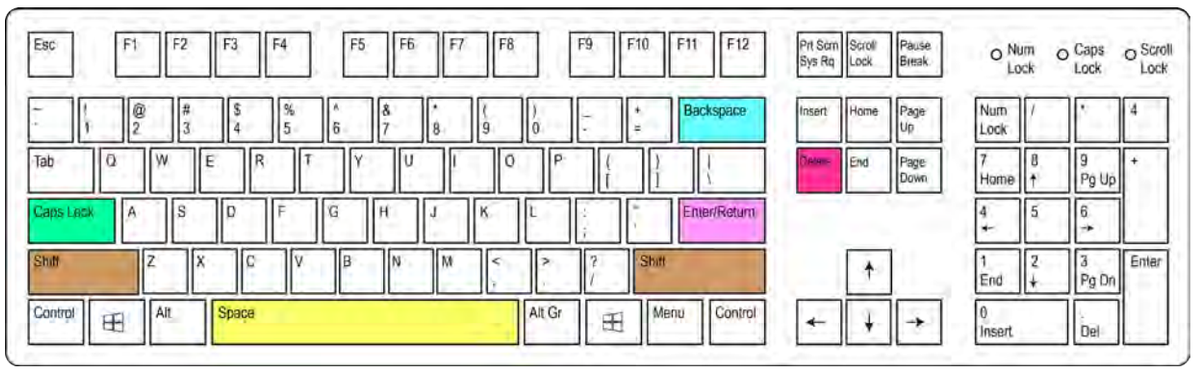


Figure No 3.10. Keyboard layout

The functions of these keys are :

Space bar — It is used to keep space between words and characters.

Enter/Return — It is used to create a new paragraph.

Backspace — It is used to erase letters, numbers and symbols to the left side of the insertion point. Insertion point is the blinking line on the workspace. It is also called cursor.

Delete — It is used to erase letters, numbers and symbols to the right side of the insertion point.

Shift — It is used to type capital letters. It is also used to type the special characters on the number keys and other double character keys.

Caps Lock — When it is on, all the letters that are typed appear in uppercase on the monitor. When it is off, all letters appear in lowercase.

Typing Tutor

It is a computer software to practise typing quickly and correctly. It will help you practise **touch typing** which is typing without looking at the keys. It comes in the form of a game to practise typing with correct finger positions on the keyboard. Your teacher will demonstrate how to use typing tutor.

Try This On Machine

1. Open Notepad : Start > All Programs > Accessories > Notepad
2. Type the rhyme given below.

MONKEYS ON THE BED

3 Little monkeys jumping on the bed.
1 fell off and bumped his head.
Mama called the doctor and the doctor said
"No more monkeys jumping on the bed".
2 Little monkeys jumping on the bed.
1 fell off and bumped his head.
Mama called the doctor and the doctor said
"No more monkeys jumping on the bed".
1 Little monkey jumping on the bed.
1 fell off and bumped his head.
Mama called the doctor and the doctor said
"No more monkeys jumping on the bed".

Now You Know

1. Software or program is a set of instructions for the computer to work.
2. Desktop, Start button, icons, taskbar and system tray are parts of the Windows Desktop.
3. Paint program can be used for drawing and painting.
4. Mouse has right, left and scroll buttons.
5. Click, double click, right clicks and drag and drop are mouse actions.
6. Keyboard consists of alphabet, number, punctuation and other special keys.
7. Typing tutor can help you develop typing skills.

Check Your Progress

1. Fill in the blanks with correct words.
   (a) Computer needs ..... to carry out task.
   (b) The collection of one or more programs is called .....
2. Draw and label 2-D shapes using Paint.
3. Type the rhyme given below in Notepad.

   2, 4, 6, 8, 10
   Its a 2, its a 4, its a 6, 8 then 10.
   We are the even numbers.
   1, 3, 5, 7, 9
   It's a 1, it's a 3, it's a 5, 7 then 9.
   We are the odd numbers.

Explore Further

1. Draw, colour and label 3-D shapes using Paint.

Weblinks

1. **Online games on using mouse.**
   http://minimouse.us
2. **Finger position on keyboard.**
   http://www.typing-lessons.org/preliminaries_4.html
3. **Touch typing techniques.**
   http://www.rapidtyping.com/typing-instructions.html
4. **Explore Further Activity Rhyme 2, 4, 6, 8, 10**
   http://bussongs.com/songs/2-4-6-8-10.php
5. **Try This On Machine Activity Rhyme Monkeys on the Bed.**
   http://www.teachingyourchild.org.uk/number-songs.htm#Monkeys_on_the_Bed

4

FILE MANAGEMENT

In this Chapter

Learning Objectives

1. Create and save files.
2. Open saved files.

4.1 Introduction to Files

We learned that computers can do many things. One of the functions of the computer is to store information. Any information stored in the computer is called a **file**. Each file has a name. It is called **filename**.

There are different types of files depending on the type of information they contain. Some examples of file are image file, text file, video file, sound file and program file.

4.2 Creating and Saving Your Drawing

Paint is a software with which you can draw and paint. The file created by Paint is an image file.

Try This On Machine

In previous chapter you have learned to draw using Paint. Draw the shapes similar to the ones in Figure 4.1.

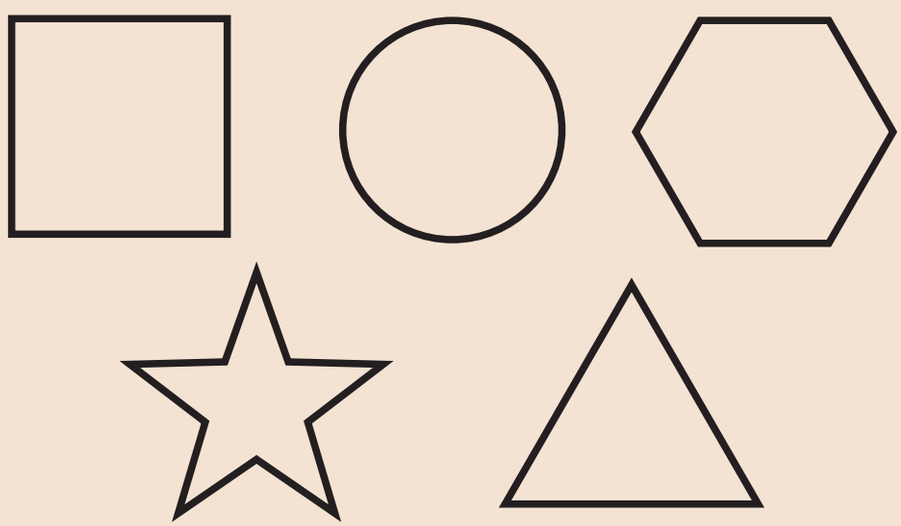


Figure 4.1. Shapes

Reprint 2019

Let us now follow the steps below to save the picture you have drawn.

Click on the Paint button. A drop-down list appears (Figure 4.2).

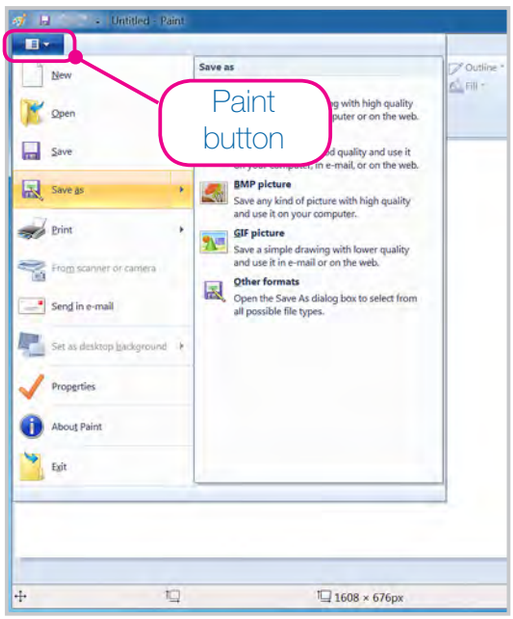


Figure 4.2. Paint drop-down list

1. Select Save As. A Save As dialog box appears.

2. Select Desktop from the navigation pane as the location where you will be saving your file.

3. Type a filename of your choice in the File name box. If no filename is given, it takes the name **UNTITLED** by default. Default means it is given automatically by the computer.

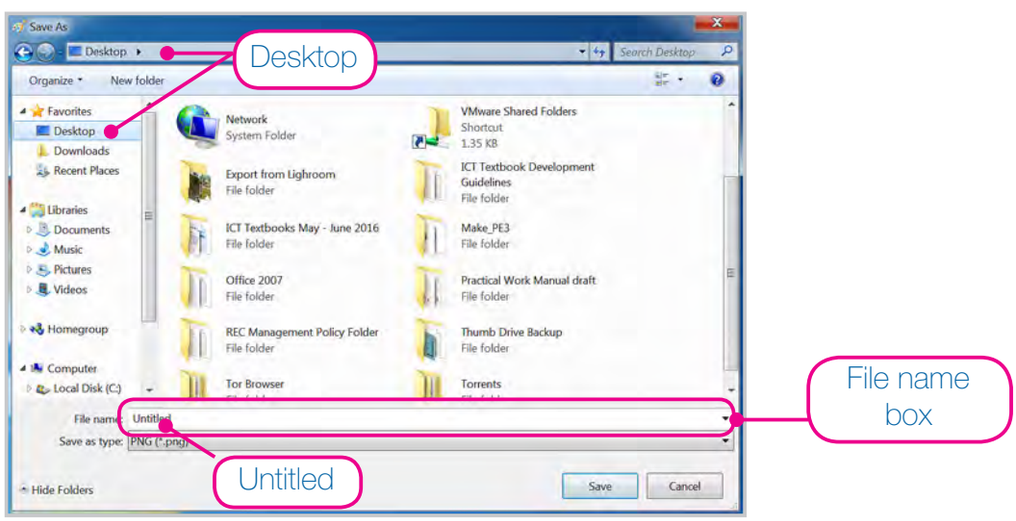


Figure 4.3. Save As dialog box

4. Click on the Save button.

Try This On Machine

Using Paint, draw our national flag and save it in location called Pictures with the filename National Flag.

4.3 Opening Files

You have to follow the following steps to open an already saved picture.

