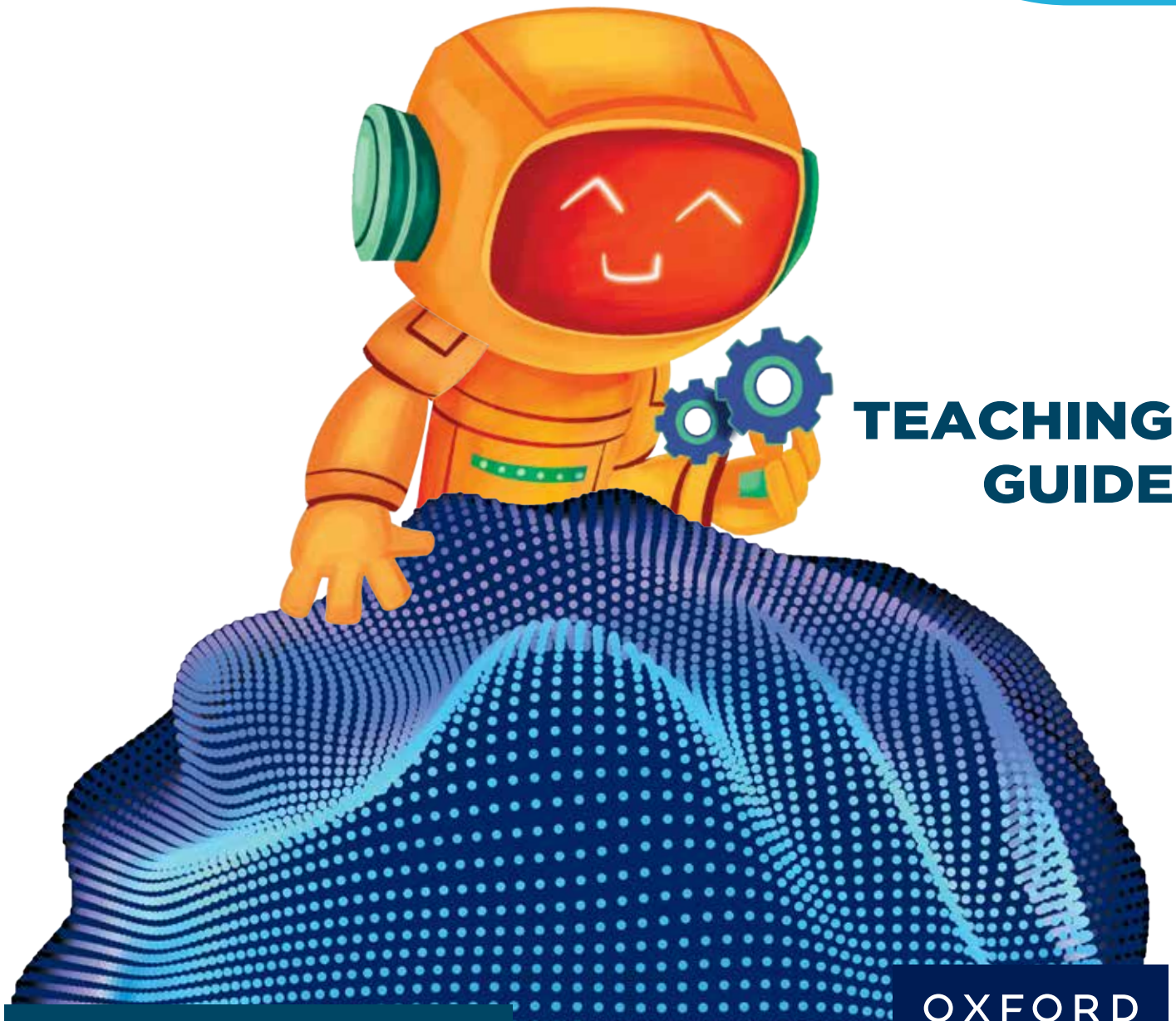
COMPUTER WHIZ 1

Fourth Edition



TEACHING GUIDE

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Introduction

Computer Whiz books 1-8 is a diligent attempt to provide the necessary knowledge, skills, and attitudes compatible with modern developments in computers and technology.

This guide is a collaborative effort, drawing insights from educational experts and the latest pedagogical approaches. It also maps the *Computer Whiz* primary series on Howard Gardner's theory of 'Multiple Intelligences'. Awareness of multiple intelligences promotes an inclusive classroom where all students feel valued and supported, regardless of their learning style.

Knowing about 'Multiple Intelligences' can significantly enhance teaching effectiveness by recognising and addressing the diverse ways in which students learn. Recognising and valuing different types of intelligence helps students feel appreciated for their unique abilities. This can boost their confidence and motivation to learn.

The content in each chapter is supported by

Vocabulary Cloud

Explains essential terminology used in the chapter

1 Vocabulary Cloud

Lesson Plan

Step-by-step and interactive lesson plans that cater to diverse pupil needs

(Depending on available time, resources, and pupils' understanding, the ideas from these lesson plans can be redistributed among lessons. It is recommended to organise the class in such a manner that pupils get some practice time at the end of the class.)

2 Lesson Plans

Concept Cloud

Delves into additional/ optional information and intriguing analogies to deepen understanding

3 Concept Cloud

Class Activity

Fosters an interactive classroom environment with our specially designed activities which are integrated into the curriculum.

4 Interactive Class Activities

Digital Resources

Lesson wise mapped digital resources provided on the Oxford University Website to enrich students' learning experience. These resources are accessible via QR codes at the back of the book.

5 Digital Resources

Homework

Suggested homework at the end of each lesson plan to reinforce the concepts.

6 Homework For Extended Learning

Answer Key

Potential responses to end-of-chapter questions, ensuring a well-rounded educational experience for your students.

7 Suggested Answers to End Of Chapter Questions

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Multiple Intelligences

Multiple Intelligences is a theory proposed by Howard Gardner in 1983, which suggests that intelligence is not a single, fixed attribute that can be measured solely by IQ tests. Instead, Gardner identified several distinct types of intelligences that individuals may possess in varying degrees.

The theory of multiple intelligences broadens the understanding of human capabilities and emphasises the importance of recognizing and nurturing diverse talents in educational settings. By acknowledging that intelligence is multifaceted, educators can create more inclusive and effective learning environments that cater to the unique strengths of each student.

Implications for education

Gardner's theory has significant implications for education. It suggests that teaching methods should be diversified to cater to different types of intelligences. Following are the types of intelligences:

Linguistic Learners might benefit from reading and writing activities.

Logical-mathematical Learners might excel with problem-solving tasks.

Spatial Learners might engage more with visual aids and diagrams.

Bodily-kinesthetic Learners might thrive in hand-on activities.

Musical Learners might enjoy learning through songs and rhythms.

Interpersonal Learners might prefer group work and discussions.

Intrapersonal Learners might benefit from self-reflective tasks.

Naturalistic Learners might enjoy learning through nature-related activities.

How to assess multiple intelligence in students?

Assessing multiple intelligences in students involves using a variety of methods to identify their strengths and preferences across different types of intelligences. Here are some effective strategies:

1. Observations

- **Classroom Activities:** Observe how students engage in different activities. Note which tasks they excel in and enjoy the most.
- **Behavioural Patterns:** Pay attention to how students interact with peers, solve problems, and express themselves.

