

SMART COMPUTING

Teacher's Resource Book 1



Contents

S no.	Title	Page
1.	Introduction	1
2.	Lesson plan 1: Watching a Cartoon	2
3.	Lesson plan 2: Smartphones and Tablets	5
4.	Lesson plan 3: Personal Computers	7
5.	Lesson plan 4: Comparison of PC, Tablet and Smartphone	9
6.	Lesson plan 5: Learning to use Smartphone and Tablet	11
7.	Lesson plan 6: Learning to Operate a PC	13
8.	Lesson plan 7: Learning to Paint on a Computer	15

Introduction

In terms of machine development and application, no machine has advanced as rapidly as the computer. Not long ago, computers were massive structures with miles and miles of wiring that only performed tasks that are now considered very simple.

Computers are now an integral part of our daily lives. There is no escaping this wonderful machine, whether we are at work, on vacation, studying at school or college, or simply going to the grocery store.

It is becoming increasingly important that children learn how to use this machine at the earliest possible opportunity. That opportunity comes in the form of computer education at school. Still, any type of education provided at the early stages of learning must not only be comprehensive but also presented in a way that is simple for both the teacher to explain and the students to understand. This is where **Smart Computing** stems from.

The **Smart Computing** series comprises five books. These books provide information on the awareness of devices found in people's homes and how to use them.

Introduction to the teaching guides

Lesson plans, useful tips, and worksheets with interesting learning activities are all included in the teaching guide. A list of goals and learning outcomes appears in each lesson. You can create your lesson plans by using the provided sample plans. The lesson plans comprise introductory activities lasting 3 to 5 minutes, which explain the concepts being taught. This is followed by 30 minutes of explanation and a 5-minute recap. Sample worksheets have been provided where need be for additional support. Answers to exercises within the lessons have also been provided.

Lesson 1 – Watching a Cartoon

Teaching objectives

- To introduce different types of machines
- To teach the importance of computers in daily life

Learning outcomes

Children will be able to learn about the different types of machines and their uses.

Lesson plan

Time period: 40 minutes

Introduction: 5 minutes

Introduce the topic in an informal way to the students by asking the following questions:

Do you watch cartoons or TV shows? What device do you use to watch them and why? How often do you use your device? What else can you watch or do with a mobile phone or tablet?

If possible bring different types of simple machines and show them to the class. Explain that these are simple machines and encourage them to recall the machines they have in their homes.

Main Lesson: 30 minutes

Read aloud pages 4 and 5 with the class. Peer reading sessions are an option if your class has a lot of children. To make sure they are understanding and paying attention, ask questions. Some are mentioned below:

- *What are machines?*
- *Name a few machines that you or your parents use at home.*
- *Why do you think people use different types of machines?*
- *Can you name a machine that can work like a human being?*

Guide the children to complete the work on pages 6 & 7. It would be a good idea to take the students to the computer lab and look around for different types of machines in the room. Elaborate that the machines used in daily life make life easy.

Lesson wind-up: 5 minutes

Recap what was taught in the class. The exercises can be given as classwork and homework. Sample worksheets can also be given as additional work.

Sample worksheets

a) Design your own tablet game or create a table cut-out activity.

b)

Look at the pictures carefully.

Which one is a machine? Circle yellow.

Which one is not a machine? Circle blue.



Exercise answers

A. Choose the right answer.

- 1) All
- 2) A
- 3) B

B. Match the following with correct answers.

- 1) TV
- 2) Computer
- 3) Tablet
- 4) Laptop
- 5) Smartphone

C. Rearrange the jumbled words.

- a) tablet
- b) smartphone
- c) laptop

Lesson 2 – Smartphones and Tablets

Teaching objectives

- Explain different uses of smartphones/tablets
- Dos and don'ts of both devices

Learning outcomes

The students should be able to:

- List some of the different uses of smartphones and tablets
- Explain the limitations of both devices

Lesson plan

Time period: 40 minutes

Introduction: 5 minutes

Ask the students the following questions.

How many people in your family have smart phones? How do people use them? Do your parents allow you to use their phones? Can you tell some differences between smartphones and tablets?

Main Lesson: 30 minutes

Read aloud pages 8-10 with the class. To make sure they are understanding and paying attention, you can show them photos of different devices and ask them what they are.

Write the words *smartphone* and *tablet* on the board and ask the students how they can use each device. Listen to all the answers and write them on the board.

Guide the students to do the exercise on page 11.

Explain to the children the importance of screen time. Tell them that they should set a time limit for using these. Excessive staring at a phone or tablet screen can strain their eyes and also weaken their eyesight.

