TOUCHPAD

Play Ver. 2.1

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."

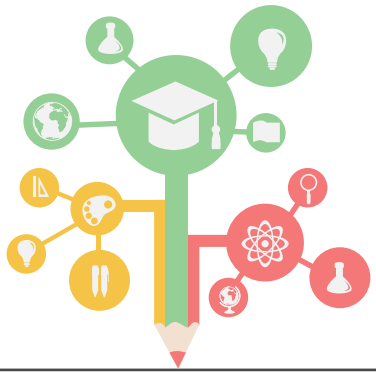
Age 9 - 11 Years	
Physical	• Motor skills develop resulting in enhanced reflexes
Cognitive	• Applies several memory strategies at once • Cognitive self-regulation is now improved
Language	• Ability to use complex grammatical constructions enhances • Conversational strategies are now more refined
Emotional/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

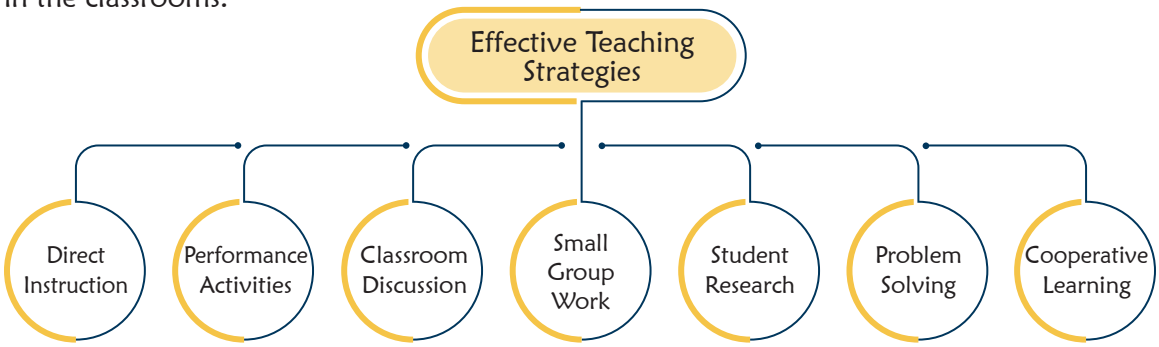
After the class

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

> "Knowing yourself is the beginning of all wisdom."

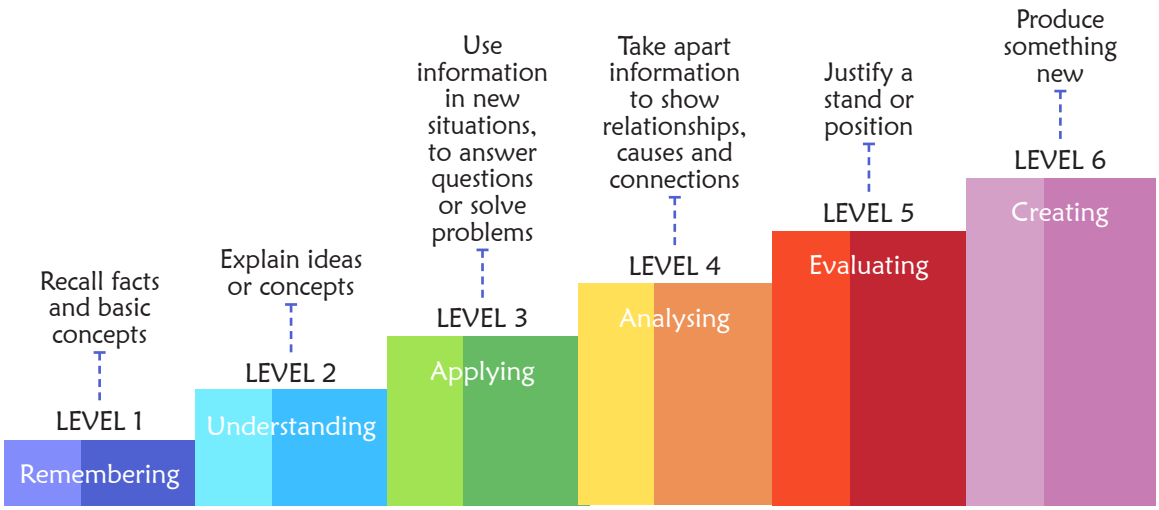
Teaching Strategies

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 Wonderful Machine
- What are Machines?
- Places where Computers are Used

Number of Periods	
Theory	Practical
2	3

Teaching Plan

While teaching this chapter, ask the students to look around themselves to identify things.

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

Make them understand that 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, Washing machine, 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).

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. What is the use of air conditioner / refrigerator / washing machine / television / mobile / car?

Q. What does a computer need to run?

Q. How is computer different from other machines?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 12 and 13 of the main course book as **Exercise**.