2. Surveys and Questionnaires

- **Self-Assessment Tools:** Use surveys where students can reflect on their own preferences and strengths.
- **Teacher-Designed Questionnaires:** Create questionnaires that ask about students' interests and activities outside of school.

3. Portfolios

- **Work Samples:** Collect samples of students' work across various subjects and activities.
- **Reflective Journals:** Encourage students to keep journals where they reflect on their learning experiences and achievements.

4. Performance Tasks

- **Projects and Presentations:** Assign projects that allow students to demonstrate their skills in different areas, such as creating a video, writing a report, or designing a model.
- **Hands-On Activities:** Use tasks that require physical manipulation, such as building, drawing, or conducting experiments.

5. Peer and Self-Evaluations

- **Peer Feedback:** Have students provide feedback on each other's work, focusing on different intelligences.
- **Self-Evaluation:** Encourage students to assess their own work and identify areas where they feel most competent.

6. Standardised Tests and Inventories

- **Multiple Intelligences Inventories:** Use standardised tools designed to measure multiple intelligences, such as the Multiple Intelligences Developmental Assessment Scales (MIDAS).

How to embed multiple intelligences in the lesson plans of Computer Whiz?

To embed multiple intelligences in the teaching and lesson plans of the Computer Whiz, you can incorporate various activities and strategies that cater to different types of intelligences. Here are some suggestions:

1. Linguistic Intelligence

- **Reading and Writing Tasks:** Include activities where students read instructions, write reflections, or create stories related to computer concepts.
- **Discussions and Debates**: Encourage students to discuss topics like the ethical use of technology or the impact of computers on society.

2. Logical-Mathematical Intelligence

- **Problem-Solving Activities:** Integrate exercises that involve coding, debugging, and logical reasoning.
- **Data Analysis:** Use tasks that require students to analyse data, such as creating graphs or interpreting computer-generated reports.

3. Spatial Intelligence

- **Drawing and Design:** Include activities that involve creating digital art using Paint or other graphic design software.
- **Visualization Tasks:** Use diagrams and flowcharts to help students understand computer processes and networks

4. Bodily-Kinesthetic Intelligence

- **Hands-On Activities:** Incorporate tasks that require physical interaction with computer hardware, such as assembling parts or using input devices.
- **Movement-Based Learning:** Use role-playing or physical games to teach concepts like network topologies or data flow.

5. Musical Intelligence

- **Sound and Music Projects:** Include activities where students create or edit audio files, or use music software to compose digital music.
- **Rhythmic Learning:** Use songs or rhythms to help students memorise computer commands or sequences.

6. Interpersonal Intelligence

- **Group Projects:** Encourage collaborative projects where students work together to solve problems or create presentations.
- **Peer Teaching:** Use activities where students teach each other about different computer concepts.

7. Intrapersonal Intelligence

- **Self-Reflection:** Include journal entries or self-assessment tasks where students reflect on their learning and set personal goals.
- **Independent Projects:** Allow students to pursue individual projects that align with their interests in technology.

8. Naturalistic Intelligence

- **Environmental Context:** Use examples of how technology is used in environmental science or agriculture.
- **Nature-Inspired Projects:** Include activities that involve creating simulations or models related to natural phenomena using computer software.

Chapter Wise Mapping of Computer Whiz 1

This is a chapter-wise mapping of the book *Computer Whiz 1* to Howard Gardner's Multiple Intelligences, highlighting which activities or content support each type of intelligence among children:

Chapter Name	Multiple Intelligences		
Chapter 1 Introducing Computers	**Linguistic Intelligence** Activities like "WORD WHIZ" where students learn new terms related to computers.	**Logical-Mathematical Intelligence** "WHIZ TASKS" involving counting and identifying different types of computers.	**Visual-Spatial Intelligence** Drawing different kinds of computers seen around the school.
Chapter 2 Parts of the Computer	**Logical-Mathematical Intelligence** Understanding the functions of different computer parts and connecting them correctly.	**Bodily-Kinesthetic Intelligence** Hands-on activities like connecting parts of a computer and using a mouse or keyboard.	**Visual-Spatial Intelligence** Drawing and labelling parts of a computer.
Chapter 3 Instructions for Computer Programs	**Logical-Mathematical Intelligence** Following and arranging instructions in the correct sequence.	**Visual-Spatial Intelligence** Using the camera app to take pictures and understanding the layout of computer programs.	

Chapter 4 Learning About Paint	**Visual-Spatial Intelligence** Using MS Paint and Tux Paint to create drawings and greeting cards.	**Bodily-Kinesthetic Intelligence** Hands-on activities with drawing tools and creating digital art.
Chapter 5 Solving Problems	**Logical-Mathematical Intelligence** Breaking down problems into smaller parts and recognizing patterns.	**Visual-Spatial Intelligence** Drawing shapes and identifying patterns in everyday life.
Chapter 6 Caring for Computers	**Interpersonal Intelligence** Understanding the importance of treating others with respect when using computers.	**Intrapersonal Intelligence** Reflecting on how to care for computers and the impact of one's actions on digital devices.

Reflection

Reflection after chapter-wise lesson planning is vital for continuous improvement, better student understanding, personal and professional growth, and the creation of more effective and inclusive lesson plans. It transforms teaching into a dynamic and responsive practice, ultimately enhancing the overall educational experience. Here are some key reasons why reflection is important:

Reflecting on each lesson helps teachers identify what worked well and what didn't. It provides valuable insights that can inform future lesson planning. Teachers can build on successful strategies and avoid repeating mistakes, leading to more coherent and effective lesson sequences.

Every classroom is diverse, with students having different learning styles and needs. Reflection helps teachers adapt their lessons to cater to this diversity, ensuring that all students have the opportunity to succeed.

While there are many reflection keys available online, attached here is a template that can be used with the Computer Whiz series lesson planning.

Reflection Key for Computer Studies

Chapter: _____ **Date:** _____

Key Competencies Checklist

1. Understanding Basic Concepts

- ☐ Can students explain the main concepts covered in this chapter?
- ☐ Do they understand the terminology used?

2. Practical Skills

- ☐ Are students able to perform the basic tasks and operations taught?
- ☐ Can they use the software or tools introduced in this chapter?

3. Problem-Solving

- ☐ Can students apply what they've learned to solve simple problems?
- ☐ Are they able to troubleshoot common issues?

4. Collaboration and Communication

- ☐ Do students work well in pairs or groups?
- ☐ Are they able to communicate their ideas effectively?

5. Creativity and Innovation

- ☐ Have students shown creativity in their projects or assignments?
- ☐ Are they able to think of new ways to use the tools and concepts learned?

6. Digital Citizenship

- ☐ Do students understand the importance of online safety and etiquette?
- ☐ Are they aware of the ethical use of technology?

Teacher's Notes

1. What went well in this chapter?

_____

_____

2. What can be improved in the next chapter?

_____

_____

3. Additional Comments:

_____

_____

01 INTRODUCING COMPUTERS

Teaching Objectives

After completing this chapter, students should be able to:

1. introduce machines, computers, and the term 'PC',
2. describe what a personal computer looks like,
3. explain the concept of computer memory and data,
4. discuss the different types of computers and their uses,
5. give examples of how computers are used in daily lives.