It would be a good idea to show them the two different kinds of phones and discuss the differences between a regular phone and a smartphone.

Lesson wind-up: 5 minutes

Recap what was taught in class. The exercises can be given as classwork or homework.

Exercise answers

A. True or false

1. False
2. False
3. False
4. True
5. True

B. Join the dots

C. Write two things that you cannot do with regular mobile phone.

You cannot do things by touching the screen.

Not all regular mobile phone may have a camera to take pictures.

Lesson 3 – Personal Computers

Teaching objectives

- To understand the different parts of computers
- To understand the different uses of computers

Learning outcome

Students should be able to understand the parts of a computer and what they can be used for.

Lesson plan

Time period: 40 minutes

Introduction: 5 minutes

Start the lesson by showing different photos of communication devices to the classroom.

If possible, show a mobile phone to the class. Explain how it is similar to a computer. For example, both of them have a screen, keypad, speaker, etc.

Main lesson: 30 minutes

Let the students read the pages 12-14 with your assistance. You can show the students how different activities are done on a computer. Allow the students to take turns in typing their names and dates on the computer.

Have a class discussion about the different kinds of activities that can be performed on a computer for e.g. using the Internet, watching movies or playing music.

It would be a good idea to take the children to the lab and let them see the different kinds of computers and their parts.

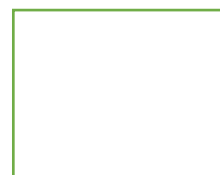
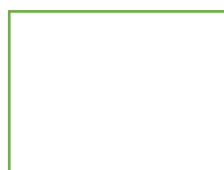
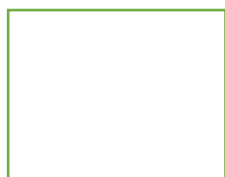
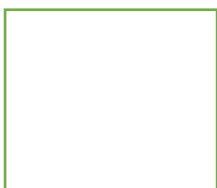
The exercises can be given as a classwork and homework. Sample worksheets have been provided for extra work.

Lesson wind-up: 5 minutes

Encourage students to recap the main points they have learnt in class today.

Sample worksheet

What can be done on a computer? Draw pictures in the boxes below.



Exercise answers

A. Fill in the blanks.

1. Keyboard
2. Monitor
3. Desktop
4. Two
5. Selecting and moving

B. Colour the pictures of computer parts.

Ask children to colour the parts accordingly.

Lesson 4 – Comparison of Personal Computer, Tablet and Smartphone

Teaching objective

- To understand the differences between devices

Learning outcome

Students will be able to understand the strengths and weaknesses of three devices—personal computer, tablet and smartphone.

Lesson plan

Time period: 40 minutes

Introduction: 5 minutes

Start the lesson with recalling what the children have learnt in the previous lesson. You can ask the following questions.

How many of you have a PC at home? Who uses it? What work can be done on a PC/smartphone/tablet?

Main lesson: 30 minutes

Read pages 16 and 17 with the class. You can do group reading if there are too many children in the classroom. Discuss the lesson with the children. Make groups of 2-3 children and ask them to state the strengths and weaknesses of the three devices.

You can use the following questions:

- *Which device is better for typing lengthy documents?*
- *Which device uses a lot of power?*
- *Which device needs minimal power?*
- *Which device cannot play CD/DVDs?*
- *Through which device can you make voice and video calls?*
- *Which device do you think is easier to use? Why?*

Guide the students to do exercise A and B on pages 18 and 19 in classroom.

Lesson wind-up: 5 minutes

Recap what was taught in class. The exercises can be given as classwork and homework.

Exercise answers

A. Choose the best answer.

- 1) Personal computer
- 2) tablet
- 3) Smartphone
- 4) personal computer

B. Differences between personal computer and smartphone.

Personal computer

- They can play CDs and DVDs.
- They are better than a tablet for typing lengthy documents.
- The big screen makes watching movies, playing games and reading books more fun.

Smartphones

- They are lightweight and easy to use.
- They are able to make voice and video calls.
- They are good for playing games, music, taking photos and reading email.

C. Name four things that you can do on all three devices.

- 1) Play games
- 2) Surf the Internet
- 3) Watch cartoons or movies
- 4) Listen to music

D. Match the following.

- 1) Computer—can do complex work
- 2) Smartphone—can make voice and video calls
- 3) Tablet—watching videos

Lesson 5 – Learning to use Smartphone and Tablet

Teaching objectives

- To learn how to use smartphone and tablet

Learning outcome

By the end of this chapter, students will be able to understand how to use a smartphone and tablet.