Ask the students to try **Hands-On** activity given on page 14 to inculcate Creativity and Critical Thinking skills.

Take the students to the computer lab and let them practise the activity **IN THE LAB** given on page 14 of the main course book. It will enhance the ability of the students and will serve as a Creativity and Technology 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 Parts of a Computer

Teaching Objectives

Students will learn about:

- Monitor
- Mouse
- CPU
- Keyboard

Number of Periods	
Theory	Practical
2	3

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

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. Define a monitor.

Q. What is the other name of a monitor?

Q. What is the function of a monitor?

Q. What does CPU stand for?

Q. Where is CPU fixed?

Q. What is a mouse?

Q. What does a keyboard have?

Q. What are keys?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 17 and 18 of the main course book as **Exercise**.

Ask the students to try **Hands-On** activity given on page 18 to inculcate Creativity and Critical Thinking skills.

Take the students to the computer lab and let them practise the activity **IN THE LAB** given on page 18 of the main course book. It will enhance the ability of the students and will serve as a Collaboration and Technology Literacy activity.

Suggested Activity

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

3 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
1	1

Teaching Plan

While teaching this chapter, tell the students that a keyboard has small buttons on it called keys and they can type text on the monitor by pressing these keys.

Encourage the students to type their name about them on the keyboard.

Make them understand that a keyboard consists of 104 keys.

Tell the students that keys are divided into three categories:

- Alphabet keys (A–Z or a–z)
- Number keys (1, 2, 3, ..., 9 and 0 [zero])
- Special keys (Enter key, Spacebar, Backspace key, Shift key, etc.)

Tell them that some keys that have special role are known as Special Keys. Those are:

- Spacebar Key
- Enter Key
- Backspace Key

Teach the students about a cursor which is a small blinking line on the screen.

Ask the students to read the **Clickipedia** given on page 22.

Ask the students to do **Periodic Assessment-2** and **Test Sheet-1** given on pages 29 and 30.

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. How many keys are there in a keyboard?

Q. Which keys are used to type names?

Q. Which key is used to move to the next line?

Q. Which key is used to leave space between words?

Q. What is a cursor?

Q. Which key is used to erase what we have typed?

Q. Which keys are used to type numbers?

Evaluation

After explaining the chapter, let the students do exercises given on page 23 of the main course book as **Exercise**.

Ask the students to try **Hands-On** activity given on page 24 to inculcate Creativity skill.

Take the students to the computer lab and let them practice the activity given in the **IN THE LAB** section on page 24 in the main course book. This will enhance the abilities of the students and serve as an Information Literacy and Collaboration Activity.

Suggested Activity

Ask the students to discuss with their parents and elders and learn more about the uses of the keyboard. Encourage the students to share some more uses of computers with the class.

4 Using the Mouse

Teaching Objectives

Students will learn about:

- Buttons of a Mouse
- Using a Mouse
- How to Hold a Mouse

Number of Periods	
Theory	Practical
1	2

Teaching Plan

While teaching this chapter, tell the students a mouse is an important part of a computer. It is a pointing device that helps us to tell the computer what to do.

Make them understand the other uses of the mouse.

Tell the students that a mouse has two buttons and a scroll wheel and how we can use them.

Teach the students how to hold and use the mouse.

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. Which is used to draw pictures, play games, give commands, and to point at different things?

Q. Define clicking.

Q. What do you mean by a double-click?

Q. Which wheel is present in the mouse?

Q. Which finger is placed on the left button of a mouse with the right hand?

Q. What is a mouse?

Q. How many buttons does a mouse have?

Evaluation

After explaining the chapter, let the students do exercises given on pages 27 and 28 of the main course book as **Exercise**.

Take the students to the computer lab and let them practice the activity given in the **In the Lab** section on page 28 in the main course book. This will enhance the abilities of the students and serve as a Technology Literacy and Information Literacy Activity.

Suggested Activity

Ask the students to draw a mouse on an A-4 size sheet by labeling its buttons and scroll wheel.

5 Fun with Tux Paint

Teaching Objectives

Students will learn about:

- What is Tux Paint?
- Components of Tux Paint Window
- Steps to Start Tux Paint
- Tools of Tux Paint

Number of Periods	
Theory	Practical
1	2

Teaching Plan

While teaching this chapter, tell the students that Tux Paint is a free drawing program designed for young children.

Explain the steps to start Tux Paint to the students.

Make them understand the main components of the Tux Paint window. Those are:

- Toolbar
- Colors Palette
- Help Area
- Drawing Canvas
- Selector

Tell them about the various tools of Tux Paint. Those are:

- Paint Tool
- Eraser Tool
- Quit Tool
- Shapes Tool
- Lines Tool

Also, tell them the use and steps of Tux Paint tools.

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. Which tool is used to draw a line?

