Lesson plan

Date	Session/ Period	Let's Reboot - Book 8
		Chapter 1 – Top-tech Game Changer Trends
		Objectives By the end of the lesson, Students should know about : • Cloud Computing • Edge Computing • Big Data • Virtual Reality • Augmented Reality • Blockchain Technology **Teaching Aids** • online videos (could be from Youtube) • Student's Book • Board and marker • Computer Students should go to the computer lab and search and gather knowledge about these terms. Ask students to work alone or with a partner to complete the practical assignment.
	Session 1 *(40 mins approx)*	**Theory** • Explain Cloud Computing, Edge Computing • Explain about Big data…continue….. **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions*
	Session 2 *(40 mins approx)*	**Theory** • Continue..Big data • Virtual Reality & Augmented reality **Assessment:** Ask different questions from the students to assess their learning from Think and Answer oral questions and Quick Questions
	Session 3 *(40 mins approx)*	**Theory** • Explain Blockchain Technology • Metaverse **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 4 (40 mins approx)	Practical execution of *Activities* of session 1/2/3/revision of chapter/doubt clearing
	HW	• All theory questions (MCQ, Fill-in, T/F and short answers) • Solve practical assignments, if available ***(Practical Sessions***)

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		Chapter 2 – Wireless Technologies
		Objectives By the end of the lesson, Students should know about the following: • Wireless Technologies • GPS, GPS Receiver and its uses; 4G and 5G Technology • Infrared Communication and Bluetooth Technology • Wi-Fi and WiMAX **Teaching Aids** • online videos (could be from Youtube) • Student's Book • Board and marker • Computer Students should go to the computer lab and gather knowledge about these terms. Ask students to work alone or with a partner to complete the practical assignment.
	Session 1 *(40 mins approx)*	**Theory** • Explain Wireless Technologies, Infrared Communication, Bluetooth Technology **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions*
	Session 2 *(40 mins approx)*	**Theory** • Explain Wi-Fi Technology, WiMAX Technology, and Global Positioning System (GPS) **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 3 *(40 mins approx)*	Practical execution of *Activities* of session 1/2
	Session 4 *(40 mins approx)*	**Theory** • Connecting to the Internet on Mobile Phones • Mobile Broadband **Assessment:** Ask different questions from the students to assess their learning from Think and Answer oral questions and Quick Questions (or create a separate quiz)
	Session 5 *(40 mins approx)*	Practical execution of *Activities* of session 4/revision of chapter/doubt clearing
	HW	• All theory questions (MCQ, Fill-in, T/F and short answers) • Solve practical assignments (Practical Sessions) on Session theory topics if available.

Date	Session/ Period	Let's Reboot - Book 8
		Chapter 3 – AI Domains
		Objectives By the end of the lesson, Students should know the following: • Importance of Data in AI • Big Data & AI • About Computer Vision (CV) • Natural Language Processing (NLP) • Integration of CV and NLP • Activities based on Data, CV and NLP **Teaching Aids** • online videos (could be from Youtube) • Student's Book • Board and marker • Computer Students should go to the computer and work on their computers so that they can follow you as you demonstrate different steps on the screen. Ask students to work alone or with a partner to complete the practical assignment.
	Session 1 *(40 mins approx)*	**Theory** • Importance of Data • Big Data and AI • Source of Big data • How do AI and Big Data Work Together? **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions*
	Session 2 *(40 mins approx)*	**Theory** • How does Rock, Scissor and Paper Game Work? **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 3 *(40 mins approx)*	Practical execution of *Activities* of sessions 1 and 2
	Session 4 *(40 mins approx)*	**Theory** • Computer Vision • The Limits of Computer Vision • Some current uses of CV **Assessment:** Ask different questions from the students to assess their learning from Think and Answer oral questions and *Quick Questions* (or create a separate quiz)
	Session 5 *(40 mins approx)*	Practical execution of *Activities* of session 4
	Session 6 *(40 mins approx)*	**Theory** • Natural Language Processing (NLP) • Scope of Integration of Computer Vision and NLP **Assessment:**

		Ask different questions from the students to assess their learning from Think and Answer oral questions and *Quick Questions* (or create a separate quiz)
	Session 7 *(40 mins approx)*	Practical execution of *Activities* of session 6
	HW	• All theory questions (MCQ, Fill-in, T/F and short answers) • Solve practical assignments, if available ***(Practical Sessions***) on Session theory topics.

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		Chapter 4 – App Development
		Objectives By the end of the lesson, Students should be able to understand: • The purpose of an app • Types of apps • Downloading and installing apps • Android and IOS • Developing an app in App Inventor **Teaching Aids** • online videos (could be from Youtube) • Student's Book • Board and marker • Computer with browser Students should open their browsers and work on their computers so that they can follow you as you demonstrate all steps. Ask students to work alone or with a partner to complete the practical assignment.
	Session 1 *(40 mins approx)*	**Theory** • What is an App? • Types of Apps **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions*
	Session 2 *(40 mins approx)*	**Theory** • App Categorization • Downloading and Installing the App **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 3 *(40 mins approx)*	Practical execution of ***Activities*** of sessions 1 and 2
	Session 4 *(40 min approx.)*	**Detail steps to be discussed(theory)** • Basics of App Development, Developing an App • Starting App Inventor • **Create a New Project** **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 5 *(40 min approx.)*	Practical execution of ***Activities*** of session 4
	Session 6 *(40 min approx.)*	Practical execution of ***Activities*** of chapter/revision/doubt clearing
	HW	• All theory questions (MCQ, Fill-in, T/F and short answers) • Solve practical assignments ***(Practical Sessions***) on Session theory topics.