1. Click the Paint button. A drop-down list appears.
2. Click Open. The Open dialog box (Figure 4.4) appears.

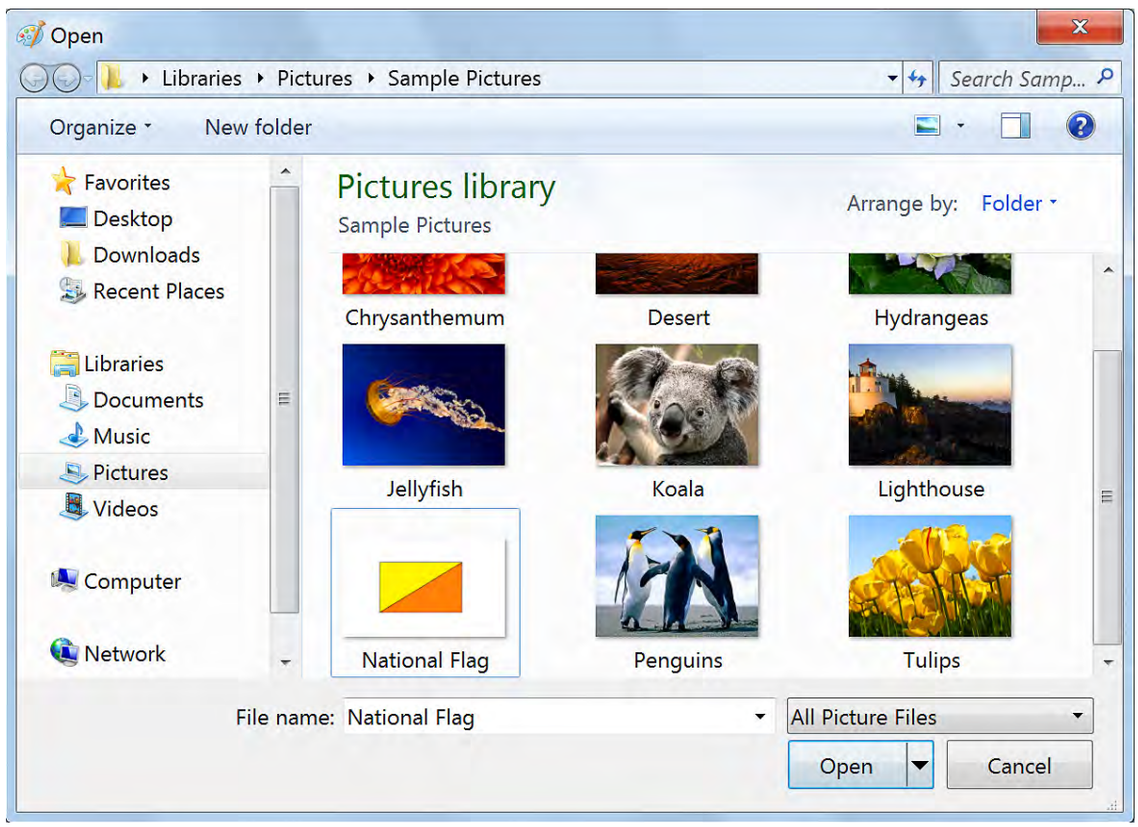


Figure 4.4. Open dialog box

3. Select your file from the list.
4. Click Open button.

Try This On Machine

1. Open the National Flag file you have saved. Make some changes in your drawing and save it as Bhutan Flag.
2. Write a short paragraph about yourself in Notepad and save it in location called Documents.
3. Open the file you have saved. Add a sentence about your parents and save it.

Now You Know

1. Any piece of information stored in the computer is called a file.
2. A file will have a filename.
3. A file can be saved for future use.
4. A file can be opened to view or make changes.
5. A file can be image file, text file, video file, sound file and program file.

Check Your Progress

1. Rearrange the steps in correct order to Save a drawing in Paint.
   (a) Click on Save button.
   (b) Select Save from Paint drop-down list.
   (c) Click on Paint button.
   (d) Type the file name in the Filename box in Save As dialog box.
2. Write the steps in correct order to open a image file in Paint.
3. Using Paint, draw and name some examples of degradable and non-degradable things. Save your work.

Explore Further

1. Using Paint, draw an outline map of Bhutan showing major river system. Name the rivers. Save it as River System of Bhutan.

Weblinks

1. Paint

http://windows.microsoft.com/en-us/windows7/products/features/paint

2. Getting started with Paint

http://windows.microsoft.com/en-us/windows7/gettingstarted-with-paint

3. File

http://pcsupport.about.com/od/termsf/g/file-definition.htm

4. File Management

http://winbeginners.com/articles/file_management.htm

5 BE AN EXPLORER

In this Chapter

Learning Objectives

1. Describe the Internet.
2. Use a browser to explore websites for information.

5.1 Introduction to the Internet

Little Sonam: Oh! I am having difficulty in getting information for my project work.

Computer: Don't worry! I am here to help you. You will get the information on the Internet.

Little Sonam: Internet! What is it?

Computer: In this case, read the following text !

The **Internet** is a connection of many computers throughout the world. Computers on the Internet are connected to each other generally by telephone wires to share information. Information may be in the form of text, picture, sound or video. Such information are usually presented in a web page. A collection of web pages forms a web site. Many such web sites make up the **World Wide Web** (**www**) or simply the Web.

Some people call the World Wide Web as the biggest library in the world. We can find information on almost any topic on the Web.

To find information on the Web, you will need a special program called **web browser** or simply **browser**.

Some common web browsers are shown in Figure 5.1.


Internet Explorer


Safari


Google Chrome


Mozilla Firefox

Figure 5.1. Examples of web browsers

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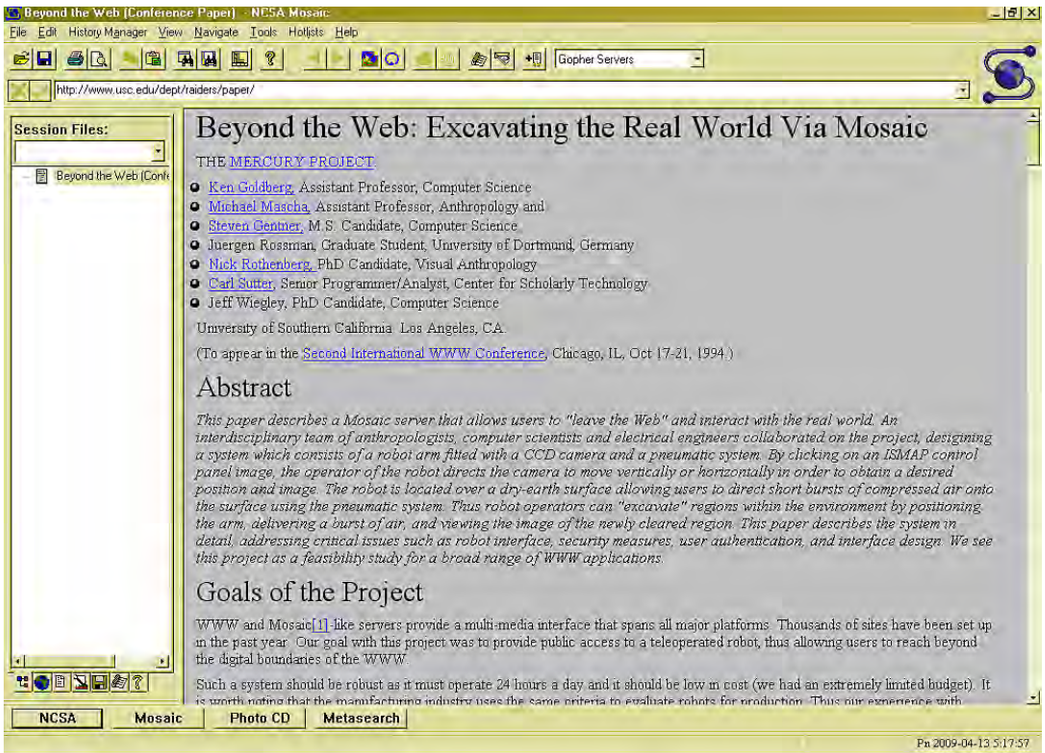
Do You Know?

Internet is popularly known as Net.

Mosaic was the first graphical web browser launched in 1993.

Bhutan started using Internet for the first time in 1999 to mark the Silver Jubilee Coronation of His Majesty the Fourth King.



NCSA Mosaic 3.0 for Windows

All web browsers have Address Bar (Figure 5.2) where you can type the address of a website or a web page you like to view.

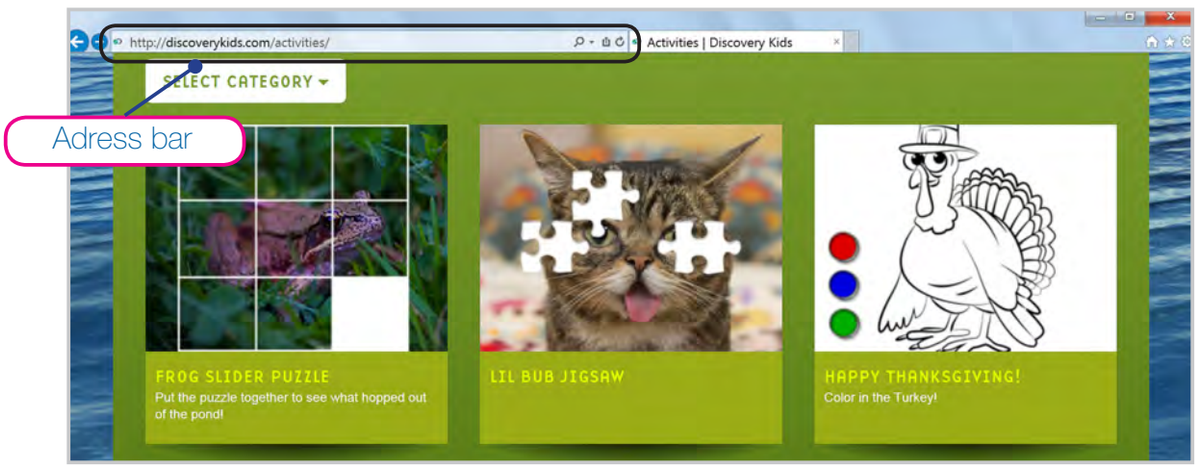


Figure 5.2. Address bar of Internet Explorer

Let us view a website using Internet Explorer.

1. Start > All Programs > Internet Explorer
2. Type a web address in the Address Bar. For example, www.kuenselonline.com
3. Press Enter key to view the information.

Information on the Internet are presented on webpages. Information on webpages are presented in the form of text, images, audios and videos. Text or image within a webpage can be linked to another webpage or a different section of the same webpage. Such a link is called **hyperlink** (Figure 5.3). When the mouse is moved over a hyperlink, the pointer changes to a hand symbol. Click on the hyperlink to visit the webpage.

