TRACKPAD

iPro Ver. 4.1

1

Teacher's Manual

Extended Support for Teachers

ORANGE
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Teacher's Time Table

Periods / Days	0	I	II	III	IV	BREAK	V	VI	VII	VIII
Monday										
Tuesday										
Wednesday										
Thursday										
Friday										
Saturday										

Development Milestones in a Child

Development milestones are a set of functional skills or age-specific tasks that most children can do at a certain age. These milestones help the teacher identify and understand how children differ in different age groups.

Age
5 - 8 Years

Physical	• First permanent tooth erupts • Shows mature throwing and catching patterns • Writing is now smaller and more readable • Drawings are now more detailed, organised and have a sense of depth
Cognitive	• Attention continues to improve, becomes more selective and adaptable • Recall, scripted memory, and auto-biographical memory improves • Counts on and counts down, engaging in simple addition and subtraction • Thoughts are now more logical
Language	• Vocabulary reaches about 10,000 words • Vocabulary increases rapidly throughout middle childhood
Emotional/ Social	• Ability to predict and interpret emotional reactions of others enhances • Relies more on language to express empathy • Self-conscious emotions of pride and guilt are governed by personal responsibility • Attends to facial and situational cues in interpreting another's feelings • Peer interaction is now more prosocial, and physical aggression declines

"If you cannot do great things, do small things in a great way."

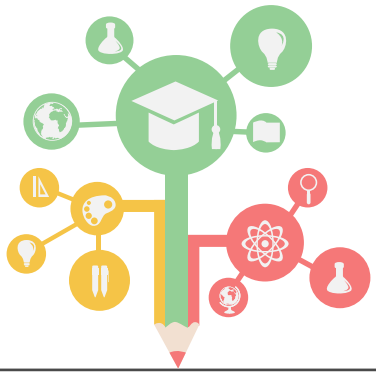
Age 9 - 11 Years	
Physical	• Motor skills develop resulting in enhanced reflexes
Cognitive	• Applies several memory strategies at once • Cognitive self-regulation is now improved
Language	• Ability to use complex grammatical constructions enhances • Conversational strategies are now more refined
Emotional/ Social	• Self-esteem tends to rise • Peer groups emerge

Age 11 - 20 Years	
Physical	• If a girl, reaches peak of growth spurt • If a girl, motor performance gradually increases and then levels off • If a boy, reaches peak and then completes growth spurt • If a boy, motor performance increases dramatically
Cognitive	• Is now more self-conscious and self-focused • Becomes a better everyday planner and decision maker
Emotional/ Social	• May show increased gender stereotyping of attitudes and behaviour • May have a conventional moral orientation

Managing the children's learning needs according to their developmental milestones is the key to a successful teaching-learning transaction in the classroom.

"Family is the most important thing in the world."

Teaching Pedagogies



Pedagogy is often described as the approach to teaching. It is the study of teaching methods including the aims of education and the ways in which such goals can be achieved.

Lesson Plans

A lesson plan is the instructor's road map which specifies what students need to learn and how it can be done effectively during the class time. A lesson plan helps teachers in the classroom by providing a detailed outline to follow in each class.

A lesson plan addresses and integrates three key components:

- Learning objectives
- Learning activities
- Assessment to check the student's understanding

A lesson plan provides an outline of the teaching goals:

Before the class

1. Identify the learning objectives.
2. Plan the lesson in an engaging and meaningful manner.
3. Plan to assess student's understanding.
4. Plan for a lesson closure.

During the class

Present the lesson plan.

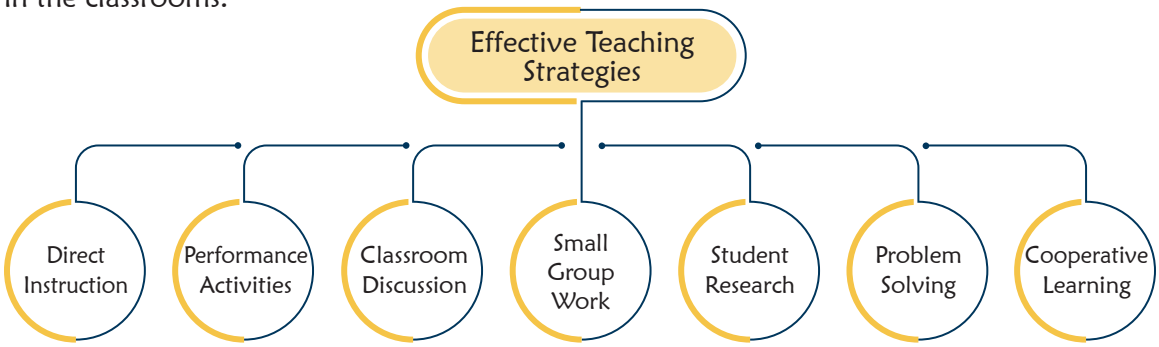
After the class

Reflect on what worked well and why. If needed, revise the lesson plan.