Q. Which component contains various colours?

Q. What is a Tux Paint?

Q. Which tool is used to draw freehand or previously defined shapes?

Q. What are the components of the Tux Paint window?

Q. Define Shapes Tool.

Ask the students to do **Periodic Assessment-3** given on page 43.

Evaluation

After explaining the chapter, let the students do exercises given on pages 35 and 36 of the main course book as **Exercise**.

Take the students to the computer lab and let them practice the activity given in the **In the Lab** section on page 36 in the main course book. This will enhance the abilities of the students and serve as a Creativity Activity.

Suggested Activity

Ask the students to draw a colourful circle on Tux Paint using the "Shapes" tool. Choose your favorite colour for the circle and make it as big as you can.

6 Introduction to Paint

Teaching Objectives

Students will learn about:

- Steps to Start Paint
- Drawing Lines
- Drawing Rounded Rectangle
- Saving a Drawing
- Components of Paint Window
- Drawing Rectangle
- Drawing Curve
- Closing Paint

Number of Periods	
Theory	Practical
1	2

Teaching Plan

While teaching this chapter, tell the students that Paint is a program used to draw and colour.

Teach the students the steps to start Paint.

Make them understand the components of the Paint window. Those are:

- Tools Group
- Colors Group
- Shapes Group
- Drawing Area
- Ribbon

Explain to the students about the following topics:

- Drawing Lines
- Drawing Rectangle
- Drawing Rounded Rectangle
- Drawing Curve

Teach the students to save and close the Paint program.

Ask the students to draw the rectangle and saving it.

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. Which group has the Pencil tool?

Q. What is a Paint?

Q. How to close a Paint program?

Q. Define the Colors group.

Q. How many components of the Paint window are there?

Q. Which is a blank area where you can draw and colour?

Evaluation

After explaining the chapter, let the students do exercises given on pages 41 and 42 of the main course book as **Exercise**.

Take the students to the computer lab and let them practice the activity given in the **In the Lab** section on page 42 in the main course book. This will enhance the abilities of the students and serve as a Creativity Activity.

Suggested Activity

Ask the students to draw a colourful picture of a hut in Paint.

7 Reasoning and Critical Thinking

Teaching Objectives

Students will learn about:

- Working with Shapes
- Word Search
- Recognising Patterns
- Directions

Number of Periods	
Theory	Practical
1	0

Teaching Plan

While teaching the chapter, tell the students about the shapes and directions.

Introduce Shapes to the students in details which are:

- Square
- Triangle
- Rectangle
- Circle

Tell the students about what pattern is and to identify one. Also, tell them how to solve by giving some examples which will improve their understanding of the topic.

Show the students what is a word search and how to solve it with the help of critical thinking.

Explain to the students what directions are and how they help us reach a definite location.

Show examples for all the topics for better clarity of the lesson at the end.

Ask the students to solve the exercises **Tech Funda** given on page 45.

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

Extension

Ask the students some oral questions based on this chapter.

Q. Define Triangle.

Q. How many shapes are there?

Q. How can you recognise a pattern?

Q. What is a word search?

Q. What are directions?

Q. How do directions help us?

Evaluation

After explaining the chapter, let the students do exercises given on page 47 and 48 of the main course book as **Exercise**.

Ask the students to practice the activity given in the **In the Lab** section on page 48 in the main course book. This will enhance the abilities of the students and serve as a Critical Thinking and Information Literacy Activity.

Suggested Activity

Ask the students to mark the direction from their home to school.

8 Scratch Jr

Teaching Objectives

Students will learn about:

- Starting ScratchJr
- Adding a New Character
- Creating a ScratchJr Project
- Components of ScratchJr Window
- Changing the Background
- Saving a Project

Number of Periods	
Theory	Practical
2	3

Teaching Plan

While teaching this chapter, tell the students that ScratchJr is a software which is used to create animated stories and games.

Guide the students on how to start ScratchJr.

Make them understand the components of ScratchJr window. Those are:

- Stage
- Green Flag
- Character
- Save Button
- Block categories
- Change Background
- Blocks Palette
- Reset Character Button
- Plus Button
- Programming Area

Explain to the students about the following topics in detail:

- Adding a new character
- Creating a ScratchJr Project
- Changing the background
- Saving a project

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 do you understand by changing a background?

Q. Name the software which is used to create animated stories and games.

Q. Define the term 'Programming Area'.

Q. Define Character.

Q. Which button is clicked to run a Scratch project?

Q. What is the name of the place where the characters move and do actions?

Q. What are Block Categories?

Evaluation

After explaining the chapter, let the students do exercises given on pages 53 and 54 of the main course book as **Exercise**.

Take the students to the computer lab and let them practice the activity given in the **In the Lab** section on page 54 in the main course book. This will enhance the abilities of the students and serve as a Creativity and Technology Literacy Activity.

Suggested Activity

Ask the students to create a pet animation using ScratchJr. Choose a pet character and make it move around the screen.