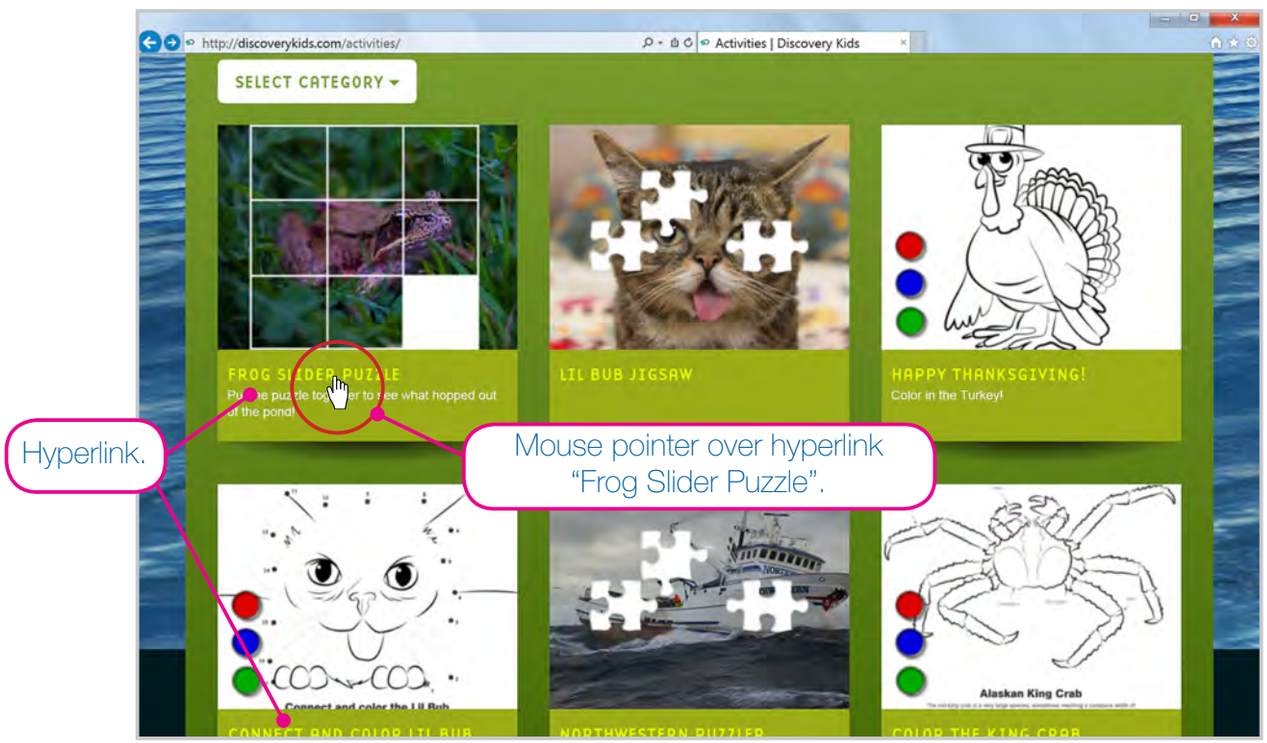


Figure 5.3. Hyperlink

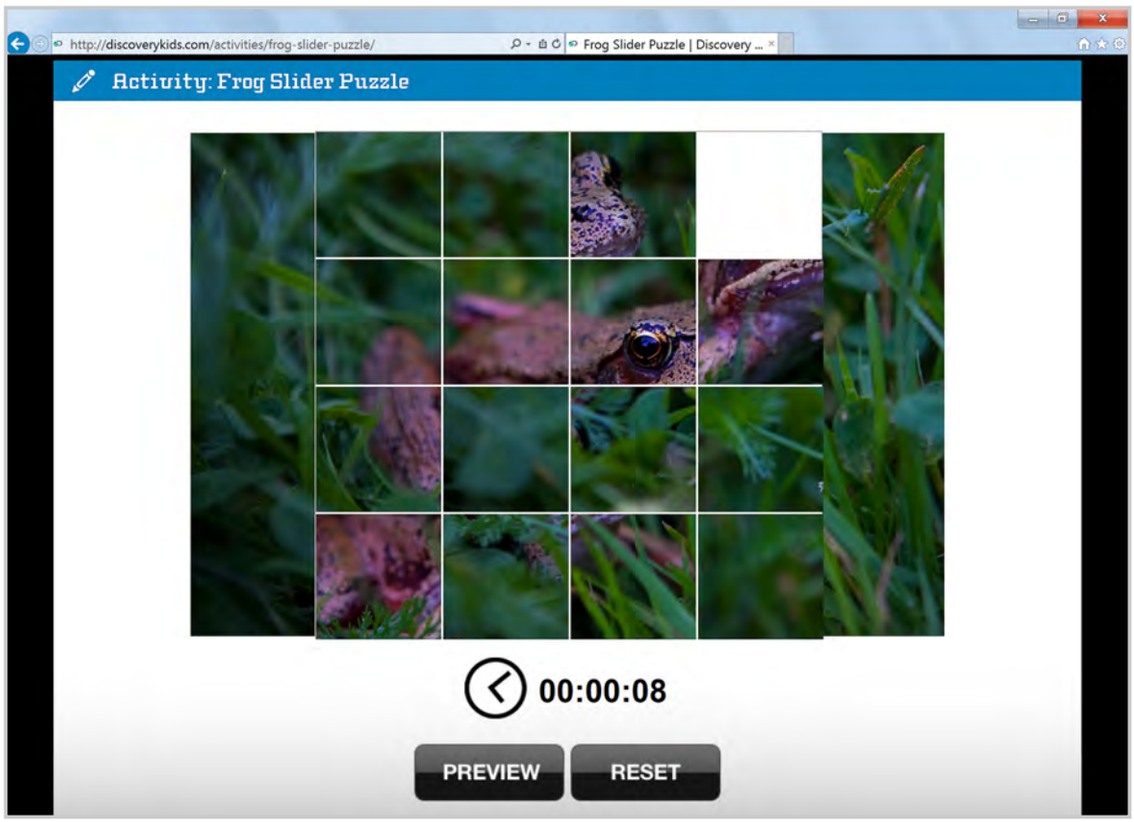


Figure 5.4. Frog slider puzzle webpage

Websites are maintained by schools, universities, government or private agencies, or an individual to share information about themselves. The first webpage that a user sees when browsing a website is called **homepage**. Some webpages use a hyperlink called home that will open the homepage.

Note for the Teacher

Install different browsers.

Websites have a unique address just like mobile phones have a unique number. The address of the website or webpage is called **Uniform Resource Locator** (URL). If we know the URL, we can instantly access the webpage by typing the URL in the address bar of a browser.

Exploring for information on the Internet using URLs and hyperlinks is called **browsing**.

Try This On Machine

1. Explore the websites given below and share any interesting information to the class.
   (a) http://www.sciencekids.co.nz
   (b) http://www.education.gov.bt
   (c) http://www.abcya.com
   (d) https://interactivesites.weebly.com
   (e) https://www.sheppardsoftware.com
   (f) http://www.cartoonnetwork.com
   (g) http://www.kidsknowit.com
   (h) http://www.uptoten.com
   (i) https://www.pbskids.org
   (j) http://www.dzongkha.gov.bt
   (k) http://www.internetlivestats.com

2. Use a different browser to explore the above websites.

Now You Know

1. The Internet is a connection of computers to share information throughout the world.
2. Information is shared over the Internet using the World Wide Web.
3. Web pages may contain information in the form of text, picture, sound and video.
4. A group of related web pages is called a website.
5. Web browser is a program to find information on the Internet.
6. Address bar is a location on the web browser where you type the address of the website.
7. The address of a website or a web page is called URL.

Check Your Progress

1. Fill in the blanks with correct words.
   (a) Connection of computers throughout the world to share information is called .....
   (b) Program to search information on the Internet is .....
   (c) The rectangular box in a web browser to type the address is called .....

2. Unscramble the words:
   (a) eneritn .....
   (b) asedsdr .....
   (c) rwserob .....
   (d) elrporxe .....
   (e) peora .....
   (f) niaftromino .....
   (g) sacimo .....

3. Do you think the Internet is useful to you? Write a paragraph about what you think about the Internet?

Weblinks

1. **Web Browser.**
   - http://whatismyipaddress.com/web-browser
   - http://browsers.about.com/od/howbrowserswork/a/whatisabrowser.htm
2. **Introduction to Internet.**
   - http://www.explainthatstuff.com/internet.html
   - http://www.internetbasics.gov.au/getting_started_on_the_internet/what_is_the_internet
3. **Difference between Internet and World Wide Web.**
   - http://www.webopedia.com/DidYouKnow/Internet/Web_vs_Internet.asp

6 FUN WITH SCRATCH

In this Chapter

Learning Objectives

1. Play logical games and puzzles successfully.
2. Identify basic components of programming environment.
3. Use different objects from the library.
4. Apply basic motions to the objects.

6.1 Playing Computer Games

We know computer can be used for playing games. Computer games are interesting to play and they also make us think. Windows has many games. Let us play one of them.

Try This On Machine

1. Start > Programs > Games > Purble Place.

2. Select Comfy Cakes.

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3. Select the difficulty level and play.
4. Try completing the game as fast as possible.
5. Similarly, you can play Purble Shop and Purble Pairs.

Do You Know?

Spacewar is the first computer game. It was designed by Steve Russell in 1961.

We can also make our own computer games using Scratch !

6.2 What is Scratch?

SCRATCH is a visual programming environment that lets you create interactive stories, animations (making pictures move), games, music, and art.

Programming in Scratch is performed by dragging and joining visual blocks. Visual blocks are used to control objects. In Scratch, objects are Sprites and Backdrops.

Do You Know?

Scratch was designed by Mitchel Resnick and developed by the Lifelong Kindergarten Group at the Massachusetts Institute of Technology (MIT) Media Lab. (Source: http://wikipedia.org)

6.3 Scratch Window

Open Scratch window as follows:

Start > All Programs > Scratch

Scratch Window consists of following components as shown in Figure 6.1.

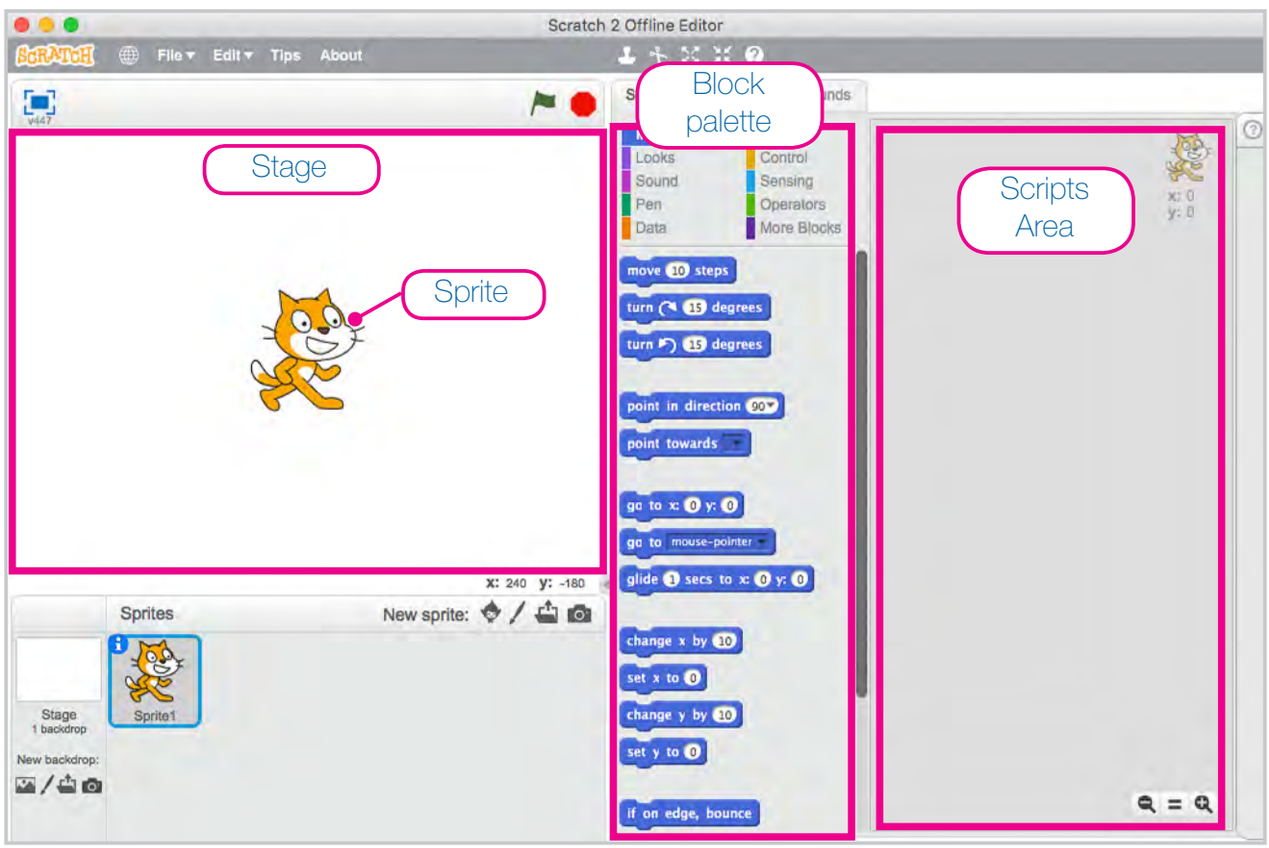

Figure 6.1. Scratch window

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Sprite is a character, like in a story or a game.