"Knowing yourself is the beginning of all wisdom."

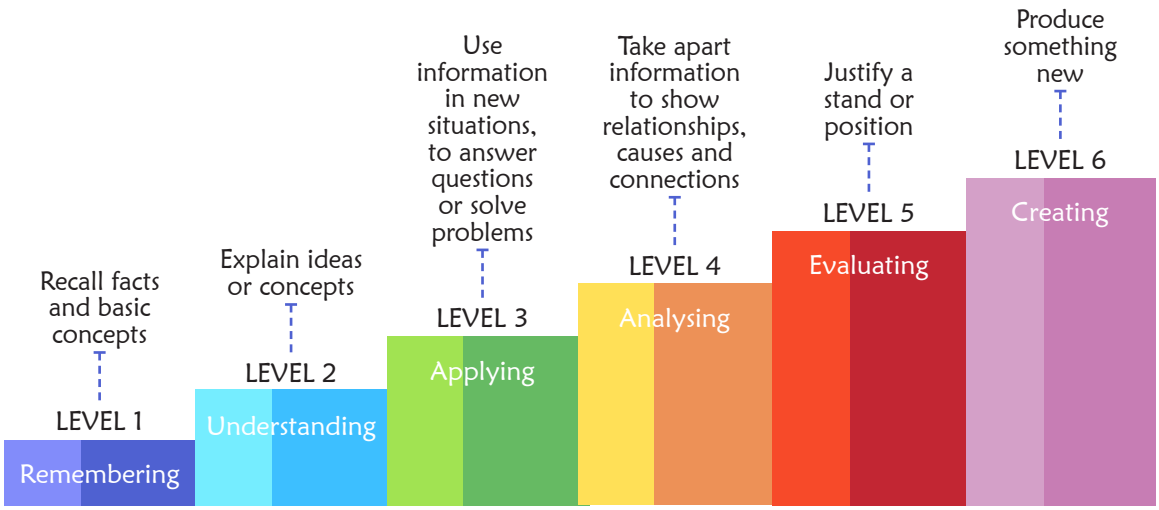
Teaching Strategies

Numerous strategies have evolved over the years to facilitate the teaching-learning process in the classrooms.



Bloom's Taxonomy

Bloom's Taxonomy was created by Dr Benjamin Bloom and several of his colleagues, to promote higher forms of thinking in education instead of rote learning. There are three domains of learning: cognitive (mental), affective (emotional), and psychomotor (physical). However, when we refer to Bloom's Taxonomy we speak of the cognitive domain. Bloom's Taxonomy is a list of cognitive skills that is used by teachers to determine the level of thinking their students have achieved. As a teacher, one should attempt to move students up the taxonomy as they progress in their knowledge.



Teachers should focus on helping students to remember information before expecting them to understand it, helping them understand it before expecting them to apply it to a new situation, and so on.

> "If you have no confidence in self, you are twice defeated in the race of life."

CLASS 1

LESSON PLAN

1 Computer—A Wonderful Machine

Teaching Objectives

Students will learn about

- Natural and Human-made Things
- Computer—A Machine
- Features of Computers
- What are Machines?
- Difference between Computers and Machines
- Types of Computers

Number of Periods	
Theory	Practical
2	1

Teaching Plan

Encourage the students to name some things which they see around themselves.

Make them understand some of these things are natural like sun, moon, star, mountains, cat, dog, tree, boy, girl, etc. The other things are man-made like chair, table, TV, fan, pencil, eraser, board, building, washing machine, mobile, etc.

Explain to the students that machines are made by man.

Give examples of some machines around us like refrigerator, air conditioner, television, mobile, car, etc. and their use.

Share with them that computer is also a machine.

Tell them the various things we can do with the computer like doing sums, drawing, listening to music, watching movies, learning, etc.

Encourage them to tell why computer is different from other machines (other machines can only do the work for which they are made but computer can do many kinds of work).

Explain to the students the features of a computer.