Lesson plan 1

WORD WHIZ	
Computer	An electronic device that can store, retrieve, and process data
Electricity	A form of energy that gives things the ability to move and work
Energy	The force that causes things to move
Machine	A device that uses mechanical or electrical power to perform a specific task

Resources

- ✓ Textbook pages 1-2
- ✓ Images of different machines and computers to be displayed on the softboard or a tablet or multimedia if available.

Starter activity (5 min)

Ask students the following questions:

- ✓ Display the image of machines including a computer on the softboard or a tablet.
- ✓ Describe the properties of a machine.
- ✓ What makes a machine different from a non-machine? Explain the difference.
- ✓ How is a machine different from a human?
- ✓ What properties does a computer have that helps it to be classified as a machine?

Reading and explanation (20 min)

Read pages 1 and 2.

Define a machine. A machine is a device that uses mechanical or electrical power to perform a specific task. Ask students to discuss and identify three different kinds of machines and their uses. Ask each student to give an example of a machine and where it has been used.

Draw two columns on the board with the following captions: Machines and Non-machines. Ask students to suggest names of machines and non-machines. Write them down in the correct column. Discuss which of these runs on electricity/energy.

Why is a computer considered a machine? Where are they used? In which places have students seen computers being used? What are the different functions of a computer? (They help us communicate, learn and entertain.)

CONCEPT CLOUD

1. What is a computer?
   - A computer is a type of machine. It can't think on its own, but it can follow instructions and do lots of useful things. They help us save information and keep in touch. People use computers to do different types of jobs.
2. How are computers used?

We can use them to:

- Research things
- Write a story and draw a picture
- Do math online
- Make charts and graphs
- Listen to music
- Take photographs
- Read e-books
- Watch videos
- Learn coding and make computer games
- Control appliances such as washing machines, games consoles, smartphones, etc.

3. What precautions should you take whilst using computers or other electrical devices?
   a. Never put your fingers in an outlet.
   b. Keep electrical equipment away from water.
   c. Unplug equipment safely.

WHIZ TASKS

Through the activity, students are given the opportunity to identify computers in different environments and understand their different utilities.

Conclusion (5 min)

Ask:

- What role will computers play in the future?
- How will computers help communication in education?

Homework assignment

- ✓ Ask students to describe what computers will look like in the future.
- ✓ Ask students to research how the use of computers have changed the way we communicate.

Lesson plan 2

WORD WHIZ	
Laptop	A portable personal computer
Mobile phone	Portable communication device that transmits and receives voice or other data
PC	A personal digital device used for studying, gaming, and browsing the internet
Smartwatch	A mobile device with a touchscreen display which acts as an extension of the mobile phone
Tablet	A wireless, portable personal computer with a touchscreen interface

Resources:

- ✓ Textbook pages 3-5
- ✓ Images of different types of computers to be displayed on the softboard or a tablet or multimedia if available.

Starter activity (5 min)

- ✓ Display the images of different types of computers. Ask students which computers they have seen. What are mobile phones used for? Have they seen a tablet, a laptop, a smartphone and a smartwatch? How have these devices changed the world?

Reading and explanation (10 min)

Read pages 3, 4 and 5.

Recall the definition of a computer. Explain that there are different types of computers that may be used in different environments. Describe the properties of each of these computers and their uses.

Explain that the computer we see at home or school is called a personal computer or PC. Discuss what personal means: something belonging to a particular person. A personal computer is a computer that can be used by one person at a time, at home or to run a small business. Identify the desktop that they see in the computer lab and the laptop as a personal computer.

CLASS ACTIVITY

Divide the class into five groups. Give each group the name of a type of computer. If possible, have the different devices on a table for the students to examine. Use images or illustrations if physical devices are not available.

Give them three minutes for discussion. Where have they seen this type of computer? What are they used for? Discuss and compare the devices. Ask each group to identify three things that these different types of computers have in common.

CONCEPT CLOUD

What are the different types of computers? What are they used for?

Personal Computers (PCs) are computing devices, designed for use by a single person. They are used to write documents, paint images, create spreadsheets, and emails, stream videos, play games, and browse social media.

Laptops are portable computers that contain the components of a desktop computer, a built-in screen, keyboard, and battery in a single unit. They are useful for travel and work-related situations, business presentations, and browsing.

Tablets are mobile devices with touchscreens that are generally smaller and lighter than laptops. They may come with or without a detachable keyboard. They are used to read books, operate game and educational apps and to browse the internet.

Smartphones are handheld devices that combine the functions of a phone with a computer. They have touchscreens and can run various apps. They are useful for communication, social media, photography, and research.

Smartwatches are wearable devices that combine the function of a traditional watch with features found in smartphones. They can display the time and date, receive and display messages, calls, and app alerts. Some monitor heart rate monitoring and other health information. Users can check the weather, make calls and send messages directly from the watch.

WHIZ TASKS

Through the activity, students are given the opportunity to identify the types of computers that they can see in different environments and understand their different uses.

Lead the students through the school. Take them on a tour through the cafeteria, the gymnasium, the library and other public areas; ask them to observe the different types of computers and see where they are being used. When they return to the classroom, they are required to draw the different kinds of computers they saw. Some children may not be good at drawing. If possible, have them cut out pictures of different devices and paste them.

DIGITAL RESOURCES

1. Video–Types of computers
2. Video–Types of computers and their uses
3. Video–Types of computers (quiz)
4. Worksheet–Identify types of computers

Conclusion (5 min)

Ask:

- What kind of computers can you imagine in a futuristic world?
- Will computers replace humans?

Homework assignment

✓ Ask students to research and present a list of other types of computers other than the ones mentioned in the book.

Lesson plan 3

Resources

✓ Textbook pages 6-7

✓ Softboard, tablet or multimedia if available.

Starter activity (5 min)

Ask students the following questions:

✓ Can you define memory?

✓ How do we remember things?

✓ Why do we forget things?

✓ Let's make a list of things we can do to avoid forgetting.

Reading and explanation (20 min)

Read pages 6 and 7.

Memory and data (page 6)

After the starter activity, ask some students if they can remember their friend's names, ages, etc. Explain to them that this is information about their friends and when such information is stored in a computer, it is called data. Everything that is typed or entered into a computer is referred to as data. Data can be in many different forms: words, numbers and pictures.

Draw a table on the board. Ask the students what their favourite subjects are. Note the number of children who like each subject.

How many children like English?

How many like Math?

How many like science?

What is the most and least favourite subject in this class?

All this information that you have assembled is called data.

What can computers do? (page 7)

Take your students to the computer lab. Show them how the computers are linked to the Wi-Fi station and the printer. Explain to them that the computers are interconnected through a network. The laptop and smartphones are also connected through Wi-Fi.

WHIZ TASKS

Data: Collection of information gathered by observations, measurements, research or analysis.

Memory: Memory in a computer is where information is stored so the computer can use it later.

CONCEPT CLOUD

A computer is an electronic device that works with information. The information can be in the form of numbers, words, pictures, movies, or sounds. Computer information is called data. Computers can process huge amounts of data. They also store and display it.

Memory is your brain learning and remembering. For example, when you remember your phone number, that's your memory.