Stage is a blank area where we add different Sprites and Backdrops. A backdrop is background of the Stage. Scratch contains readymade Sprites and Backdrops.

Block Palette contains a list of blocks. A block is an instruction to the Sprite or Stage to carry out a task. Look at a block shown in Figure 6.2. It has a notch at the top and a bump on the bottom. The presence of notch means that another block can be attached to it, while, presence of bump means the block can attached to another block.

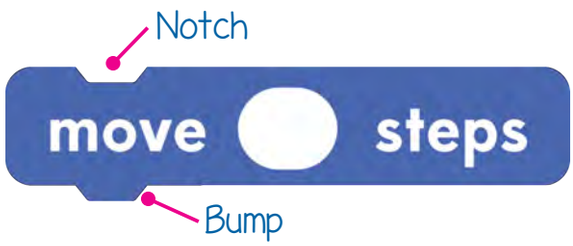

Figure 6.2. Notch and bump

Scripts Area is the region in which blocks are arranged to develop scripts that make changes to Sprites and Stage.

Script is a block or a group of blocks arranged to carry out a task. It is also known as program. The process of developing scripts using blocks is known as **scripting** or **programming**.

6.4 Steps to Change Sprites

1. Click on Choose sprite from library button as shown in Figure 6.3.

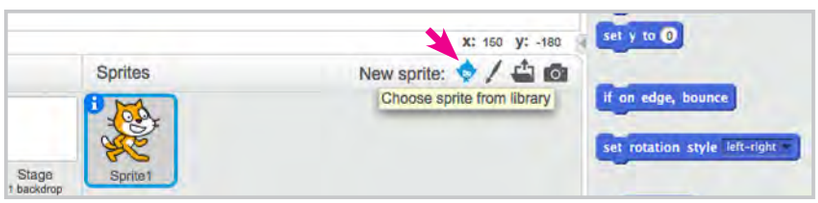

Figure 6.3. Choose sprite from library button

2. Sprite Library window appears as shown in Figure 6.4.

3. Select a category and choose a sprite. Double click to add the Sprite to the Stage.

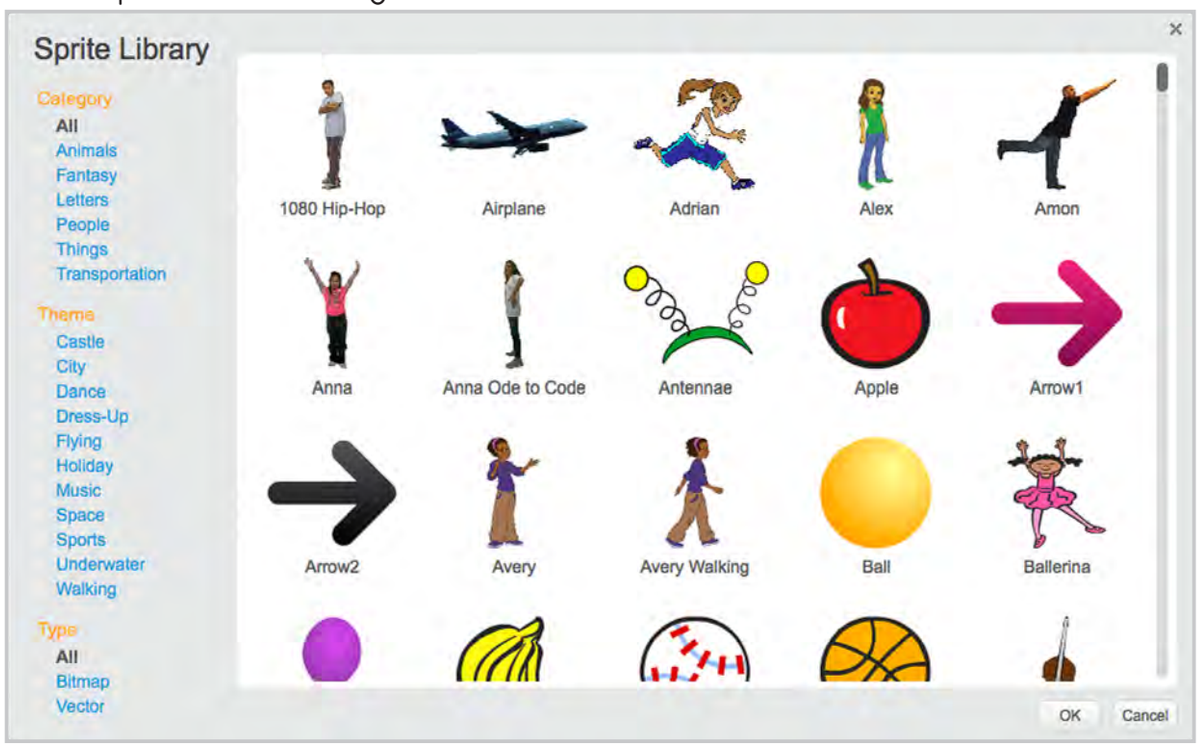

Figure 6.4. Sprite library window

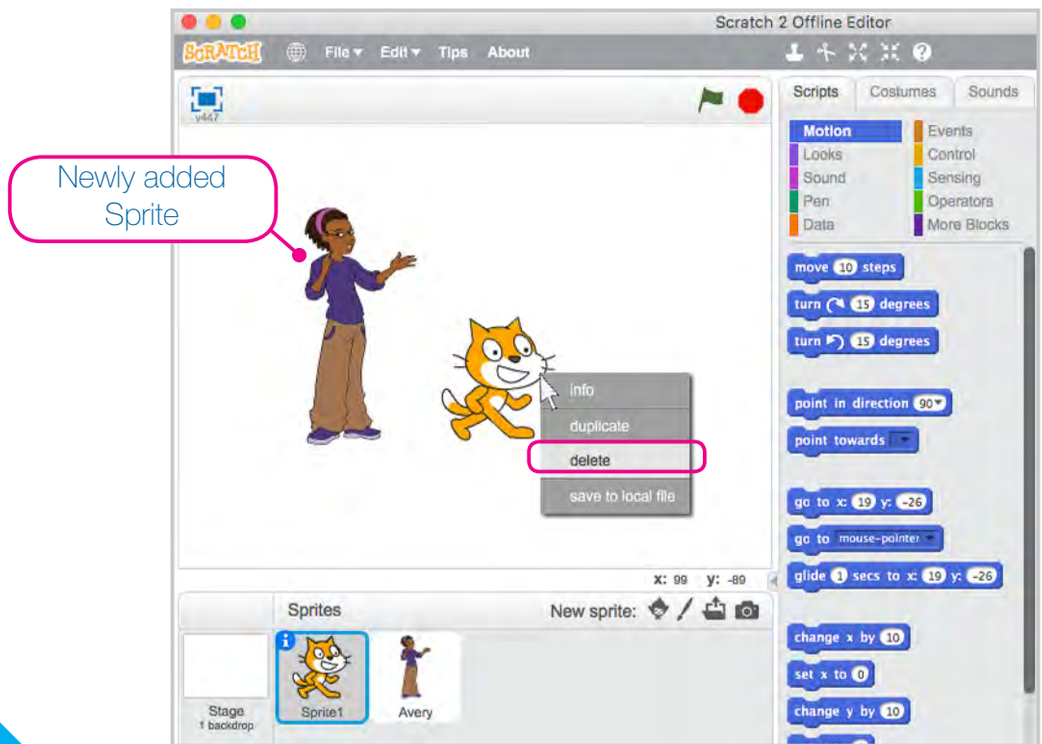

Figure 6.5. Deleting sprite

Reprint 2019

4. Drag and drop Sprite to change its location on the stage.
5. To delete the Sprite, right click on the sprite and select the delete option as shown in Figure 6.5.

6.5 Steps to Change Backdrops

1. Click on **Choose backdrop from library (**Figure 6.6**)** button to visit Backdrop Library. Backdrop Library window appears as shown in Figure 6.7.