Explain to the students about the different types of computers covering:

- **Desktop computer** – kept on desk or table.
- **Laptop** – can be kept on lap also and is portable.
- **Tablet** – smaller than a laptop and has a touchscreen.
- **Smartphone** – smaller than tablet and provides computer facilities.

Tell the students that all these types of computers are called Personal Computers or PCs.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. Is computer a machine?

Q. Name some natural things.

Q. Name some human-made things.

Q. Who makes machines?

Q. Are machines natural?

Q. Discuss briefly the use of an air conditioner/refrigerator/washing machine/television/mobile/car.

Q. What does a computer need to run?

Q. How is a computer different from other machines?

Q. State any two features of a computer.

Q. Name two things which man can do better than computers.

Q. Name any two types of computers.

Q. Which is the largest type of computer?

Q. Which is the smallest type of computer?

Q. Can we keep all computers in our pocket?

Q. Name two computers which we can keep in our pocket.

Q. Name the computer which we keep on a desk or a table.

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 12 to 14 of the main course book as **One Touch Learn** and **Let's Do It**. After solving the course book exercises, tell the students to solve **Crack the Code** activity given on pages 14 and 15 of the main course book to imbibe Interdisciplinary and Problem Solving & Logical Reasoning skills. Help the students to solve these questions.

In Creative Assignment, activities like **Hands-On** and **Fun in Lab** given on page 15 of the main course book will enhance the ability of the students and serve as a Creativity & Innovativeness, Communication and Digital Literacy activity.

Suggested Activity

Show pictures of some machines (calculator, fan, sewing machine, set top box, cycle, clock, microwave, stapler, electronic toy, etc.) and ask the students what they are used for?

2 Uses of a Computer

Teaching Objectives

Students will learn about

- Functions of a Computer
- Places where Computers are Used
- What Computers Cannot Do?

Number of Periods	
Theory	Practical
3	0

Teaching Plan

While teaching this chapter, tell the students that computer is a magical machine and makes our work faster and easier.

Tell the students about various functions of a computer as follows:

- Type letters, words and sentences
- Draw and colour images
- Watch cartoons and movies
- Send and recieve messages
- Calculate sums
- Play games
- Play songs

Share with the students that there are some things which computers cannot do such as think, dance, walk, swim, breathe and sing.

Tell the students why the computer is used at different places like:

- At home (watch movies, play games, make school projects, online shopping, etc.).
- In schools (store student records, library books record).
- In offices (maintain records).
- In banks (keep record of money).
- In hospitals (make medical reports, controlling machines while doing surgeries).
- In shops (make bills, storing details of items).
- At railway stations and airports (book tickets, record of passenger information, information about arrival and departure of trains and airplanes.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. State two features of a computer.

Q. Does a computer get tired?

Q. Do computers make mistakes?

Q. Why do we use computers?

Q. Name two things that a computer cannot do.

Q. Are computers used only in schools and at homes?

Q. Name two places other than home and school where computers are used.

Q. Why do we use computers at the following places?

- Home
- Railway stations
- Offices
- Schools
- Shops
- Hospitals

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 20 and 21 of the main course book as **One Touch Learn** and **Let's Do It**. After solving the course book exercises, tell the students to solve **Crack the Code** activity given on pages 22 and 23 of the main course book to imbibe Problem Solving & Logical Reasoning skills. Help the students to solve these questions.

In Creative Assignment, activities like **Hands-On** and **Fun in Lab** given on page 23 of the main course book will enhance the ability of the students and serve as a Collaboration & Teamwork, Creativity & Innovativeness, Interdisciplinary and Experiential Learning activity.

Suggested Activity

Ask the students to discuss with their parents the use of computers for:

- Controlling movement of metro trains
- Weather forecasting
- Making animations
- Launching satellites
- Making robots

3 Using Computers—Do's & Dont's

Teaching Objectives

Students will learn about

- Things to do in a Computer Lab
- Things not to do in a Computer Lab

Teaching Plan

Number of Periods	
Theory	Practical
3	0

While teaching this chapter, tell the students that a computer is a wonderful machine and can perform a variety of tasks. But, computer requires a proper care otherwise it won't be able to perform properly.

Introduce things to do in a computer lab and how to conduct properly near a computer.

Also explain things no to do in a computer lab.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. What are the things to do in a computer lab?

Q. Which are the things to avoid in a computer lab?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 27 to 29 of the main course book as **One Touch Learn** and **Let's Do It**. After solving the course book exercises, tell the students to solve **Crack the Code** activity given on page 29 of the main course book to imbibe Ethical & Moral Reasoning and Digital Literacy skills. Help the students to solve these questions.