Hence, data is the information you have, and memory helps you remember things.

WHIZ TASKS

The activity is a table that tells what fruits the students like best. After students do this activity explain to them that this is how stored data in a computer's memory is used to do analysis and gather new information.

This can also be linked to counting and simple pictorial addition and subtraction that first graders must be doing in their Mathematics class. Linking concepts across subjects helps student's meta-cognition.

Conclusion (5 min)

- Ask the students to explain the concepts of memory and data as they relate to computers.

Homework assignment

✓ Ask students to research and present a list of other types of computers other than the ones mentioned in the book.

Suggested answers to end-of-chapter Workstation (page 8)

Explore with Whiz

Fill in the blanks

1. electricity
2. information
3. Personal Computer
4. tablet
5. personal
6. smartwatch

Whiz Quiz

1. The computer gets its power through electricity.
2. Data can include words, numbers and pictures.
3. The computer makes our work easier and faster.
4. Laptops are small in size and weight and can be easily transported from one place to the other.
5. A mobile phone or a smartphone are small enough to carry around in a pocket.

02 PARTS OF THE COMPUTER

After completing this chapter, students should be able to:

1. identify basic parts of a computer,
2. understand the functions of monitors and a mouse,
3. start and shut down a computer in the correct way.

Teaching Objectives

Lesson plan 1

WORD WHIZ	
Keyboard	A device with a panel of keys used to enter text and functions into the computer
Monitor	An electronic device or screen that is used to display computer information
Mouse	A hand-operated pointing device to select one or more actions
System unit	Part that houses the primary devices that perform computer operations
Wireless	Computer networks that are not connected by cables

Resources

- ✓ Textbook pages 11-12
- ✓ Images of different parts of the computer to be displayed on the softboard or on a tablet or multimedia if available.

Starter activity (5 min)

Display the images of different parts of a computer on the softboard or a tablet and ask students the following questions:

- ✓ What makes up a computer? What are its different parts?
- ✓ How do we interact with a computer?
- ✓ How do we get information from a computer?

Reading and explanation (20 min)

Read pages 11 and 12.

Make labels for the different parts of a personal computer (monitor, keyboard, system unit, and mouse). Ask the students to identify the different parts and pin the names of the different parts of the computer appropriately on the mounted picture and emphasise that all these parts make up the computer.

The students also learn that the different parts are connected by wires or wireless technology such as Wi-Fi or Bluetooth.

WHIZ TASKS

This activity helps the students identify the different parts of the computer and recognise that they are linked to one another.

Take the students to the lab and ask them to observe how hardware is connected to each other. Then have them do this activity independently.

DIGITAL RESOURCES

1. Worksheet–Label the parts of computer.
2. Video–Parts of Computers.

Conclusion (5 min)

Ask:

- Have you seen any other parts of the computer?
- Which parts do you think the computer will not be able to function without?

Homework assignment

✓ Ask students to research what other advanced parts the computer has.

Lesson plan 2

Resources

✓ Textbook pages 13-14

✓ Image of monitor with different icons to be displayed on the softboard or a tablet or multimedia if available.

Starter activity (5 min)

Point to the monitor and ask your students which part of the computer this is. What are monitors used for? Can the computer be used if there was no monitor or screen? The answer for this will determine the importance of this part of the computer.

Reading and explanation (20 min)

Read pages 13 and 14.

Recall the definition of a computer. Explain that there are different components of a computer.

Explain that the data that has been typed into the computer is visible on a monitor. The information that is displayed is from the memory of the computer. The monitor resembles a television screen and it allows you to view the information just like you can on a TV. The monitor is an output device. Any information that you enter on the keyboard will appear on the monitor so you can see it.

Point to the desktop icons on the monitor. Explain that these visually represent folders or programs. To open a program or folder, double click the icon.

CONCEPT CLOUD

How do you ensure that the monitor is placed strategically?

The computer monitor should be positioned directly in front of the user to avoid twisting the neck unnecessarily which could cause unnecessary strain and headaches.

How do you protect your eyes?

It is important to check the distance from your eyes. Sit in your chair as you normally would when working on the computer, stretch your arm out in front of you, and extend your index finger. The tip of your finger should touch the computer screen. If the computer monitor is too close or too far away from your eyes, you may be squinting or straining your eyes in an effort to see the screen.

WHIZ TASKS

Through the activity, students may recognise the different types of monitors. Show them different types of monitors, if a variety is present in school.

CONCEPT CLOUD

Organising the desktop and icons will facilitate students in finding programs on their devices.

- Icons can be organised by categories: games, educational apps, creativity tools, etc.
- A Favourites folder can be created for the apps they use most.
- Some students may choose to **color** code the icons

Conclusion (5 min)

Ask:

- What devices are used to show output?
- How do icons help the computer user?

Homework assignment

✓ Draw an output device. It could be a monitor or a different output device. Write its name and explain why it is considered an output device.

Lesson plan 3

WORD WHIZ	
Arrow	Keys used to move the cursor left, right, up, and down on the screen
Cursor	A blinking vertical line in text editing or a pointer arrow on the desktop
Drag	To select an item on the computer screen and move it to a different location

Left click	To press the left-hand button on a computer mouse
Pointer	It Indicates the movement of the mouse and is used to select and click on items
Right click	Provides menu options relating to the file, icon or screen area where the cursor is located
Scroll	To continuously move forward, backward or sideways through the text and images
Wheel	Hard plastic disc on a computer mouse, used for scrolling

Resources

- ✓ Textbook pages 15-16
- ✓ Pictures of keyboard, mouse and system unit on the softboard or a tablet or multimedia if available.

Starter activity (5 min)

- ✓ Bring in a keyboard, mouse and system unit to the classroom if there is no access to a computer lab. Alternatively, put a picture of a keyboard, mouse and system unit on the soft board.

Ask students the following questions:

- ✓ Can you identify these parts of the computer?
- ✓ Do you know what a keyboard is used for? What does it resemble?
- ✓ Which part controls the other parts of the computer?

Reading and explanation (20 min)

Read pages 15 and 16.

Explain that the keyboard is an input device used to enter information into the computer. Illustrate to the students that the keyboard has letter and number keys. Point out the different kinds of keys to them including the special keys. Tell them to be gentle and not bang the keys.

CONCEPT CLOUD

Types of keys

- The Enter key is the key we use most frequently. What you type appears on the screen but until you press Enter, the computer is unaware of what you have typed. Pressing Enter sends those characters displayed on the screen into the computer's memory. In a document, the Enter key ends one line of text and begins a new line.
- The Backspace key moves the cursor backwards and erases data from the page, one letter or number at a time. It removes errors.
- The function of the space bar is to leave spacing between the words. Pressing the space bar moves the cursor one space to the left.

Instruct the students to observe the monitor as you slowly move the mouse. Explain to them that the point or the arrow they see is called a pointer. Move the pointer around on the screen.

Ask the students to point to the file/folder they would like to open. Move the pointer so that it points to the selected file/folder and explain to the students that when they click on the file or folder, it will open the contents of the file.

Show the students the buttons on the mouse that you click. Emphasise that when you click the button once or twice, the computer will open the file or folder. Demonstrate the function of the wheel in the center of the mouse. Point to the Microsoft Word icon and open a document. The pointer now becomes a short, flashing, vertical line. It is called a cursor. It can be used to select text, format it, and insert new text.