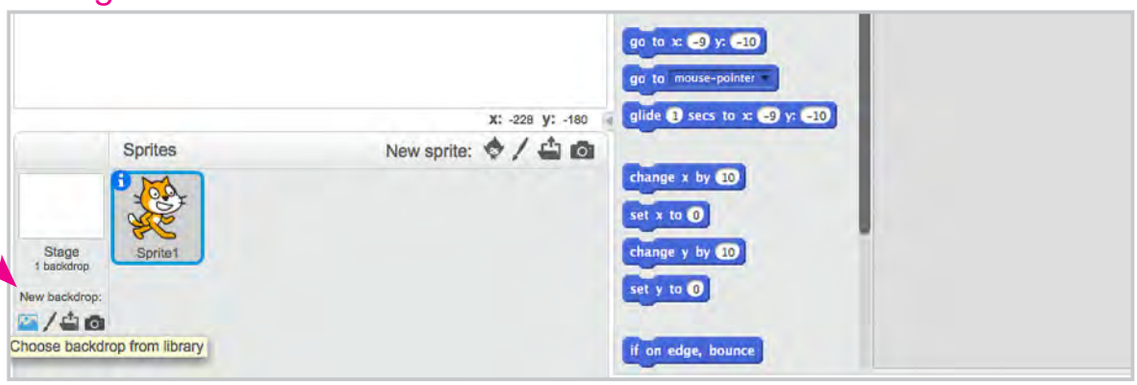

Figure 6.6. Choose backdrop from library button

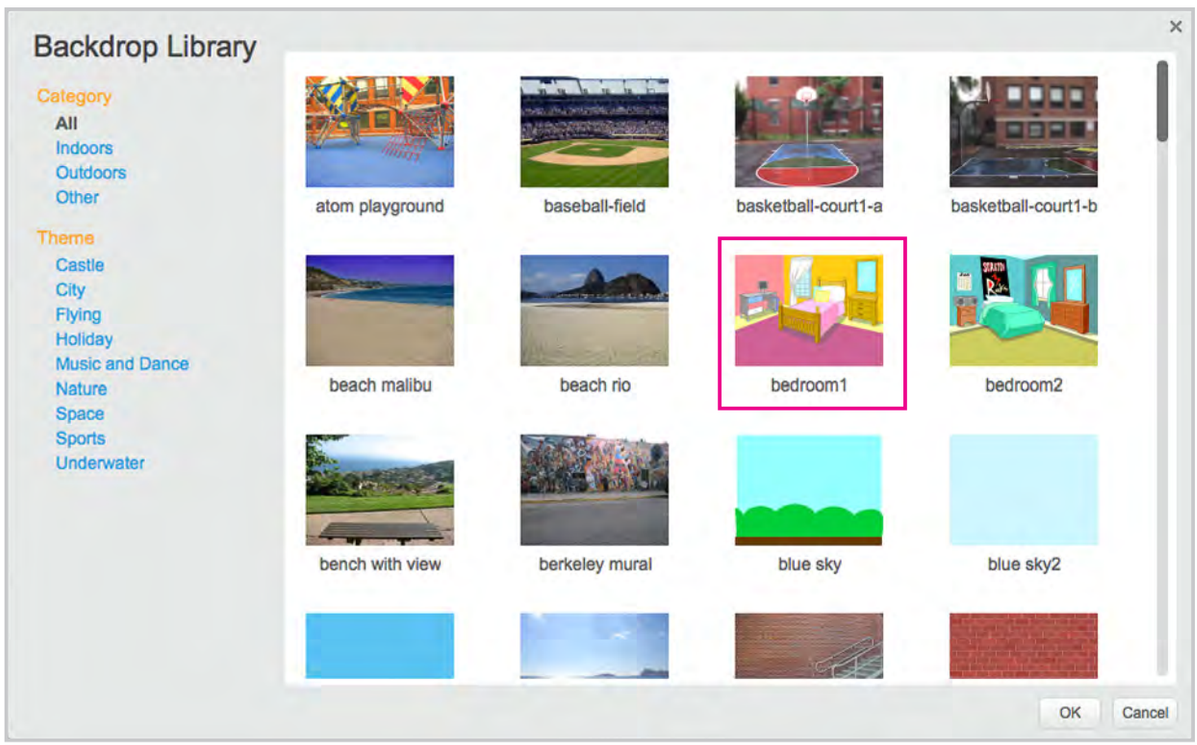

Fig. 6.7. Backdrop library window

2. Select a category and choose a Backdrop.

3. Double click on the selected Backdrop to add it to the Stage. The new backdrop appears on the stage as shown in Figure 6.8.

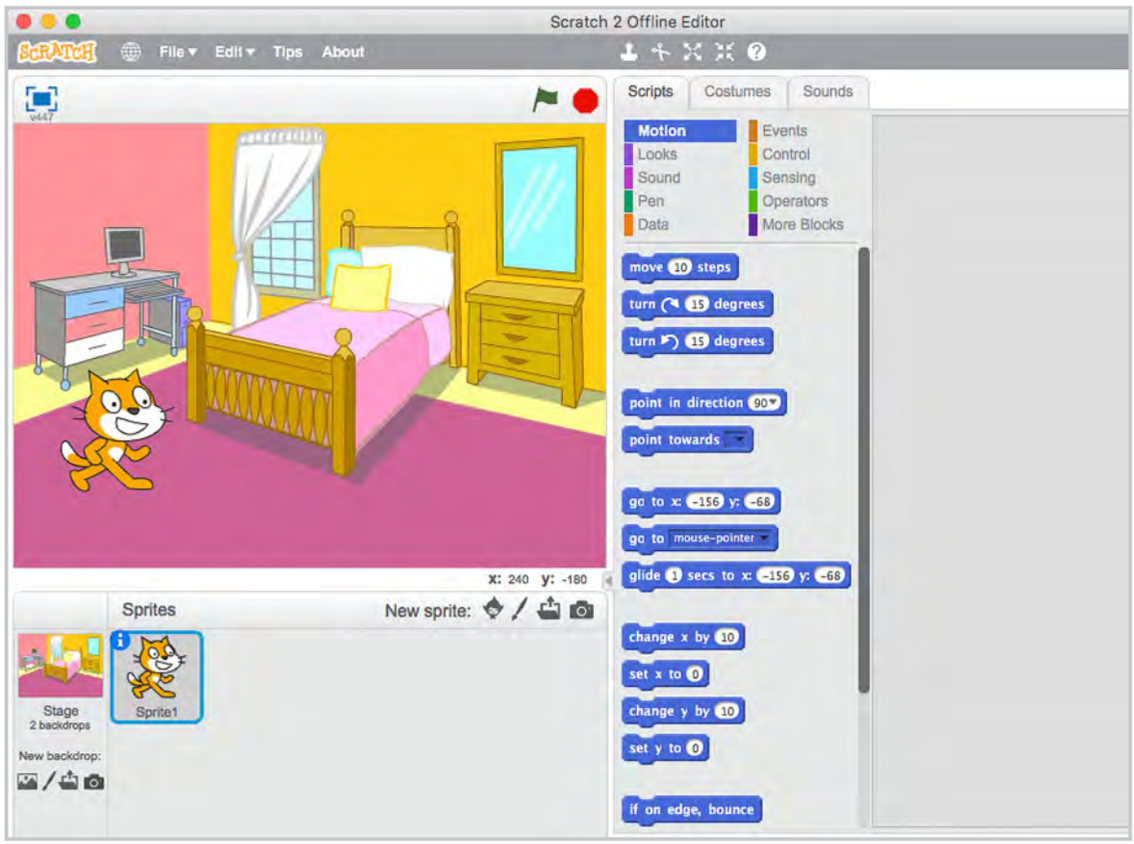

Fig. 6.8. Stage with new a backdrop

6.6 Applying Basic Motions to the Sprite.

A. Move block

You can move the Sprite towards left or right using the move block. Using positive value in move block will make the sprite move towards right while the negative value make the sprite move towards left. The distance the sprite moves on the stage depends on the value used.

Follow the steps given below to move the sprite.

1. Select the Motion category under Scripts tab.

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2. Drag and drop  block to the Script Area as shown in Figure 6.9..

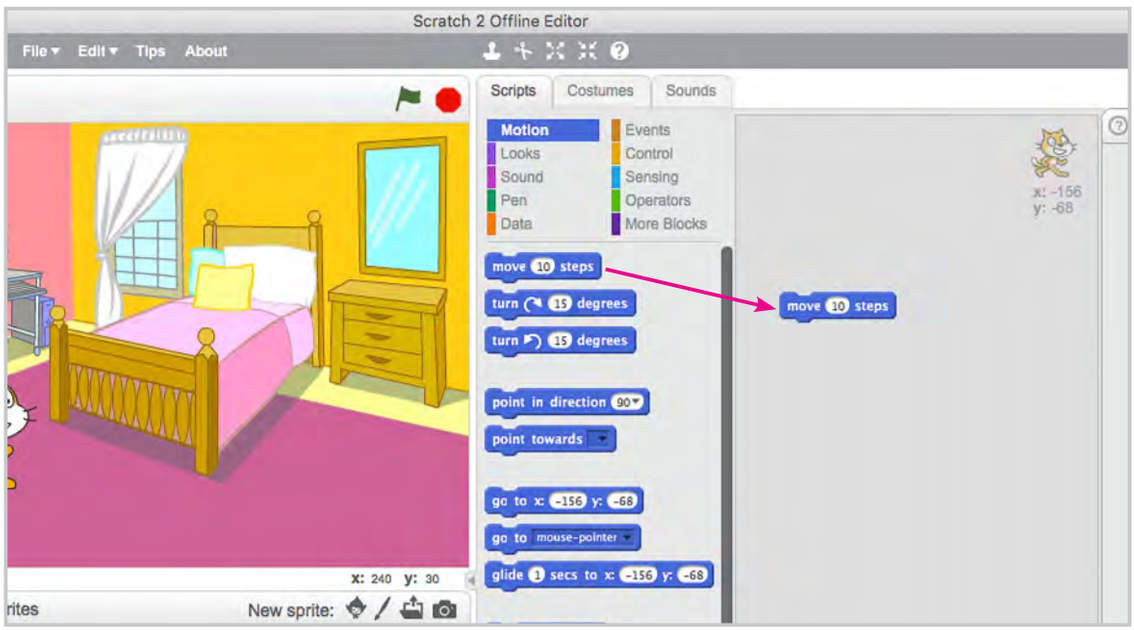


Figure 6.9. Drag and drop move block

3. Click on the block in the Script Area to move the Sprite. Making the blocks to perform a task is know as running the script. The script is run by clicking on any block inside the Script Area.

4. Change the number in the move block to 20, 50 and 100. Observe the distance covered by the Sprite.

5. Use negative number in the move block and observe the direction of the Sprite movement.

B. Turn blocks 

You can turn the Sprite clockwise or anti clockwise by using the Turn blocks as shown in Figure 6.10. The angle at which sprite turns depends on the value used.

Follow the steps given below to turn the sprite.

1. Select the Motion category under Scripts tab.
2. Drag and drop 

block to the Script Area and click to turn the Sprite by 15 degrees clockwise.

   OR

   Drag and drop 

block to the Script Area and click to turn the Sprite by 15 degrees counter-clockwise.
3. Change the value in the turn block to 45, 90 and 180 in both the cases in step 2. Observe the angle turned by the Sprite.

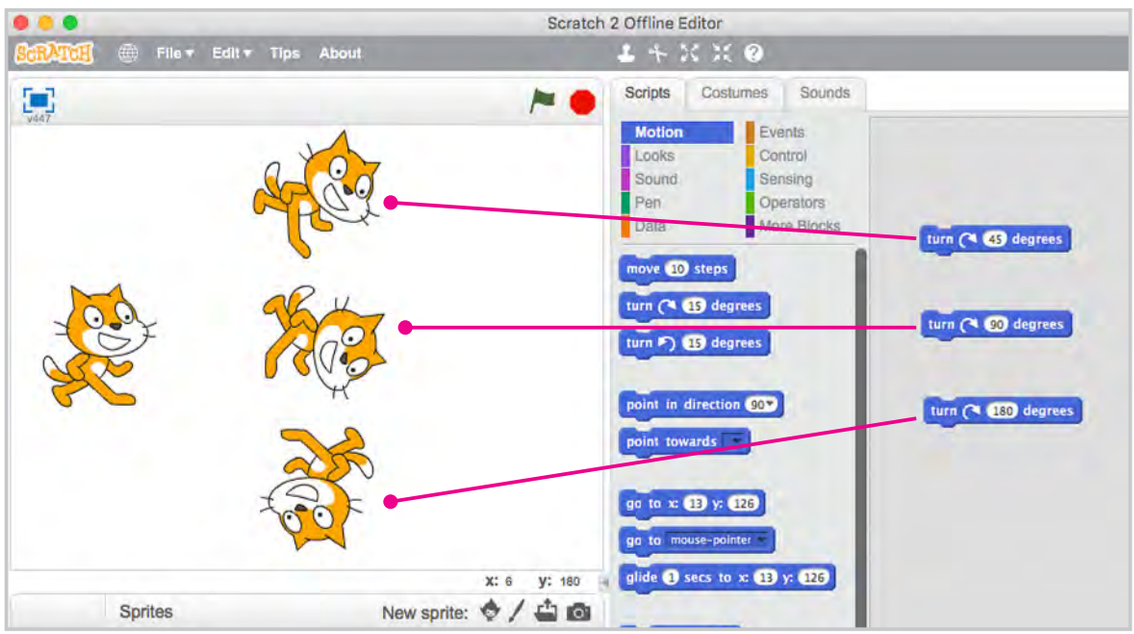


Figure 6.10. Drag and drop turn block

Try This On Machine

1. Select a new Sprite.
2. Change the Backdrop to Spotlight-Stage.
3. Apply the following motions to the Sprite you have selected..
4. Move it 20 steps towards right.
5. Move it 20 steps towards left.
6. Turn it 45 degrees clockwise.
7. Turn it 45 degrees counter-clockwise.