Lesson plan

Time period: 40 minutes

Introduction: 5 minutes

Start the lesson by bringing smartphone or tablet in the classroom. You can make groups of children by twos or threes and let them have a go at trying different apps on the phone.

Main Lesson: 30 minutes

Ask children to read pages 20-22 with your assistance. You can do peer reading if there are many children in the classroom. Ask them questions to make sure they are understanding and paying attention. Some are mentioned below:

- *How are both devices similar?*
- *Can you take a photo with a smartphone? Where are the photos/videos collected?*
- *How do we make a voice/video call?*

You can ask the students to do exercises A and B in their notebooks.

Exercise C can be done as homework.

Lesson wind-up: 5 minutes

Recap what was taught in class. The exercises can be given as homework and classwork.

Exercises Answers

A. On which device we do the following.

- a) Launch a video - smartphone and tablet
- b) Surf Internet - smartphone and tablet
- c) Take pictures - smartphone and tablet

B. Fill in the missing letters.

1. Touchscreen
2. Smartphone
3. Camera
4. Calculator
5. Tape
6. Video

C. Yes or no

1. Yes
2. No
3. No
4. Yes
5. No

Lesson 6 – Learning to Operate a PC

Teaching objectives

- To learn how to operate a personal computer
- To learn about the features of a personal computer

Learning outcomes

Students should be able to:

- Understand the different features of a computer
- Understand how to turn on and off a computer

Lesson plan

Time period: 40 minutes

Introduction: 5 minutes

It is suggested to take the children to the computer lab and teach them about turning on and turning off a computer. Group children in twos and threes for this practical work.

Main Lesson: 30 minutes

Take the children to the computer lab and begin the lesson by reading the pages 24 and 25. You can ask them questions as mentioned below for better understanding:

- *How many of you are allowed to use a PC at home?*
- *What is the process of turning on a computer is called?*
- *What is the desktop?*
- *What are icons?*
- *Look at the screen. Where is the taskbar?*
- *What happens when you click the left button on the mouse twice?*

Let the children read pages 26 to 28 with your help. Ask the children to follow the steps given in the chapter for starting a game. You can also tell them the correct way of logging off or shutting down the computer. Mention that it is very important to keep your computer area clean. They should not eat or drink when working on a computer. They should also cover the computer once they have finished working on it. Ask the children to do exercise A and B in their notebooks.

Lesson wind-up: 5 minutes

Recap what was taught in the lesson. Exercises C and D can be done for their homework.

Exercise answers

A. Make a list of things you should do to keep your computer safe.

1. Keep the work area clean.
2. Keep your computer covered when not in use.
3. Do not use electronic devices with wet hands.

B. Tick the option you should select to turn off your computer.

Shut Down

C. Fill in the blanks.

1. Games and movies
2. Shut down
3. Boot up
4. Desktop
5. Icons

D. Mark whether True or False.

1. False
2. True
3. True
4. False
5. False

Lesson 7 – Learning to Paint on a Computer

Teaching Objectives

- To learn how to use the application MS Paint and its different tools

Learning Outcome

Students should be able to:

- Draw pictures on MS Paint and colour them
- Use the different tools of MS Paint

Lesson Plan

Time period: 40 minutes

Introduction: 5 minutes

This is another practical lesson where you have to take the children to the computer lab and show them how to use the MS Paint app.

Open the MS Paint app and show them the different tools.

Main Lesson: 30 minutes

Start a lesson by showing the application on the computer. Show the different tools that are used to draw on the MS Paint. Ask them the following questions to make sure they are paying attention:

- *What is the white area called?*
- *What is a ribbon?*

Show the students the different tools used in MS Paint and read pages 30-32. Ask the children to read pages 33 and 34 in groups.

Groups children in twos and threes to let them try the different tools.

Give them a task and ask them to follow the steps given in the chapter.

Ask the students to do exercises A and B in their notebooks.

Lesson wind-up: 5 minutes

Recap what was taught in the class. Exercises C and D can be done for homework.

Sample worksheet

Paint me a picture

1. Select your favourite shape
2. Click on the fill button.
3. Select a colour and click on the shape
4. Repeat steps 1-3 to create other shapes for your picture.
5. Select a text box and draw a text box
6. Type the name of your picture.

Exercise Answers

A. Which tools will you use for the following tasks:

1. oval
2. eraser
3. square
4. paint can
5. text

B. Choose the best answer.

1. Colour box
2. TWO
3. Shapes

C. Fill in the missing letters.

1. Pencil
2. Eraser
3. Colour
4. Text