CONCEPT CLOUD

A mouse can be used by either hand. If left-handed, you can place the mouse on the other side of the keyboard. The mouse will work in the same way.

To click, press the button - usually the left one when there are two - and promptly release it. It should be a firm, quick tap.

To open files/folders, double-click: rapidly click the left button twice.

To move the location of a file, press and hold the left button, then drag the mouse without letting go of the button until the file is where you want it to be.

Make sure that the mouse pad is free of dust in order to prevent any damage to the mouse.

Show the students the system unit. Explain that it is the name given to the tall box with buttons which has different electronic devices within it. Explain that just like the human brain is enclosed within the human head, the brain of the computer, i.e. the CPU, is stored inside the system unit.

The system unit is the rectangular box housing the CPU (central processing unit) which has all the chips needed to operate the computer. The CPU stores the information/data that is typed into the computer and tells the computer what to do, and when to do it.

WHIZ TASKS

When in the computer lab, instruct the students to drag the icons and organise them on the desktop. This will help them identify different types of icons and practice mouse control as well.

DIGITAL RESOURCES

1. Worksheet–Match the following with the correct function.

Conclusion (5 min)

Ask:

Guess who I am!

CLASS ACTIVITY

Play a game. Give the students slips of paper with the following clues. Tell them to write the answer on the paper. When you call out the name of the device that they have guessed, the students must stand up and read out their clues.

I show the data that is typed into the computer.

I display information from the computer's memory.

I look like a television.

I am the brain of the computer.

I contain the memory of a computer.

I tell the computer what to do.

I can type words.

I can enter your birthdate.

I can create space between words.

I help move the pointer.

Homework assignment (5 min)

✓ The entire game can be given to the students as a homework handout so they can try to solve all the clues and retain this knowledge.

Lesson plan 4

Resources

✓ Textbook pages 17-22

Picture of system unit to be displayed on the softboard or on a tablet or multimedia if available. Ideally the first half of this class should be carried out in the computer lab so there can be a practical demonstration.

Starter activity (5 min)

✓ Discuss this with the students and elicit answers: Why do you think it is important to start and shut a machine in the correct way?

Reading and explanation (5 min)

It is very important that you start and shut down the computer in the correct way. If you are not careful, this can lead to data loss and potentially cause electrical issues, damage to your power supply or the computer itself. Shutting a computer down properly can resolve problems, enhancing the efficiency of your device, preserve the batteries, and prevent overheating.

Practical demonstration (pages 24-25) (15 min)

This activity should be carried out in the computer lab if resources permit. Take the students to the computer lab or bring any available computer to the classroom. Demonstrate how to switch the computer on and explain the need for doing this in the right way. Show them how to shut it down too.

To start the computer, follow the steps below:

1. Plug in the power supply and switch it on.
2. Press the POWER button on the system unit or the laptop.

To shut down the computer or a laptop perform the following steps:

1. Click on the Windows button in the taskbar.
2. Click on the Power icon in the lower-right corner of the Start menu.
3. Click on the 'Shut down' command.
4. Switch off the power supply.

WHIZ TASKS

1. Monitor
2. CPU
3. Mouse
4. Keyboard
5. Power button

Homework assignment (5 min)

✓ The students can be assigned from pages 20-22 as homework.

Suggested answers to end-of-chapter Workstation (page 20)

Explore with Whiz

Circle the correct word.

1. CPU
2. pointer
3. wheel
4. Switching on
5. CPU

How do you turn a computer on and off? Number these sentences so they are in the correct order:

1. Switch on the power supply.
2. Press the POWER button on the system unit.
3. Click on the Windows button in the taskbar.
4. Click on the Power icon in the lower-right corner of the Start menu.
5. Click on the 'Shut down' command.
6. Switch off the power supply

Whiz Quiz

1. Computer hardware is anything you can touch.
2. The system unit consists of the computer's brain called the CPU or Central Processing Unit. It tells the computer what to do.
3. The wheel is located in the middle of a mouse.
4. The mouse is used to move the pointer on the screen.

03 INSTRUCTIONS FOR COMPUTER PROGRAMS

Teaching Objectives

After completing this chapter, students should be able to:

1. follow a given set of instructions,
2. arrange simple instructions in the correct sequence,
3. list basic tasks that can be done using a computer,
4. use the camera app on the computer.

Lesson plan 1

Resources

✓ Textbook pages 23-25

Starter activity (5 min)

Ask the following questions:

✓ What would happen if I did not give you instructions on what to do in class?

✓ What if my instructions not given in order?

Reading and explanation (15 min)

Read pages 23 to 25.

Explain to the students how instructions will guide them to take steps in order to achieve a specific task. If for example, they want to plant a seed, what steps will they take? What if they put the seeds in an empty pot and then fill in the soil. Is that the correct way to pot seeds? Thereby, they will understand that they will not achieve a task properly if the instructions are jumbled.

Scoop the soil into the pot.

Place the seeds in your palm.

Pinch the seeds and place them in the soil.

Gently push some soil on top of the seeds.

Make sure they have been covered properly by the soil.

Explain to the students how the seeds need water to grow. They must water the pot regularly for a plant to emerge.

Similarly, ask students what might happen if they are simply given the ingredients for a recipe. Will they be able to make French toast if they know just what to put in it?

Ask students if they now understand why instructions are so important. Expected responses: to do things in an orderly/organised way; so that not many mistakes are made; so that they get the desired result. Explain that in order to avoid mistakes, a computer also needs a set of instructions to perform properly.

WORD WHIZ

Coding	The process of writing computer programs
Instructions	Detailed information about how something should be done
Programs	Provide a computer with instructions for performance of a task
Software	Set of instructions used to operate computers and carry out specific tasks

CONCEPT CLOUD

It is important to create a clear, logical sequence of instructions for any computer program. Instructions are specific commands or statements that tell a computer what to do. They help the program execute tasks, such as calculations, data processing, or interactions with users. To arrange instructions in the correct sequence, determine what you want to achieve first. Break down the tasks into small, manageable steps. Each step should be clear and concise. Once you have arranged the instructions, test to make sure they execute correctly.

WHIZ TASKS

Let the students attempt this activity themselves first. Then discuss different responses and decide on the correct sequence. This will not only enhance their sequencing skill but also their troubleshooting skill.

These are the steps to build a simple tower using coloured blocks.

Number them so that they are in the correct order.

Sort your blocks by colour (3)

Clean up (7)

Choose your blocks (2)

Stack your blocks to make your tower taller (5)

Find a flat surface to work on (1)

Play with your tower and share with friends (6)

Build your base (4)

Conclusion (5 min)

Ask:

- How would it work if you had to make a sandwich and forgot to put the filling in?

Hence, students should be made to understand that steps must be organised and in no situation can they delete an entire step.

Homework assignment

Choose a task that you want to achieve. Write five to eight step-by-step instructions that will help you achieve that task.

Lesson plan 2

Resources

- ✓ Textbook pages 26-27
- ✓ Image of a computer screen with different apps. Also picture of a recipe with clear instructions to be displayed on the softboard or a tablet or multimedia if available.