Now You Know

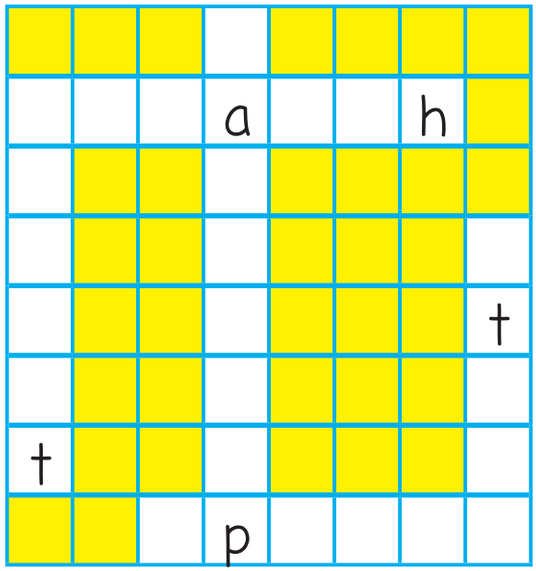
1. Scratch is a visual programming language that helps us create interactive stories and games.
2. Sprite, Stage and Script are the three main components in Scratch.
3. Sprite is a character of your story.
4. Appearance of the Stage can be changed using Backdrop.
5. Move blocks and Turn blocks are used to make the Sprites move and turn..
6. Change in number in the blocks changes the distance the Sprite moves and the angle at which it turns.

Check Your Progress

1. Write TRUE or FALSE against each statement given below:
   (a) We can place more than one Sprite on a stage.
   (b) The figure of Cat is the only Sprite in Scratch.
   (c) Move block is used to make Sprite move left or right.
   (d) Notch and bump in a block is used to attach another block.
   (e) Sprite can move only 10 steps.

2. Word Puzzle

Fill in the words that best fits in the squares.



Explore Further

1. Choose appropriate Sprites and Backdrop to show children playing in a park.

Weblinks

1. **Logical and Strategy Games.**
   http://knowledgeadventure.com/games
2. **Scratch.**
   https://scratch.mit.edu
3. **Basic Scratch Lessons.**
   http://wiki.Scratch.mit.edu/wiki/Getting_Started_with_Scratch

7

CREATE AND PLAY IN SCRATCH

In this Chapter

Learning Objectives

1. Use more Motion blocks to move the Sprite.
2. Apply sound to the Sprite.
3. Create Sprite and Backdrop.

7.1 Position and Direction Blocks

We have already learned to apply Move and Turn motions to the Sprite. There are many other Motion blocks that can be applied to Sprite. Some of them are:

A. Point Towards block 

The Point Towards block points the Sprite towards the mouse-pointer or another Sprite.

B. Change x by block 

The Change x by block moves the Sprite right or left. Positive value moves the Sprite right while the negative value moves the Sprite left.

C. Change y by block 

The Change y by block moves the Sprite vertically (up or down). Positive value moves the Sprite up while the negative value moves the Sprite down.

D. Go to block 

The Go to block moves the Sprite to the mouse-pointer or to another Sprite.

E. Go to x and y block 

It moves Sprite to a location on the Stage based on x and y position on Stage.

7.2 Sound Blocks

We can add sound to a Sprite. It is done with the following steps.

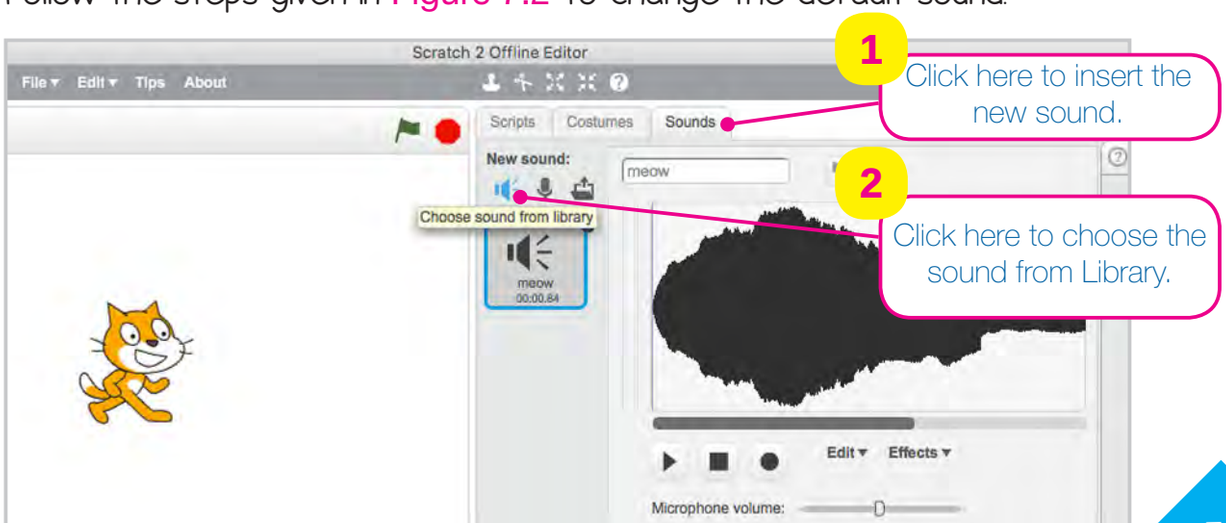
1. Select the Sound category under Scripts tab.
2. Drag and drop 

block to the Script Area as shown in Figure 7.1.
3. Click on the block in the Script Area to play the sound.

Figure 7.1. Adding sound block

We can change the default sound **meow** to other sounds. Scratch comes with many sound clips in its Sound Library.

Follow the steps given in Figure 7.2 to change the default sound.



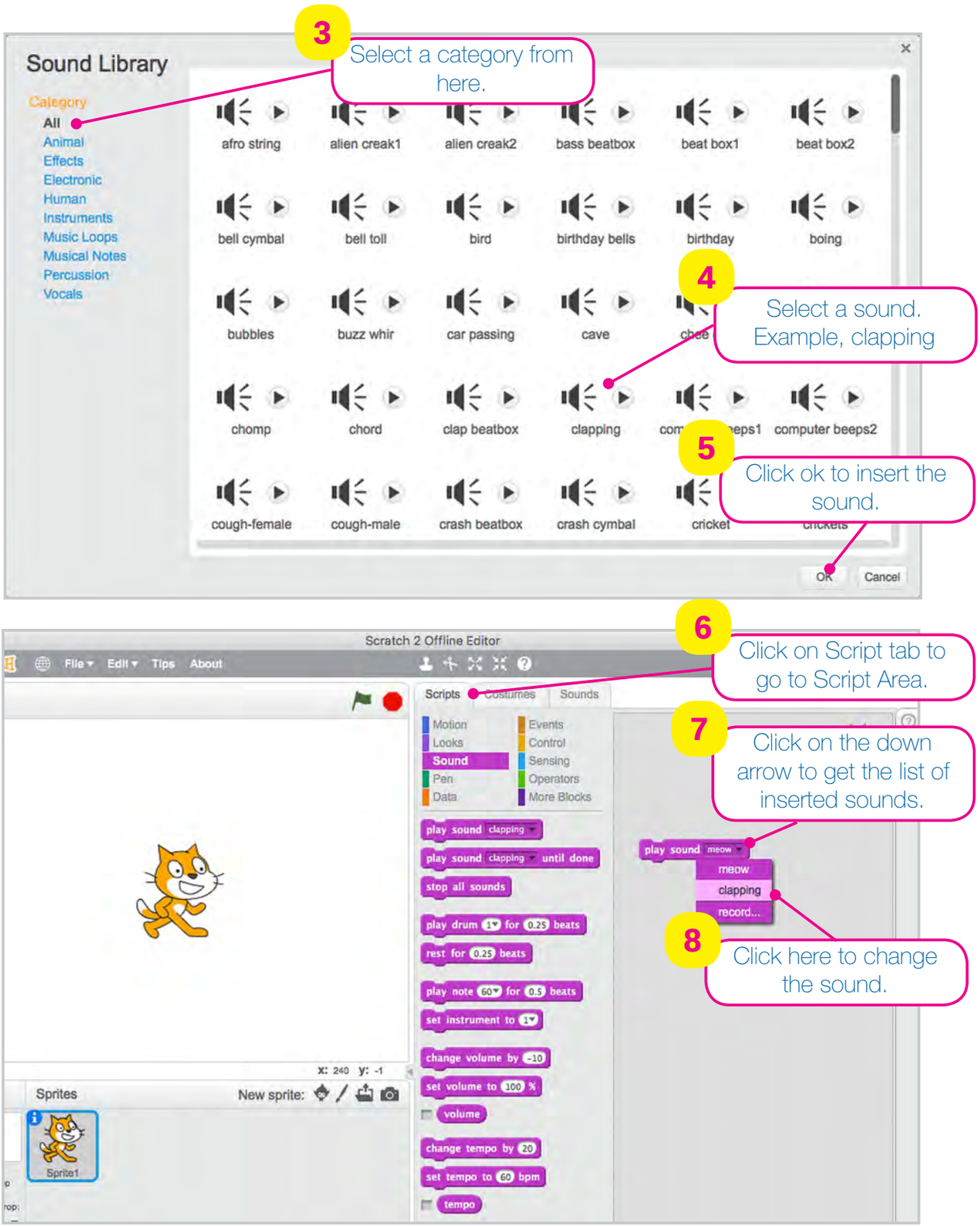


Figure 7.4. Changing default sound

We can add two or more sounds to the Sprite. These sounds can be arranged to be played together, one after another or completely stopped as shown in Figure 7.5.

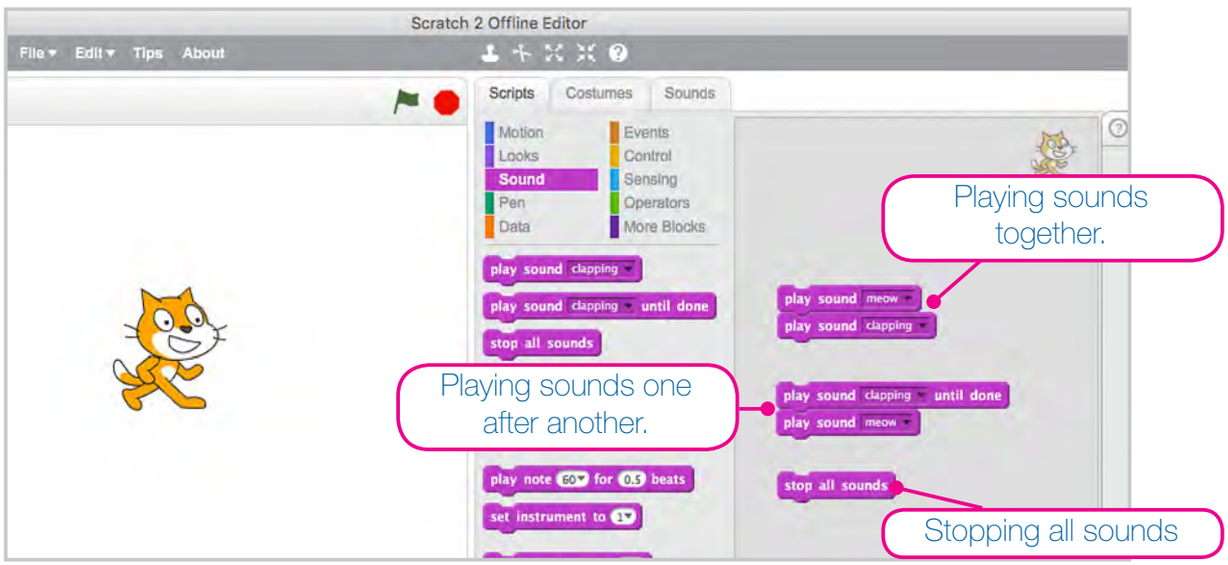


Figure 7.5. Playing and stopping sounds.

