

TRACKPAD

iPLUS Ver. 2.0

Teacher's Manual

Extended Support for Teachers



ORANGE

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Periods Days	0	I	II	III	IV	BREAK	V	VI	VII	VIII
Monday										
Tuesday						B				
Wednesday						R				
Thursday						E				
Friday						A				
Saturday						K				



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."

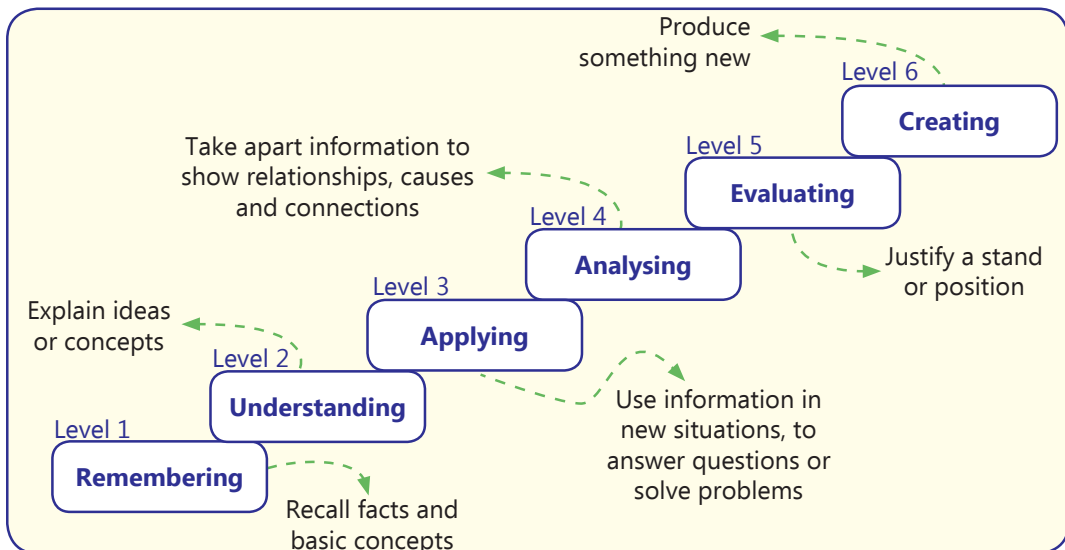
Teaching Strategies

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 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."

1. Computer—A Machine

Teaching Objectives

Students will learn about

- ☞ Natural and man-made things
- ☞ Computer—A Smart machine
- ☞ Features of a computers
- ☞ Machines
- ☞ Difference between computers and machines
- ☞ Types of computers

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).

Share with them that computer is also a machine.

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).

Make the students understand that there are certain things which man can do better than computers covering:

- **Feelings** – Computer does not have feelings and does not understand emotions.
- **Instruction** – Computer cannot work without our instructions.
- **Decision** – Computer cannot take its own decisions.

Number of Periods

3

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

- **Desktop computer** – kept on desk or table
- **Laptop computer** – can be kept on lap also and is portable
- **Hand-held computer** – smaller than a laptop and has a touchscreen, such as tablet and smartphone

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 man-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 14, 15, 16, and 17 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack the Code activity given on pages 16 of the main course book to imbibe interdisciplinary and problem & logical reasoning skills. Help the students to solve these questions.

In Creative Assignment, activities like Be Creative and Practical Time given on page 17 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

- ☞ Uses of a Computer
- ☞ What computers Cannot do?
- ☞ Places where Computers Are Used

Number of Periods

3

Teaching Plan

While teaching this chapter, tell the students that computer is a magical machine and makes our work faster and easier. Explain to the students the features of a computer covering features like being fast, committing no mistakes, searching information, doing many types of works, non-tiredness and having large storage.

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

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

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

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
 - Schools
 - Railway stations
 - Shops
 - Offices
 - Hospitals

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 22 and 23 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack the Code activity given on page 23 of the main course book to imbibe problem solving and logical reasoning skills. Help the students to solve these questions.

In Creative Assignment, activities like Be Creative and Practical Time given on page 24 of the main course book will enhance the ability of the students and serve as a collaboration and teamwork, creativity and 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
- Launching satellites
- Weather forecasting
- Making robots
- Making animations

3. Parts of a Computers

Teaching Objectives

Students will learn about

- ☞ Main Parts of a Computer
- ☞ Additional Parts of a Computer

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.

Number of Periods	
Theory ②	Practical ①



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
- **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. 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 28, 29, 30 and 31 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack the Code activity given on page 30 of the main course book to imbibe problem solving and logical reasoning skills. Help the students to solve these questions.

In Creative Assignment, activities like Be Creative and Practical Time given on page 31 of the main course book will enhance the ability of the students and serve as a collaboration and teamwork, creativity and innovativeness, interdisciplinary and experiential learning activity.

Suggested Activity

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