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		Chapter 5 - Google Apps
		Objectives By the end of the lesson, Students should know about the following: • Apps created by Google • Working with Google Drive and Maps • Working with Google Docs, Sheets, and Slides • Uploading a video on YouTube **Teaching Aids** • online videos (could be from Youtube) • Student's Book • Board and marker • Computer with PowerPoint 2019 Students should open a browser and Notepad text editor and work on their computers so that they can follow you as you demonstrate all steps. Ask students to work alone or with a partner to complete the practical assignment.
	Session 1 *(40 mins approx)*	**Theory** • What is an App? • About the GOOGLE • Google Apps **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions*
	Session 2 *(40 mins approx)*	Practical execution of *Activities* of session 1
	Session 3 *(40 mins approx)*	**Theory** • Google Maps • Google Docs **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 4 *(40 mins approx)*	Practical execution of ***Activities*** of session 3
	Session 5 (40 mins approx)	**Detail steps to be discussed(theory)** • Google Sheets • Google Slides **Assessment:** Ask different questions from the students to assess their learning from Think and Answer oral questions and Quick Questions (or create a separate quiz)
	Session 6 (40 mins approx)	Practical execution of Activities of session 5
	Session 7 (40 mins approx)	**Theory** • YouTube • Google Meet **Assessment:** Ask different questions from the students to assess their learning from Think and Answer oral questions and Quick Questions (or create a separate quiz).
	Session 8 (40 mins approx)	Practical execution of Activities of session 7
	HW	• All theory questions (MCQ, Fill-in, T/F and short answers) • Solve practical assignments ***(Practical Sessions***) on Session theory topics.

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		Chapter 6 - Working with CSS
		Objectives By the end of the lesson, Students should be able to: • Advantages of CSS • Inline style sheets • Internal Stylesheet • External Style sheets **Teaching Aids** • online videos (could be from Youtube) • Student's Book • Board and marker • Computer Students should open *Adobe Animate CC* and work on their computers so that they can follow you as you demonstrate all steps. Ask students to work alone or with a partner to complete the practical assignment.
	Session 1 *(40 mins approx)*	**Theory** • Cascading Style Sheets • Advantages of CSS • Syntax of CSS, CSS Comments **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions*
	Session 2 *(40 mins approx)*	Practical execution of *Activities* of session 1
	Session 3 *(40 mins approx)*	**Detail steps to be discussed(theory)** • Three Ways to Insert CSS • CSS Properties…..continue… **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 4 *(40 mins approx)*	Practical execution of *Activities* of session 3
	Session 5 *(40 mins approx)*	**Detail steps to be discussed(theory)** • continue…CSS Properties **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 6 *(40 mins approx)*	Practical execution of *Activities* of session 5
	HW	• All theory questions (MCQ, Fill-in, T/F and short answers) • Solve practical assignments ***(Practical Sessions***) on Session theory topics.

Date	Session/ Period	Let's Reboot - Book 8
		Chapter 7 - Lists and Arrays in Python
		Objectives By the end of the lesson, Students should know the following: • Lists and their operation • Arrays and its operations • Python Lists Vs Arrays • When to use Arrays? **Teaching Aids** • online videos (could be from Youtube) • Student's Book • Board and marker • Computer with Python Students should open Python and work on their computers so that they can follow you as you demonstrate all steps. Ask students to work alone or with a partner to complete the practical assignment.
	Session 1 *(40 mins approx)*	**Theory** • Python List • How to Access Elements from a List? • How do slice lists in Python? **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions*
	Session 2 *(40 mins approx)*	Practical execution of *Activities* of session 1
	Session 3 *(40 mins approx)*	**Theory** • Taking n last elements of a list • How to change or add elements to a list? • How to delete or remove elements from a list? **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 4 *(40 mins approx)*	Practical execution of *Activities* of session 3
	Session 5 *(40 mins approx)*	**Theory** • Python List Methods • Other List Operations in Python • Python Array **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 6 *(40 mins approx)*	Practical execution of *Activities* of session 5
	Session 7 *(40 mins approx)*	**Theory** • Creating Python Arrays • Accessing Python Array Elements

		• Slicing Python Arrays, Changing and Adding Elements • Removing Python Array Elements **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 8 *(40 mins approx)*	Practical execution of ***Activities*** of session 7
	Session 9 *(40 mins approx)*	**Theory** • Sorting an Array • Arrays vs Lists **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 10 *(40 mins approx)*	Practical execution of ***Activities*** of session 9
	HW	• All theory questions (MCQ, Fill-in, T/F and short answers) • Solve practical assignments ***(Practical Sessions***) on Session theory topics.