Try This On Machine

Create an animation in which a dog barks. Then make it move a distance and then bark and howl at the sametime. Let the dog turn in opposite direction and howl and then bark.

7.3 Running scripts

We have learned to run scripts by clicking on the blocks. We can also run scripts by using Green Flag button ( ) at the top-right corner of the Stage. will only work when when clicked block is used in the script.

Follow the steps given below to run the script which moves the Sprite.

1. Select the Events category under Scripts tab.
2. Drag when clicked block to the Script Area. Drag and attach move steps block to it.

❸ Click at the top-right corner of the Stage to run the scripts. You can stop running the script any time by clicking the Stop button as shown in Figure 7.6.

Figure 7.6. Using when green flag clicked block

Try This On Machine

Create an animation in which a horse moves 200 steps to right and neighs. It should then turn 45 degrees counter-clockwise and move to new position x = 60 and y = 70. Your animation should start when is clicked.

7.4 Creating Sprite and Backdrop

We may require Sprites and Backdrops which are not in the Library. In such case, we can create our own Sprites and Backdrops. Scratch has Paint editor which can be used to create Sprites and Backdrops. It is similar to the Paint program that you have learned in Chapter 3.

A. Creating Sprite

Click on the Brush tool under New sprite to open Paint editor as shown in Figure 7.7. Start drawing your Sprite.

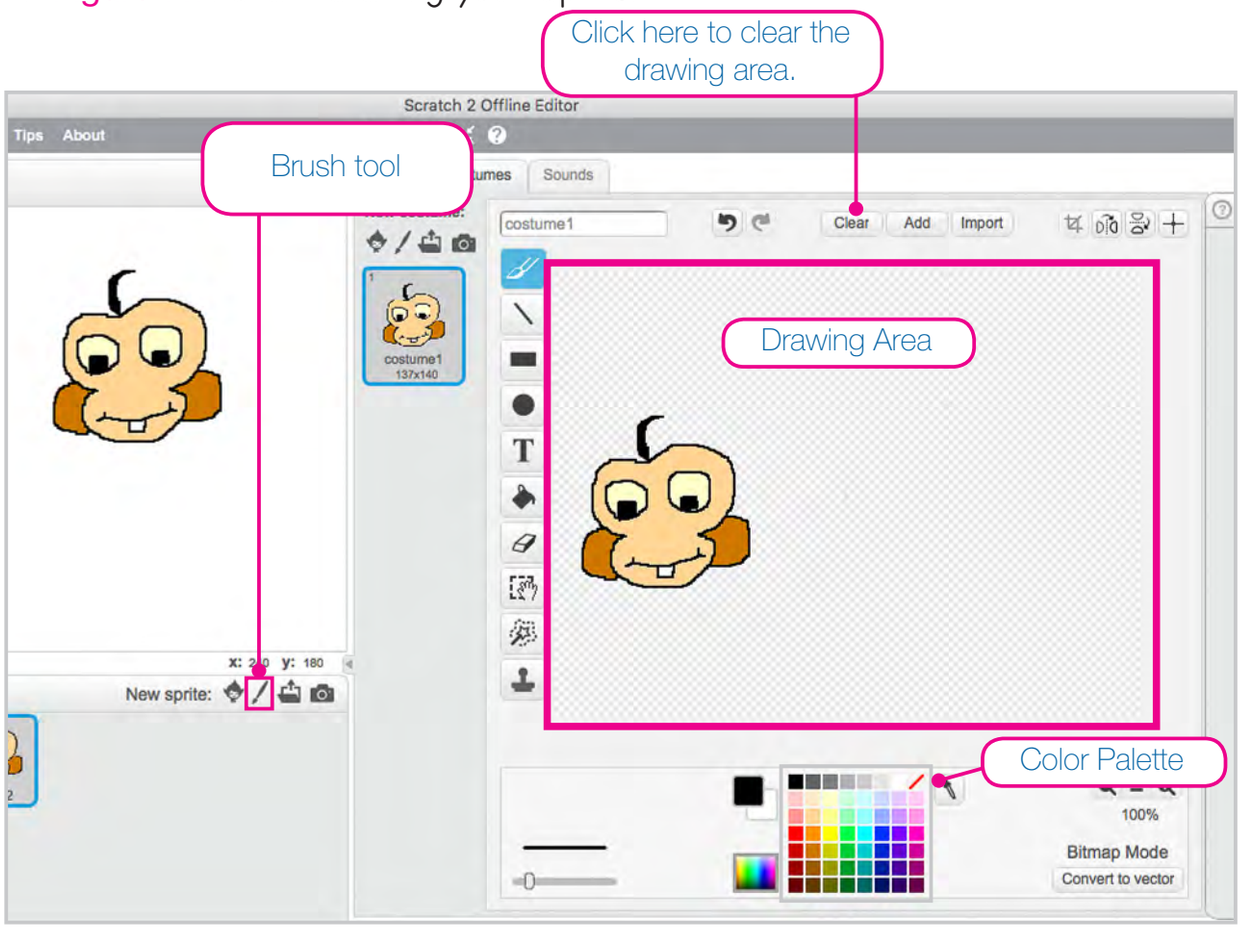


Figure 7.7. New sprite drawing area

B. Creating Backdrop

Click on the Brush tool (Figure 7.8) under New backdrop to open Paint editor. Start drawing your Backdrop.

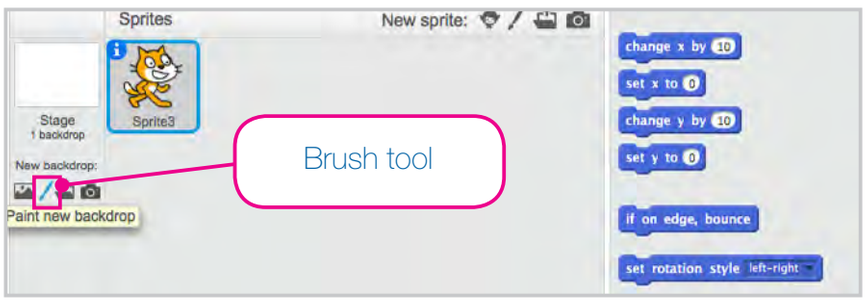


Figure 7.8. Opening backdrop drawing area

C. Deleting Backdrop

By default a white Backdrop is applied on the Stage. A Backdrop can only be deleted if there are more than one Backdrops in the program. To delete the default white Backdrop, first add a new Backdrop from the library. Select the default Backdrop by clicking on it and delete it as shown in Figure 7.10.

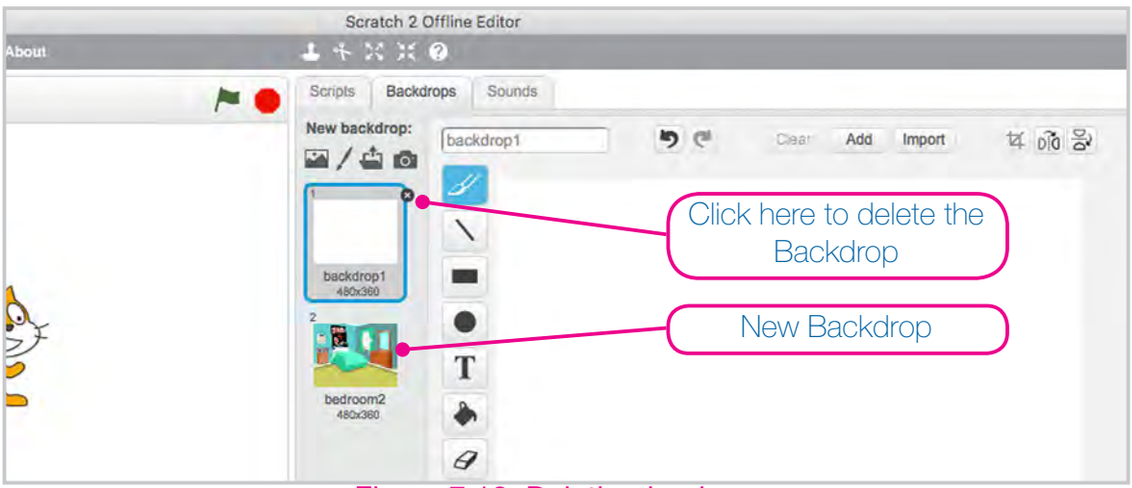


Figure 7.10. Deleting backrop

Try This On Machine

1. Open a new Scratch window.
2. Paint a garden and use it as the Backdrop.
3. Draw a butterfly as a Sprite.
4. Use different Motion blocks to create a simple animation.
5. Save your file on the Desktop.

Now You Know

1. There are different Motion blocks that can be applied to the Sprite.
2. Clicking the Green Flag will run the script attached to the "When Green Flag Clicked" block.

3. Sound can be added to Sprites.
4. New Sprites and Backdrops can be created using Paint editor in Scratch.

Check Your Progress

1. Write TRUE or FALSE against each statement given below:
   (a) Sprites from the Library can be modified.
   (b) We use a Turn block to move the Sprite horizontally.
   (c) Using Green Flag is one way to run a script.
2. Dorji wants to move the Cat towards the mouse pointer. He arranges the blocks as shown in Figure 7.11 and clicks the Green Flag. The Cat does not move towards the mouse pointer.

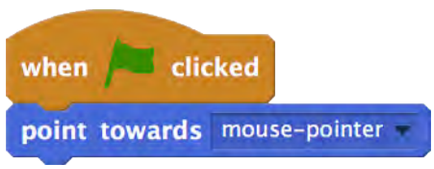


Figure 7.11 Dorji's script

Help Dorji to move the Cat towards the mouse pointer.

Explore Further

Draw your own Sprite and Backdrop to show a bird flying over the mountain. Add appropriate sound in your animation.

Weblinks

1. **Explanation of types Blocks in Scratch.**
   http://wiki.scratch.mit.edu/wiki/Blocks
2. **Changing Backdrop.**
   http://wiki.scratch.mit.edu/wiki/Costume

3. Ways to create a Sprite.

http://wiki.scratch.mit.edu/wiki/How_do_I_create_a_new_sprite%3F

END OF THE YEAR ACTIVITY

This activity can be spread over multiple periods. Students need not complete it in one sitting like a regular class test or an examination.