Starter activity (5 min)

Ask the following questions:

- ✓ What is a computer program?
- ✓ What is another word used to describe a computer program?
- ✓ What do these programs allow you to do?

Reading and explanation (20 min)

Read pages 26 and 27.

Explain that a computer program consists of a set of instructions that tells the computer what to do, just like a recipe that tells us how to make a cake. A computer program is also known as software or an app. Many fun games that are played on a computer or tablet are computer programs. Drawing apps allow us to create pictures and art. Educational games or apps help us learn new things, like math or reading. Some apps allow us to watch movies or listen to music. Programs such as Microsoft Word or Google Docs help us write stories, letters, or do schoolwork. Google Chrome or Safari helps us find information and explore the internet.

Using the camera app

Explain that a camera is a tool that helps us take pictures. A camera app is like a window on a phone or tablet that lets us take and look at pictures and videos on a phone or tablet. Explain that most computers have front-facing cameras while smartphones and tablets have front as well as rear-facing cameras. Show the students the main screen of the app and where the shutter is. Show them how to pinch the screen to zoom in and out for better framing. Teach them how to access the gallery or photo library to see the pictures they have taken. Introduce basic editing features, like cropping or adding filters. Let them experiment with a photo they took. Show them how to switch to video mode and the button to start and stop recording.

DIGITAL RESOURCES

1. Video–Uses of Computers
2. Worksheet–Colour by number activity.

Conclusion (10 min)

Ask:

- Do you remember the right way to shut down the computer?
- The students will be asked to provide a set of instructions and the teacher will write them down on the board. This again will teach them how to break up a task into many simple tasks.

1. To switch off the computer, move the pointer to the Start button on the taskbar and click on it.
2. A menu with the Shut Down button in the bottom-right appears.
3. Click on it to shut down the computer.
4. Switch off the power supply.

Homework assignment

✓ Ask students to attempt the exercises provided in Workstation.

CLASS ACTIVITY

If possible, go out to the playground where the students can practise taking pictures, applying what they learned in a real-world setting. Tell them to use filters etc so the pictures present in different ways. Have them share their pictures with the class.

Suggested answers to end-of-chapter Workstation (page 28)

Explore with Whiz

True or False

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

Whiz Quiz

1. The process of writing instructions for the computer is called coding.
2. Computer programs are called apps or software.
   a. Take pictures
   b. Take videos

Worksheet

Identify which of the tasks can be done on a computer. Tick the tasks you can do on a computer and cross the ones you cannot.

a. ✓
b. ✓
c X
d. ✓
e. ✓
f. X
g. ✓
h. X

04 LEARNING ABOUT PAINT

Teaching Objectives

After completing this chapter, students should be able to:

1. explain the use of Paint
2. use some of the Paint tools in MS Paint and Tux Paint
3. discuss essential features of MS Paint and Tux Paint

Lesson plan 1

Resources

- ✓ Textbook pages 30-31
- ✓ Images displaying visuals of a MS Paint window screenshot on the softboard or multimedia if available or a computer with MS Paint window open on the screen.

Starter activity (5 min)

Ask students what tools they use to make drawings. Explain to them that they can also paint digitally using different software such as MS Paint and Tux Paint

Ask them the following questions:

- ✓ Have any of you drawn a picture on a computer?
- ✓ How do you think using paint software may benefit you?
- ✓ What picture would you like to make using the Paint software?

Reading and explanation (15 min)

Read pages 30 and 31. Also attempt Whiz Tasks on Pg 32.

MS Paint or Microsoft Paint is a simple and easy-to-use paint app that enables students to use basic tools to create artworks. MS Paint is also a great basic tool for first graders to practise mouse-control.

The ideal way to conduct a lesson on Paint is in the computer lab. Open the Paint program. This will open up a blank window with a ribbon containing numerous tools. Explain to students that the blank area is called the drawing area. Illustrate which area comprises the ribbon. It is the command bar that contains a program's features and functions. Identify the different tabs on the Ribbon. Point to the Clipboard, Image, Tools, Shapes, and Colors groups.

CONCEPT CLOUD

Point out the difference between the American and British spelling of colour. Explain to them that all ribbons and menus will use the American spelling 'color'. But in countries that follow British spelling, we add a u and spell it colour.

Point out the tools in the different group and ask students what they may be used for. Then demonstrate the use of Pencil, Fill with Color, Text and Eraser tools. Students should then practise using each tool. Make sure every student gets a chance. Explain to them that they must respect each other's work and can only print with the teacher's permission.

WORD WHIZ

Drawing area	An area where users can draw graphics and interact with the mouse and keyboard
Edit	Change material from a text, image, film, radio or television program
Freehand	Done without using anything to guide the hand
Insert	A command used to add data into an image
Ribbon	A command bar that consists of the software's features
Tools	A program or utility that helps the users to do something on an app

CONCEPT CLOUD

Microsoft Paint, also known as MS Paint, has multiple features:

- Drawing tools:
  1. Pencil for freehand drawing
  2. Brush for painting
  3. A fill tool for filling in closed areas
  4. Shapes for drawing lines, rectangles, and circles
  5. Text for adding text
  6. Eraser for removing parts of an image
  7. Selection tools for selecting and working with specific areas
- Color palette: used to select colours
- Shapes: to create simple shapes such as circles, squares, and triangles
- Text Tool: to add text to their images
- Eraser: helps to correct mistakes easily
- Fill Tool: enables you to fill shapes with colour
- Magnifier: allows you to zoom in or out of an image

WHIZ TASKS

When in the computer lab, instruct the students to draw a starry night on MS Paint. Use the star-shaped tools from the Shapes group to draw different shapes of stars. They can use their imagination and colour the stars in whichever colour they wish. Tell them to select the brush tool and use it to draw clouds. Fill the background with black or navy blue colour. They can use the text tool to write a caption in whatever font they choose.

DIGITAL RESOURCES

1. Video–on screen tutorial: Opening MS Paint and identifying tools in MS Paint
2. Video–on screen tutorial: Drawing shapes and filling it with different colours and textures in MS Paint

Conclusion (5 min)

Ask:

- Which tool did you use to draw lines in MS Paint?
- Where did you select colours from?
- What did you draw with the help of MS Paint today?

Homework assignment

Ask the students to create a simple game or crossword giving about five clues which will help their friends guess which feature they are discussing.

CLASS ACTIVITY

This is a suggestion of an extra class activity which would take up one entire period in the computer lab.

Divide the students into five groups. Each group will choose, explore and create one of the following: Clipboard, Image, Tools, Shapes, and Colors. They will present the work they have done after twenty minutes, thereby presenting the uses of the different features. They should aim to create an interactive discussion through their work.

Lesson plan 2

Resources

✓ Textbook pages 32-34

✓ Images of different types of computers to be displayed on the softboard or a tablet or multimedia if available.

Starter activity (5 min)

Ask students the following questions:

✓ Do you like to paint?

✓ Have you used any app other than MS Paint to draw pictures on a computer?

Reading and explanation (20 min)

Read pages 32 to 34 of the textbook. Install Tux Paint Software. Ask the students to explore the software interface and identify its main features. Explain that Tux Paint, like MS Paint is a software that is used to draw, colour, and edit pictures. The toolbars consist of drawing and editing tools. The area where you draw is called the drawing canvas. The palette of colours near the bottom of the screen is called a Color Palette. Click on 'New' to create a new drawing and to choose a colour or picture background.

