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TOUCHPAD®

PLUS Ver. 4.0

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 to 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 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 needs 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.

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During the class:

Present the lesson plan.

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After the class:

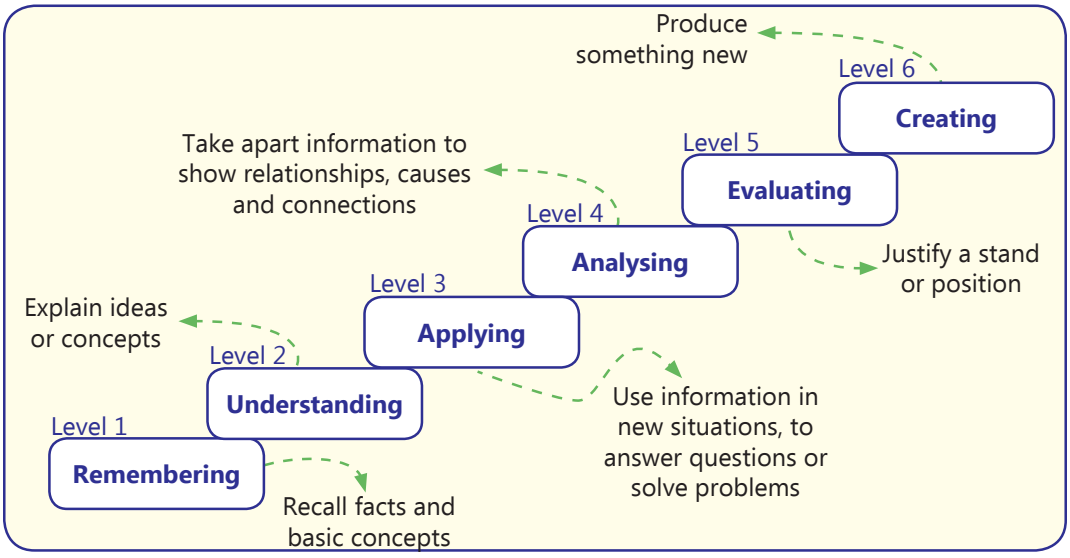
Reflect on what worked well and why. If needed, revise the lesson plan.

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.

Class 8

LESSON PLAN

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1. Computer Networking

Teaching Objectives

Students will learn about

- Computer Network
- Need for Computer Network
- Advantages of Computer Network
- Components of a Network
- Network Terminologies
- Devices Required for a Network
- Types of Networks
- Topology
- Network Architecture
- Wireless Networking Technology
- Protocol

Number of Periods	
Theory	Practical
3	1

Teaching Plan

Before starting the chapter, ask the students to solve the question in Take Off given on Page 11 of the main course book.

While teaching this chapter, tell the students that the process of connecting computers and peripheral devices with each other to exchange data is called computer networking.

Tell the students about the meaning and basics of computer network.

Share with the students the need for computer network – for resource sharing and for communication.

Discuss with the students the advantages of a computer network.

Introduce network terms like Server (host computer) and Client (dependent on server).

Explain the different types of servers to the students covering dedicated server, print server, database server, network server and web server.

Tell the students about the components required for a network covering NIC, hub/switch, router, modem and networking cable.

Share with the students that on the basis of geographical area covered, the networks can be classified into LAN (Local Area Network), MAN (Metropolitan Area Network), WAN (Wide Area Network), PAN (Personal Area Network) and CAN (Campus Area Network).

Introduce Topology as geometric arrangement of computers or nodes in a network.

Explain the difference between different types of topologies covering bus topology, ring topology, star topology, tree topology and mesh topology.

Tell the students that the network architecture defines the overall design of the computer network.

Share with the students the two types of network architectures as Peer-to-Peer network and Client-Server network.

Share with the students about the wireless networking technologies detailing about Wi-Fi and Bluetooth.

Introduce Protocol as a set of rules that govern the communication between the computers on a network.