The activity

Key Skills:

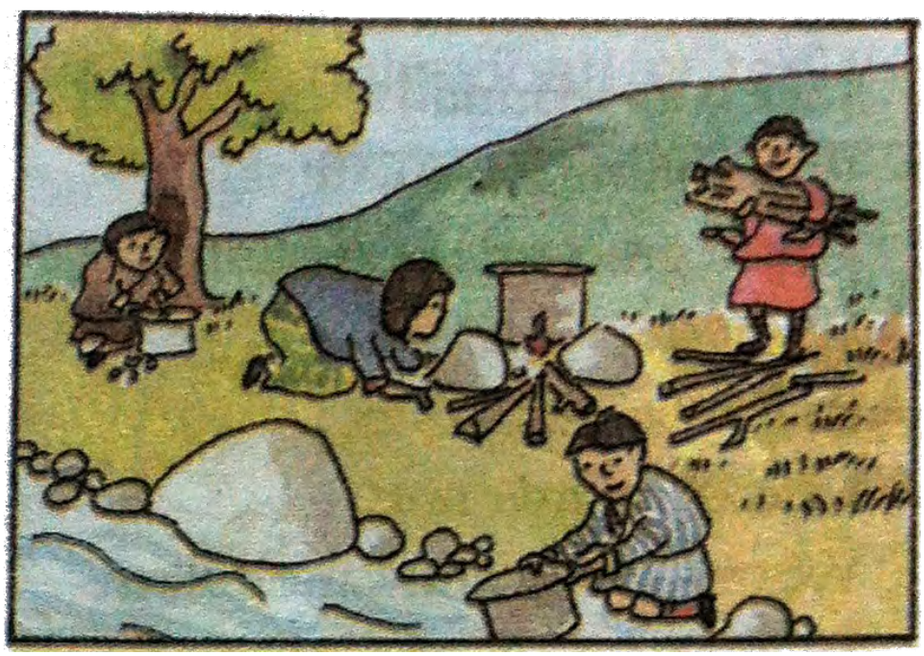
1. Basic file operations
2. Basic operations in Scratch
3. Mouse and keyboarding skills

Task

1. Four friends Tashi, Kado, Sagar and Pem are on a holiday. Look at the pictures 1, 2, 3, 4 and write a story on them using the Notepad. Save it as A Dangerous Picnic.
2. Draw picture 4 of the story using Paint editor in Scratch. Make Pem as a Sprite.
3. Use the picture you have drawn to show Pem running towards the tree. Save it as Running Pem.
4. If you were one of the four friends, what advice will you give to others when they go out for a picnic? Open the file A Dangerous Picnic in Notepad. Write some words of advice. Save it again when you are finished.

1

2



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3

4

ASSESSMENT CHECKLIST

Name of the student : .....

Roll No. ..... Class : ..... Section : .....

School : .....

Tick (✓) under the appropriate column 1, 2 or 3 against each core competency statement. The numbers, as described below, indicate the competency level of a student in each of the stated skills:
1 = Some of the time 2 = Most of the time 3 = All the time
For Explore Further activity, use tick (✓) or cross (x) to show whether the student was able to successfully do it or not.

Sl. No.	Chapter 1 Core Competencies	Degree		
		1	2	3
1	Identify main parts of a computer system (System Unit, Monitor, Keyboard and Mouse).			
2	Demonstrate an understanding of the functions of the main parts of computer.			
3	Follow correct procedures to start and shutdown the computer.			
	Sub Total A			
Explore Further				
a	Identify different types of computers.			
b	Name some places where computers are used.			

Sl. No.	Chapter 2 Core Competencies	Degree		
		1	2	3
1	Follow correct body postures while using computer.			

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2	Demonstrates an understanding of proper placement of computer parts while using them.			
3	Follow computer laboratory rules.			
	Sub Total B			
Explore Further				
a	Demonstrate an understanding of importance of body posture while using other machines.			
b	Demonstrate an understanding of importance of computer laboratory rules.			

Sl. No.	Chapter 3 Core Competencies	Degree		
		1	2	3
1	Identify basic components of Windows Desktop.			
2	Use mouse and keyboarding efficiently.			
	Sub Total C			
Explore Further				
a	Demonstrates high degree of mouse and keyboard handling skills.			

Sl. No.	Chapter 4 Core Competencies	Degree		
		1	2	3
1	Identify different types of computer files.			
2	Demonstrates an understanding of basic file management techniques of creating and saving, retrieving and editing saved files.			
	Sub Total D			
Explore Further				
a	Use basic file management techniques of creating and saving, retrieving and editing saved files in many applications.			

Sl. No.	Chapter 5 Core Competencies	Degree		
		1	2	3
1	Demonstrates basic understanding of the Internet and World Wide Web.			
2	Use web browser to open common websites.			
	Sub Total E			
Explore Further				
a	Demonstrate the ability to use web browser independently.			

Sl. No.	Chapter 6 Core Competencies	Degree		
		1	2	3
1	Play computer games skilfully.			
2	Identify basic components of Scratch window.			
3	Use different Sprites and Stage backgrounds from the library.			
4	Apply simple Motion blocks to move the Sprite.			
	Sub Total F			
Explore Further				
a	Demonstrate ability to use Sprites and Backdrops creatively.			

Sl. No.	Chapter 7 Core Competencies	Degree		
		1	2	3
1	Apply different ways to run the blocks.			
2	Demonstrate an understanding of the uses of Motions blocks.			
3	Use sounds with Sprites.			

4	Create new Sprites and Backdrops.			
	Sub Total G			
Explore Further				
a	Demonstrate ability to create and use Sprites, Backdrops and Sound for an animation.			

Total A = Sub Totals A + B + C + D + E + F + G = ...

Sl. No.	End of the Year Activity	Degree		
		1	2	3
1	Picture drawn in Paint editor. (Assesses the student's proficiency to use mouse to draw).			
2	Pem running in Scratch. (Assesses the student's competency to create a custom Sprite and apply a simple motion to it).			
3	Advice added to the story and saved in Notepad. (Assesses the student's ability to use keyboard,and save and open file).			
	Total B			

Total points scored = Total A + Total B = ...

Score = $\frac{\text{Total points obtained}}{\text{Number of checklist items} \times 3} \times 100\ \%$

Grade = ...

Note: Refer the table on page 75 to award grade.

ASSESSMENT PLAN

The achievement of learning objectives will be the focus of assessment for this course. This will include essential ICT knowledge, skills, values and computational thinking practices. This assessment comprises two parts: the **through-course assessment** and the **year end assessment**, which will be examined through **observations**, **conversations** and **portfolios**.

The through-course assessment tasks consist of **Try This**, **Try This on Machine** and **Check Your Progress** which are designed to gather evidences of student proficiency in specific skills defined in the learning objectives.

The year end assessment requires students to apply the key skills they have acquired over the year in a holistic way. This is a project based assessment spanning over several periods. Sample project is included in the book but teachers may choose to create their own projects, modelled on the sample. Students should also be encouraged to come up with their own projects. Teachers should ensure that key skills learnt during the course are clearly identified and applied in the projects.

In doing the assessment, teachers should focus on observing and discussing:

» how students carry out ICT supported learning.

» how students collaborate with peers, and seek support from parents and teachers.

» how students are progressing in their learning on the basis of work they are doing or have completed.

They should be given ample support and feedback to develop their competency in the key skills before they are assessed. This is to ensure that the nature of assessment is mostly formative as envisioned for this curriculum.

Assessments are done through checklists based on the learning objectives. Student's competency will graded in a scale of 1 to 3. Grades should be given after careful evaluation of how consistently the student has demonstrated the required competency.

The overall competency of a student is determined on the basis of the cumulative score of through-course assessments and the year end assessment. Based on the student's score, a grade from A to D will be awarded as per the table given below:

Score	Grade	Description
80% and above	A	Student is an expert in this area. He/She can provide guidance, troubleshoot and answer questions related to this area where the skill is used.
60% to 79%	B	Student can perform the actions associated with this skill without assistance. He/She is certainly recognized amongst the peers as "a person to ask" when difficult questions arise regarding this skill. He/She might require help from the teacher once in a while.
40% to 59%	C	Student is able to successfully complete tasks in this competency as requested. He/She will require help from the teacher time to time, but he/she can usually perform the skill independently.
Below 40%	D	Student have basic knowledge and understanding from experience gained in a classroom. He/She is expected to need help when performing this skill.

Assessing Student Performance

Assessment is an integral part of teaching and learning. Teachers and schools are expected to conduct assessment to provide information about student's learning to the learner, the teacher and the parent.

Assessment is broadly of two types: formative assessment and summative assessment. Assessment primarily carried out to help students to learn is usually called formative assessment or assessment for learning. It takes place continually as students are learning. Assessment which is primarily for other purposes is often called summative assessment or assessment of learning. It usually comes at the end of learning.

The table below shows how assessment is used for variety of audiences and purposes.

Assessment OF Learning	Assessment FOR Learning
- To monitor national standards. - To report on achievement to students themselves and parents. - To make teachers, administrators and politicians accountable. - To screen students for higher studies and employment. - To determine what courses students should take in school or university.	- To help students to learn by diagnosing difficulties. - To support students to learn by providing feedback.

The distinction between summative and formative assessment can be confusing. After all, the results of assessment can often be used for both the purposes. When the results of assessment are used to evaluate student performance, it is called summative assessment. When the results of assessment are used to improve student performance, it is called formative assessment.

Assessment requires a variety of data-gathering methods, including observations, interviews, performances, and collections of student work.

Literacy with ICT looks at assessment through three lenses: observation, portfolio, and conversation.

Observations

By observing learners as they engage in using ICT, teachers determine which behaviours students have demonstrated and those they are still working towards. This information helps teachers plan for instruction that will further develop student's literacy with ICT.

Observation can be either direct or indirect. Direct observation is when you watch interactions, processes or behaviour as they occur, such as teacher watching student explore the Internet to find specific information. The teacher may focus on the student's ability choose the right tool and the relevancy of the information retrieved.

Indirect observations are when you watch the result of interaction, process or behaviour. For example, teacher can inspect the cleanliness of the computer laboratory to determine whether the students are following the laboratory rules.

Effective observation involves proper planning to determine the focus of observation. For example, in order to know how well your student applied the strategy while playing logical games, the focus should be on looking at the time taken to complete the game.

Teachers could use checklist, recording sheet and field notes to help them observe student's progress in use of ICT.

Conversations

Assessing literacy with ICT involves setting learning goals, building criteria and giving and getting feedback. These conversations may be shared between students, between teacher and student or be self-reflective. They may also be student-led conferences involving parents. This type of conversation is an important part of reporting to you about your child's literacy with ICT.

An effective conversation provides an opinion concerning the strengths and weaknesses of the student. The result may be then used to plan and design future learning programs.

Conversation may start with simple question of what their plan is, quality of the work done and the results they achieved.

Portfolios

As they learn, students use portfolios to accumulate evidence of their literacy with ICT. These portfolios may be process or product portfolios, or a combination of the two. They may be paper-based or electronic. The electronic portfolio or e-portfolio may include images, audio, PowerPoint slides of the project, animation, video or a simple reflection. It can be used by teacher, parents and students themselves to document what they are doing (either day-to-day things or through their best work or improvements they've made).

Involving student actively in the portfolio process develops self-awareness, goal-setting, and decision-making skills essential for lifelong learning. They integrate diverse experiences in their portfolio over time and assess their own progress based on evidence and criteria, thus fostering the sense of responsibility and ownership of their own learning.

Students can organize their portfolios, as blogs, reflections on wiki, discussion on forum, and podcasting and vodcasting their works.

Focus on Proficiency

Assessment in this curriculum is based on holistic assessment of ICT skills and knowledge. Component skills would not be isolated and individually assessed. Doing so places strong emphasis on ICT literacy. Instead, a checklist would be developed which will define children's levels of performance or proficiency in each of the intended learning outcomes. It is hoped this will provide a good overview of children's area of strengths and weaknesses to plan for future learning.