There are tools and brushes on either side of the drawing area in Tux Paint. When you select a tool on the left panel, its various options are shown on the right panel.

The various tools are:

- The Paint tool that is used to draw freehand. The students can use various brushes from Brushes in the right toolbar. They can choose the colours from the Color Palette.
- The Line tool that is used to draw straight lines using the various brushes and colours.
- The Shapes tool that is used to draw some simple filled and unfilled shapes.
- The Eraser tool that is used to erase the picture.
- The Fill tool that is used to fill a closed area with colour.
- The Magic tool that is used to add special effects to a picture.

WHIZ TASKS

Identify the tools you think were used to make the following picture in Tux Paint:

Tools: Line, Eraser, Fill, Paint, Shapes, Brushes

Conclusion (10 min)

Ask:

Which tools will we use to do the following? Draw an oval; Make triangles; Draw freehand; Colour flowers; Draw buildings; Erase a mistake.

- What is your favourite tool and why?

Homework assignment (5 min)

✓ Instruct the students to make a certificate for 'Best Student' using all the tools that they have learnt.

CONCEPT CLOUD

Tux Paint has a simple interface with a canvas of a fixed size and useful drawing tools

Drawing Tools include:

Paintbrush: multiple brushes that can change shape depending on the direction they are used to draw in. Alternate colour palettes can be created.

Color picker: helps choose colours from a drawing

Color mixer: helps combine primary colours

Rubber stamp: can insert photograph and cartoon stamps; Stamps can be resized, flipped, mirrored and rotated.

Fill: Fill an area with a specific/solid colour

Shape tool: draw various filled and unfilled shapes; rotate shapes

Text and Label tools: many fonts; Bold and italic styles; text size can be changed

Magic tools: special effects feature with over 90 tools

Color Filters: changes the colours of the picture

Mirror: flip the image horizontally

Flip: flip the image vertically

Shift: move the entire picture around

Zoom: zoom your entire picture in or out

Rotate: rotate your picture

Painting

Bricks: paint large or small brick patterns

Rainbow: draw using a brush that paints in all colours in the rainbow

Calligraphy: a smooth brush that changes thickness

Squiggles: draw squiggly shapes

Metal Paint: paints shiny metallic colours

Eraser

Eraser: Use to expose parts of the background colour, Template, or Starter after drawing on it

Undo: multiple levels of undo; undo actions can themselves be undone with the 'Redo' button

Commands

New: create a new drawing with a blank canvas or a pre-drawn backdrop.

Save: cave a picture to the virtual picturebook

Open: open a previous drawing by selecting it from the picturebook

Slides: view a slideshow of multiple saved drawings; control playback speed; create class presentations.

Print: print pictures on a printer.

Practical demonstration (30 min)

Take students to the computer lab. On a computer screen, demonstrate the steps to open the MS Paint and Tux Paint apps. Identify the drawing area. Point to the Tools group on the Home tab and demonstrate the use of the different tools. Let students tell you what functions they think these tools perform before you show it to them. Give the students sufficient time to sit at the computer and practise using the tools. Instruct them to make a car using different shapes, e.g. rectangle for the car body, circles for the wheels, etc. Tell them to colour the car. They can use either of the apps to create a car.

Make sure every student gets a chance. Explain to them that they must respect each other's work. If they have positive comments, they might tell their partners at the computers; but otherwise, they must refrain from criticism. Also, once they have done their work, they can only print with the teacher's permission.

DIGITAL RESOURCES

1. Video–On-screen tutorial:
   Tools in Tux Paint using the magic tool

Suggested answers to end-of-chapter Workstation (page 35)

Explore with Whiz

Underline the correct answer.

1. Drawing area
2. Draw freehand
3. Shapes group
4. An eraser icon

You are using Tux Paint. True or false.

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

Whiz Quiz

1. The blank area for drawing is called the drawing area.
2. The ribbon consists of the drawing and painting tools.
3. The Eraser tool is used to remove unnecessary lines and colours.
4. In Tux Paint, the drawing area is called the drawing canvas
5. A color palette is used to add colour to our art projects.

05 SOLVING PROBLEMS

Teaching Objectives

After completing this chapter, students should be able to:

1. break down a problem into smaller parts,
2. understand that problems are easier to solve when broken in simpler parts,
3. identify patterns in everyday life.

Lesson plan 1

Resources

✓ Textbook pages 37-38

Starter activity (5 min)

Ask these questions:

✓ Have you ever had to deal with a complex problem?

✓ How have you tried to solve the problem?

✓ Have you tried to break down the problem into simpler steps? Has that helped?

Reading and explanation (20 min)

Read pages 37 and 38.

Explain that computational thinking implies solving problems using logic. It helps to break down a problem into simple steps that are easier to solve and that a computer can understand.

Computational thinking involves the following steps:

- Breaking down a problem into smaller parts
- Looking for patterns in these parts
- Organising things in a logical manner
- Developing a step-by-step solution
- Testing the solution
- Removing mistakes from solution

Imagine that your room is in a big mess. You have to clean up before your mother comes home from work. What will you do? Expected answers: Make my bed. Fluff the pillows. Put books on shelves. Put away toys/games in basket. Put scraps of paper in waste paper basket. Climb on bed and shut the windows. Empty waste paper basket in kitchen trash can.

These steps have to be done in an organised way so the bed remains made and no one steps on the bed after it is made. So these things have to be kept in mind when organising the steps in a series.

WORD WHIZ

Logic	Looking at a problem and drawing conclusions based on factual evidence
Organising	Arranging systematically
Patterns	Repeated decorative designs
Problem	An unwelcome situation that needs to be dealt with and overcome

CONCEPT CLOUD

Computers often help us solve problems. Computational thinking allows us to take a complex problem, understand what the problem is and develop possible solutions. These solutions can then be presented in a way that both a computer and a human can understand.

There are four techniques to computational thinking:

- Decomposition is when you break down a complex problem or system into smaller, more manageable problems
- Pattern recognition refers to the process of looking for similarities among and within problems
- Abstraction is when you focus on the important information only
- Algorithms refer to the development of a step-by-step solution to the problem

Each technique has to be applied correctly in order to program a computer.

Let's liken problem-solving to a blender that stopped working:

1. Define a problem: You have to identify the problem first. This will help you understand what's wrong with the blender.
2. Determine the cause of the problem: To fix it, you must try to find out what is wrong. Is there something wrong with the electric point or with the machine motor? You examine, test, and analyse the reason it won't work.
3. Identify and choose a solution: Once you know the cause, you decide how to fix the issue. This will depend on different factors such as cost, time, and efficiency.
4. Implement a solution: With the chosen solution in mind, you take action. You repair it so you have a working blender again.

WHIZ TASKS

The students can draw the house again using the same shapes in whichever way they choose. Ask them if it was easier to draw the house using these separate geometrical shapes.

DIGITAL RESOURCES

1. Video–Solving Problems
2. Video–Breaking down a problem into smaller parts.

Conclusion (5 min)

Ask:

- How did it help you to break down the problem into simpler parts?

Homework assignment

✓ What are the things you need to do to get ready for school in the morning? Break down the morning routine into smaller tasks.