Discuss briefly about the different types of protocols explaining about HTTP, HTTPS, FTP, TC/IP, POP3, IMAP and SMTP.

Ask the student to solve the exercise Double Tap given on Pages 14, 20 & 22.

Extension

Ask the students some oral questions based on this chapter.

Q. Define computer network.

Q. What is the need for a computer network?

Q. What are the advantages of a computer network?

Q. Define server / client.

Q. What are the different types of computer servers?

Q. What are the components required for a network?

Q. Define LAN / MAN / WAN / PAN / CAN.

Q. Define Topology.

Q. Name different types of topologies.

Q. What is meant by protocol?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 23, 24 and 25 in the main course book. Tell the students to try sections under Scratch your Brain and Go Online given on Page 24 in the main course book.

Take the students to the computer lab and let them practice the activity given in the DIY In the Lab section on Page 25 in the main course book. This will enhance the ability of the students and serve as a Subject Enrichment activity.

Ask the students to complete the elements like 'Art Integration Learning' and 'Experiential Learning' given on Pages 15 & 21.

Suggested Activity

Ask the students to make models of different types of topologies using marbles and used wire pieces / straws.

2. Krita- Image Editing

Teaching Objectives

- Students will learn about
- Starting Krita
- Components of Krita
- Creating a New File
- Opening an Image for Editing
- Understanding Krita Tools
- Tools to Edit an image
- Saving an Image

Teaching Plan

Ask the students to complete the elements like 'Art Integration Learning' and 'Experiential Learning' given on page 13 at home & show it to him/her the next day.

Before starting the chapter, ask the students to solve the question in Take Off given on Page 27 of the main course book.

While teaching this chapter, tell the students about image editing.

Introduce the students to free and open source Krita Software.

Show to the students the interface of Krita and explain various elements.

Demonstrate to the students the method of creating a new file in Krita software.

Tell the students about the various tabs available in the create new document dialog box.

Demonstrate various Krita tools available in Krita for creating and editing Images.

Explain to the students following tools:

Rectangular Selection Tool: used to select a rectangular portion of an image.

Elliptical Selection Tool: used to select an oval or circular portion of an image.

Polygonal Selection Tool: used to select a multi-side section of the image.

Freehand Selection Tool: used to select an object or section of an image by drawing a freehand border around it.

Contiguous Selection Tool: used to detect the edges of the image automatically on the basis of the color codes and do the selection quickly using the round brush tip.

Similar Color Selection Tool: used to select the areas with similar colour in an image.

Crop Tool: used to remove unwanted portion from an image.

SVG Text Tool is used to type text on the image or the blank workspace.

Smart Patch Tool: used to remove dark spots, scratches and other unwanted parts from an image.

Clone Tool: used to duplicate a part of an image.

Further tell them the steps involved in saving an image after editing.

Ask the students to solve the exercise Double Tap given on Page 36.

Extension

Ask the students some oral questions based on this chapter.

Q. What is the Image editng?
Q. What is Krita?
Q. What is the process to start Krita?
Q. Name any two components of Krita.
Q. What is Resolution?
Q. What is a Layer?
Q. Which option is used to open and existing image for editing?
Q. What do you mean by cropping?
Q. What do you understand by Freehand Brush?
Q. What do you mean by Clonning an image?
Q. Which tool is used to type text?
Q. Which tool is used to remove dark spots?
Q. Which key is used to select the Crop tool?
Q. Which option is used to save an image after making the desired changes?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 38 & 39 in the main course book. Tell the students to try sections under Scratch your Brain & Go Online given on Page 38 & 39 in the main course book.

Take the students to the computer lab and let them practice the activity given in the DIY In the Lab section on Page 39 in the main course book. This will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to open an image in Krita and use various tools to manipulate, retouch, crop, resize and add colours to the image. Finally ask them to save the image as 'My first editing in Krita'.