In Creative Assignment, activities like **Fun in Lab** given on page 29 of the main course book will enhance the ability of the students and serve as a Ethical & Moral Reasoning activity.

Suggested Activity

Ask the students to prepare a chart of things to do and not to do in a computer lab.

4 Parts of a Computers

Teaching Objectives

Students will learn about

- Main Parts of a Computer
- Other Parts of a Computer

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that just as our body has different parts like hands, eyes, brain, etc. similarly, a computer also has various parts.

Tell the students that a computer has four main parts:

- **Monitor** – also called Visual Display Unit (VDU), looks like a television, used to see pictures, games, cartoons, alphabet, numbers and words.
- **CPU** – stands for Central Processing Unit, fixed inside CPU box, called brain of the computer, most important part of the computer.
- **Mouse** – device with long wire, two buttons and scroll wheel, used to draw pictures.
- **Keyboard** – has small buttons called keys, used for typing numbers and letters.

Share with the students that a computer has some other parts also, like:

- **Speakers** – attached to computer, used to hear sounds and music stored in computer.

- **Headphones** – attached to computer, used to hear sounds and music stored in computer without disturbing others.
- **Printer** – used to print text and images on paper.
- **Scanner** – used to send documents or images from paper to computer, works like a photocopier machine.
- **Compact Disc (CD) and Pen Drive** – called storage devices and used to save data.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. Name the four main parts of a computer.

Q. Discuss in brief the use of monitor, mouse, keyboard and CPU.

Q. What does CPU stand for?

Q. What is the other name of a monitor?

Q. Expand VDU.

Q. Where is CPU fixed?

Q. Name some other parts of a computer.

Q. What is the difference between speakers and headphones if both are used to hear sounds?

Q. What is a scanner?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 33 to 35 of the main course book as **One Touch Learn** and **Let's Do It**. After solving the course book exercises, tell the students to solve **Crack the Code** activity given on page 36 of the main course book to imbibe Problem Solving & Logical Reasoning skills. Help the students to solve these questions.

In Creative Assignment, activities like **Hands-On** and **Fun in Lab** given on pages 36 and 37 of the main course book will enhance the ability of the students and serve an Art Integration, Creativity & Innovativeness and Digital Literacy activity.

Suggested Activity

Ask the students to paste pictures of different parts of a computer in their computer notebook and write their names.

5 Using the Mouse

Teaching Objectives

Students will learn about

- Mouse Buttons
- Mouse Pad
- How to hold a Mouse
- How to use a Mouse

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that a mouse is a pointing device and helps to tell the computer what to do.

Share with the students some uses of a computer mouse.

Show to the students that the small arrow moving on the screen is called pointer.

Tell the students that mouse has two buttons and a scroll wheel:

Introduce mouse pad as a small surface on which a mouse is placed.

Show to the students the correct way of holding the mouse with reference to the position of fingers and palm.

Show to the students that a computer mouse can be used for:

- **Pointing** – by moving the pointer.
- **Clicking** – by pressing mouse buttons.
- **Single-clicking or Clicking** – pressing and releasing the left button quickly, used to select an icon.
- **Double-clicking** – pressing and releasing the left button twice quickly, used to open a program.
- **Right-clicking** – pressing and releasing the right button quickly, used to display a shortcut menu.
- **Dragging** – moving the mouse while keeping the left button pressed, used to move objects on screen. Ensure that the scope of Teacher's Corner given at the end of the chapter has been covered.
- **Scrolling** – rolling the mouse wheel up and down, used to move the page up and down.

Extension

Ask the students some oral questions based on this chapter.

Q. What is a mouse used for?

Q. Name the pointing device.

Q. Which finger must be placed on the left button / right button?

Q. Which finger must be used to scroll the wheel?

Q. Which fingers must be used to hold the sides of the mouse?

Q. Define pointing / clicking / dragging.

Q. What is the meaning of single-click / double-click / right-click?

Q. What is single-click / double-click / right-click used for?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 44 to 46 of the main course book as **One Touch Learn** and **Let's Do It**. After solving the course book exercises, tell the students to solve **Crack the Code** activity given on page 46 of the main course book to imbibe Coding & Computational Thinking skills. Help the students to solve these questions.

In Creative Assignment, activities like **Hands-On** and **Fun in Lab** given on page 47 of the main course book will enhance the ability of the students and serve as a Creativity & Innovativeness, Art Integration and Digital Literacy activity.