✓ What comes first, second, and third when you brush your teeth? Put the steps in order.

Lesson plan 2

Resources

✓ Textbook pages 39-41

✓ Images of different patterns to be displayed on the softboard or a tablet or multimedia if available.

Starter activity (5 min)

Ask the children:

✓ Have you learnt patterns in math?

✓ What patterns can you spot in this room?

✓ Explain that if a dress has dots or stripes, those are considered patterns too.

Reading and explanation (20 min)

Read pages 39 to 41.

Explain to the children that a pattern is when something happens or looks the same way over and over again. You can find patterns in numbers, words, and even in the names of months and days of the week. There are patterns in your class timetable.

It is easier to solve a problem when the patterns are similar. Look at these three different butterflies. Can you see what they have in common? What are the patterns you see?

Pattern recognition is when computers look for similarities or patterns in data, just like how we notice shapes, colours, or numbers that repeat or follow a sequence. Computers can look at pictures, sounds, or numbers to find patterns. Once a computer recognises a pattern, it can help predict what may happen next.

WHIZ TASKS

Identify the months that have the same last three letters.

Expected Answer: September, October, November, December

✓ 3, 7, 10, 14, 17, 20.

DIGITAL RESOURCES

1. Video–Recognising Patterns
2. Worksheet–Sequencing activity of Computational Thinking
3. Worksheet–Pattern recognition with fruits and numbers

Conclusion (5 min)

Ask:

- Look around the class and see what patterns you can find.

Homework assignment

✓ Attempt the exercises on Page 42-43

Suggested answers to end-of-chapter Workstation (page 42-43)

Explore with Whiz

1. Simple, easy
2. Sweeping, organising
3. Juice, sandwich
4. Decorations, goodies, food preparation

Whiz Quiz

1. There are six steps in the process of computational thinking.
2. The first step of computational thinking is breaking down a problem into small simple parts.
3. The second step of computational thinking is looking for patterns in these parts.

06 CARING FOR COMPUTERS

Teaching Objectives

After completing this chapter, students should be able to:

1. identify different ways to take care of their computers,
2. understand the importance of keeping food and liquids away from the computer desk,
3. treat others with respect when using the computer and interacting on it.

Lesson plan 1

Resources

- ✓ Textbook pages 46 and 47
- ✓ Different images of food, magnets, liquids, etc. to be displayed on the softboard or a tablet or multimedia if available.

Starter activity (5 min)

Ask the students:

- ✓ How would you take care of a machine?
- ✓ What precautions would you take with a computer?
- ✓ Why is it important to take care of your computer?

Reading and explanation (15 min)

Read pages 46 and 47.

Have a brainstorming session. Ask your students to make a list of things they should not do to make sure that their computer is taken care of.

Expected answers:

Do not:

Handle the computer with dirty hands,

Bring any liquid/drinks near the computer,

Switch it on and off repeatedly,

Keep the computer near dust, direct sunlight, heat, etc.

Keep magnets near the computer,

Touch the monitor screen.

Instruct them that they need to protect their devices by using them with clean hands and keeping the workspaces clean. They should wipe the device screens regularly. They must be gentle with the keyboard and the cable wires and should shut down the computer properly.

WORD WHIZ

Accidental	Happening by chance
Cable wires	An insulated wire used to transmit electricity
Clean	Free from dirt or marks
Damage	Physical harm that affects the normal function of something
Fluctuation	An irregular shift in the level or strength of something
Power surge	Abnormally high voltage that lasts for a very short period of time
Repair	Restore to a good condition

CONCEPT CLOUD

When your students are working at the computer, there are certain things that they should keep in mind:

They must:

- Have their chair at the right height so that their eyes are level with the computer screen,
- Have their computer screen directly in front of them,
- Make sure their chair has a good backrest,
- Keep their shoulders and back relaxed,
- Make sure that their wrists rest on the desk,
- Let their feet be flat on the floor,
- Take regular breaks,
- Adjust the position of the computer so that there is no glare.

They must not:

- Fix their eyes on the screen continuously,
- Lift their shoulders while they type or move the mouse,
- Twist their body to reach out for the keyboard or mouse,
- Use their computer in poor lighting.

Conclusion (5 min)

Ask:

- How will you protect your computer?
- What will you be careful not to do?

Homework assignment

✓ Make a poster using images or drawings showing what you should not do when using a computer.

Lesson plan 2

Resources

- ✓ Textbook pages 47-48
- ✓ Images of different objects to be displayed on the softboard or a tablet or multimedia if available.

Starter activity (5 min)

Ask:

- ✓ Can you recall why we need to keep our computer area clean?
- ✓ What things should we keep away from the computer table?

CLASS ACTIVITY

Make as many small chits of paper as there are children. Write the names of things that can be left around a computer and the things that should be kept away from a computer. Divide the class into two zones so there is one area which covers things that can be left around a computer safely and things that should be kept away. Have the children pick out one chit each. Tell them to identify the things that can be left around a computer and the things that should be kept away from a computer. They should walk to the area that corresponds to the chit they have picked.

WHIZ TASKS

Once the class activity is over, instruct the students to tick the things that should be kept away from a computer in their textbook. Once they have done so, discuss why these things cannot be left close to the computer and the hazards of doing so.

Ask the children to do the exercises. Once they have attempted both, these exercises can be discussed further. Ask them what they will do if they are in the computer lab and the following situations happen:

If their hands are dirty from eating a sandwich during break

Expected answers: they should not handle a computer. They should wash their hands, dry them and then use the computer.

If the wire gets caught in the chair

Expected answers: Be careful to disentangle it. Do not let water fall on the wires, wet wires can be dangerous.

If they are typing a letter on the keyboard

Expected answers: they must not bang on the keys, they must handle the keyboard gently

If they need to switch on the computer

Expected answers: To start the computer, first switch on the power supply.

Then press the POWER button on the system unit.

The menu helps you choose what you want to do with the computer.

Remind them that switching on a computer is called 'booting'.

DIGITAL RESOURCES

1. Worksheet–Tick and cross activity for digital ethics

Conclusion (5 min)

Ask them if they remember the correct way to shut down a computer.

Expected answers:

- To switch off the computer, click on the Windows button in the taskbar.
- Click on the Power icon in the lower-right corner of the Start menu.
- The menu shows different options.
- Click on the Shut down command to shut down the computer.
- Switch off the power supply.

Homework assignment

✓ Ask students to do the exercises in the workstation and worksheet.

Suggested answers to end-of-chapter Workstation (page 50)

Explore with Whiz

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

Whiz Quiz

1. The computer must be covered to protect it from dust or water.
2. Whilst interacting with others on the computer, we must take care to respect others.
3. A good digital citizen is a person who knows right from wrong, uses the computer intelligently, and respects others when interacting through the computer.
4. It is not okay to share people's work without asking them for permission.

Worksheet

a. Correct posture should be maintained while working on a computer. Back should be straight and there should be appropriate distance between the screen and your eyes.

b. The device must be used on a flat surface–never on a bed and the screen time should be limited to 1 or 2 hours.

c. Do not eat or drink near the computer. Spills and crumbs can harm it.

d. Be careful with cable wires as a device can be damaged when charging due to power surges from voltage fluctuations. Also the screen should be at eye-level.