Date	Session/ Period	Let's Reboot - Book 8
		Chapter 8 - Functions in Python
		Objectives By the end of the lesson, Students should know the following: • About Function • Calling a function • Parameters and Arguments in a function • Scope and lifetime of variables **Teaching Aids** • online videos (could be from Youtube) • Student's Book • Board and marker • Computer with Python Students should open Python and work on their computers so that they can follow you as you demonstrate all codes. Ask students to work alone or with a partner to complete the practical assignment.
	Session 1 *(40 mins approx)*	**Theory** • What is a Function? • Parameters and Arguments in a function **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions*
	Session 2 *(40 mins approx)*	Practical execution of *Activities* of session 1
	Session 3 *(40 mins approx)*	**Theory** • Scope and lifetime of variables • Return Statement **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 4 *(40 mins approx)*	Practical execution of *Activities* of session 3
	HW	• All theory questions (MCQ, Fill-in, T/F and short answers) • Solve practical assignments ***(Practical Sessions***) on Session theory topics.

Date	Session/ Period	Let's Reboot - Book 8
		Chapter 9 - Cyber Threats and Protection
		Objectives By the end of the lesson, Students should know: • Types of Malware • Types of Hackers • Types of Cyber-threats • Safeguarding personal information • Social Engineering. Phishing and DDoS • Good Digital Citizenship • Fake news and fact check • Dangers of online friendship **Teaching Aids** • online videos (could be from Youtube) • Student's Book • Board and marker • Computer with Web browsers Students should work on their computers so that they can follow you as you demonstrate all components and options on the screen. Ask students to work alone or with a partner to complete the practical assignment.
	Session 1 *(40 mins approx)*	**Theory** • Cyber Threat • What is a Hacker? **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions*
	Session 2 *(40 mins approx)*	**Theory** • Protecting Your Computer • What is Personal Information? • How to Protect your Personal Information **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 3 *(40 mins approx)*	Practical execution of *Activities* of session 1 and 3/doubt clearing session
	Session 4 *(40 mins approx)*	**Theory** • Social Engineering • Phishing • About Good Digital Citizenship • Preparing for the future with Positive Digital Footprints **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 5 *(40 mins approx)*	Practical execution of *Activities* of session 4
	HW	• All theory questions (MCQ, Fill-in, T/F and short answers) • Solve practical assignments ***(Practical Sessions***) on Session theory topics.

Date	Session/ Period	Let's Reboot - Book 8
		Chapter 10 – Data Science Visualization
		Objectives By the end of the lesson, Students should understand: • What is data visualization? • The importance of visualization • Collecting relevant data • Asking the right Question • Predict an answer • Examples of data visualization **Teaching Aids** • online videos (could be from Youtube) • Student's Book • Board and marker • Computer with Web browsers Students should work on their computers so that they can follow you as you demonstrate all on the screen. Ask students to work alone or with a partner to complete the practical assignment.
	Session 1 *(40 mins approx)*	**Theory** • What is data visualization? • Examples of data visualization • Importance of accurate data **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions*
	Session 2 *(40 mins approx)*	**Theory** • Asking the right Question(all subtopics inside it) **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 3 *(40 mins approx)*	Practical execution of ***Activities*** of sessions 1,2/Revision of chapter
	HW	• All theory questions (MCQ, Fill-in, T/F and short answers) • Solve practical assignments ***(Practical Sessions***) on Session theory topics.

Date	Session/ Period	Let's Reboot - Book 8
		Chapter 11 – Creating a Chatbot without Coding
		Objectives By the end of the lesson, Students should understand the following: • Various uses of chatbots • Creating Chatbot using Appypie • Schematic diagram of chatbot flow • Integrating the Chatbot on a web page **Teaching Aids** • online videos (could be from Youtube) • Student's Book • Board and marker • Computer with Web browsers Students should work on their computers so that they can follow you as you demonstrate all on the screen. Ask students to work alone or with a partner to complete the practical assignment.
	Session 1 *(40 mins approx)*	**Theory** • What is Chatbot? • Why are Chatbots Important? • Uses of Chatbot • What is Appypie, and How Can It Help in Creating Chatbots? **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions*
	Session 2 *(40 mins approx)*	**Theory** • Creating a Chatbot using Appypie….complete the exercise **Assessment:** Ask different questions from the students to assess their learning from *Think and Answer* oral questions and *Quick Questions (or create a separate quiz)*
	Session 3 *(40 mins approx)*	Practical execution of ***Activity*** of sessions 2
	HW	• All theory questions (MCQ, Fill-in, T/F and short answers) • Solve practical assignments ***(Practical Sessions***) on Session theory topics.

Chapter	Sessions
1 Top-tech Game Changer Trends	4
2 Wireless Technologies	5
3 AI Domains	7
4 App Development	6
5 Google Apps	8
6 Working with CSS	6
7 Lists and Arrays in Python	10
8 Functions in Python	4
9 Cyber Threats and Protection	5
10 Data Science Visualization	3
11 Creating a Chatbot without Coding	3
Total	**60**