Suggested Activity

Ask the students to draw a picture of a mouse representing single-click, double click, right-click, drag.

6 Using the Keyboard

Teaching Objectives

Students will learn about

- Keys on the Keyboard
- Number Keys
- What is a Cursor?
- Alphabet Keys
- Special Keys

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that keyboard is used to type on computer screen.

Show to the students that a keyboard has small buttons on it called keys.

Make the students count that a computer keyboard has 101 to 104 keys.

Tell the students that the keys on a keyboard are divided into three categories:

- **Alphabet keys** – 26 in number (A-Z or a-z).
- **Number keys** – 10 in number (0 to 9).
- **Special keys** – Enter, Spacebar, Backspace, etc.

Show to the students the position of various categories of keys on the keyboard.

Make the students understand that the alphabet keys (A to Z) on the keyboard are also used to type words and sentences in both capital and small letters (A-Z or a-z).

Share with the students that the number keys are used to type numbers and there are two sets of number keys on a keyboard.

Show to the students that there are some special keys also on the computer like:

- **Spacebar key** – longest key at the bottom, used to give blank space between letters and words.
- **Enter key** – also called Return key, two in number, used to move the cursor to the next line.
- **Backspace key** – used to erase typed letter, word or sentence.
- **Arrow keys** – Show to the students the four arrow keys (up, down, left and right) on the keyboard, used to move the cursor.

Open WordPad and show to the students the small blinking line called cursor.

Make the students understand that the cursor shows the place where the typed letters will appear.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. What are the small buttons on a keyboard called?

Q. How many keys are there on a keyboard?

Q. Name the categories in which the keys on a keyboard are divided into.

Q. What are alphabet / number keys used for?

Q. How many sets of number keys are there on the keyboard?

Q. How many alphabet keys are there on the keyboard?

Q. What is the use of Enter / Spacebar / Backspace key?

Q. Name some special keys.

Q. What is the use of cursor control keys?

Q. How many cursor control keys are there?

Q. What is a cursor?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 51 to 53 of the main course book as **One Touch Learn** and **Let's Do It**. After solving the course book exercises, tell the students to solve **Crack the Code** activity given on page 53 of the main course book to imbibe Digital Literacy and Art Integration skills. Help the students to solve these questions.

In Creative Assignment, activities like **Hands-On** and **Fun in Lab** given on pages 53 and 54 of the main course book will enhance the ability of the students and serve as a Creativity & Innovativeness, Collaboration & Teamwork and Digital Literacy activity.

Suggested Activity

Ask the students to paste a picture of computer keyboard in the computer notebook and label Number keys, Alphabet keys, Enter keys, Spacebar key, Backspace key and Cursor Control keys on it.

7 Storage Devices

Teaching Objectives

Students will learn about

- Storing Things
- Storage Devices of a Computer

Number of Periods	
Theory	Practical
3	0

Teaching Plan

Introduce different storage objects used in daily life for storing different things.

Introduce storage devices as the parts that are used to store our work in the computer.

Share with them pictures / models of some storage devices like:

- **Hard Disk** – has high storage capacity and fixed inside the CPU box.
- **Compact Disc (CD)** – circular in shape and portable storage device.
- **Digital Versatile Disc (DVD)** – circular in shape but with more storage capacity than CD.
- **Memory Card** – smaller than pen drive and CD and used in mobile phone, digital camera, or similar devices.
- **Pen Drive or USB Flash Drive** – having more storage capacity than DVD but less than Hard Disk.

Show to the students CD/DVD Drive and USB ports used to read the files stored in CD/DVD and Pen Drive respectively.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. What are the parts of a computer?

Q. Which has more storage capacity: CD or DVD?

Q. Arrange in increasing order of storage capacity: CD, DVD, Pen Drive and Hard Disk.

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 57 and 58 of the main course book as **One Touch Learn** and **Let's Do It**. After solving the course book exercises, tell the students to solve **Crack the Code** activity given on page 59 of the main course book to imbibe Interdisciplinary and Problem Solving & Logical Reasoning skills. Help the students to solve these questions.

In Creative Assignment, activities like **Hands-On** and **Fun in Lab** given on pages 59 and 60 of the main course book will enhance the ability of the students and serve as a Creativity & Innovation, Communication and Experiential Learning activity.

Suggested Activity

Ask the students to collect information about a modern storage device – Blue Ray Disc which looks like a CD/DVD but has much more storage capacity than the two.