DELHI PUBLIC SCHOOL, PALI
ANNUAL CURRICULUM PLAN SESSION 2019 – 2020

CLASS: VII
SUBJECT: Artificial Intelligence

Month & Working Days	Theme/ Sub-theme	Learning Objectives		Activities &Resources	Expected Learning Outcomes	Assessment
		Subject Specific (Content Based)	Behavioural (Application based)			
June-17	Introduction to Artificial Intelligence Subtheme: Definition of AI/Meaning of the Term AI, Difference between Human intelligence and Artificial Intelligence, Real life applications of AI(Space program Mars Lander, Medical Research: Prosthetic limbs, Mining through Robots, Google Assistant) Pros and Cons of	• To make students aware about theterm AI. • To make students understand difference between Human intelligence and Artificial Intelligence. • To make them aware about Real life applications of AI.(Space program Mars Lander, Medical Research: Prosthetic limbs, Mining through Robots, Google Assistant) • To make students understand Pros and Cons of AI	• To enable students to use AI to solve their daily life problems. • To make students understand the importance of AI in daily life of 21st century. • To make students aware about dependency of humans on AI.	**Activity (to introduce the lesson):** • Activity demonstrating the use of Google Assistant, Google Maps and Google translator. **Activity (to support learning):** • Ice Breaker Activity: Dream Smart Warehouses and Dream Smart Hospitals Activity: Designing a rough layout of floor plan of Smart infrastructure to fight pandemics. **Activity / Assignment (to assess learning):** • Writing a Letter describing World in 2K50. Learners have to write a letter self-keeping the future in context at global level. They will describe how AI has changed life (covering positive and	**Students will :** • Be aware about the term AI. • Understand difference between Human intelligence and Artificial Intelligence. • Be aware about Real life applications of AI. • Understand Pros and Cons of AI. **Students will be:** • Able to use AI to solve their daily life problems. • Understand the importance of AI in daily life of 21st century. • Aware about dependency of humans on AI.	**Activity / Assignment (to assess learning):** Writing a Letter describing World in 2K50.Learners have to write a letter self-keeping the future in context at global level. They will describe how AI has changed life (covering positive and negative aspects) in the year 2050.

	AI			negative aspects) in the year 2050.		

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July -26	Number System **Sub-theme:** Decimal Number System Binary Number system Conversion of Decimal to Binary system	• To learn about Decimal, Binary, Octal and Hexadecimal Number System. • To enable students to convert decimal number into binary number.	• To make students able to understand the importance and usage of every number system in daily life. • To make students aware about how binary numbers system is used to communicate with electronic devices.	**Activity (to introduce the lesson):** • Discussion on how numbers are involved in everything we do, from purchasing something from a store, reading a book, driving a car, calculating our age, measuring commodities. **Activity (to support learning):** • Activity to make students understand how computer translates alphabets into binary equivalent, as it understands the binary number only. **Activity / Assignment (to assess learning):** • An activity of demonstrating decimal to binary conversion: To ask students to perform binary to decimal conversion and decimal to binary conversion in excel.	**Student will:** • Learn about Decimal, Binary, Octal and Hexadecimal Number System. • Be able to convert decimal number into binary number. • Understand the importance and usage of every number system in daily life. • Be aware about how binary numbers system is used to communicate with electronic devices.	**Activity / Assignment (to assess learning):** • An activity of demonstrating decimal to binary conversion: To ask students to perform binary to decimal conversion and decimal to binary conversion in excel.

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August-20	**Continued……** Number System **Sub-theme:** Conversion of Binary to decimal system, Octal Number system, Hexadecimal Number system, Computer Arithmetic:- Binary addition, Binary Subtraction, Binary Multiplication, Binary Division	• To enable students to convert binary number into decimal number. • To enable students to perform binary addition, subtraction, multiplication and division.	• To enable students to understand the face value, positional value of the digits in the number. • To enable students to understand the concept of base of the number system	**<u>Activity (to introduce the lesson):</u>** • Discussion about how digital computer stores all kinds of data (audio, graphics, video, text and numbers) and information in binary numbers. • Discussion about natural numbers, whole numbers and integers and decimal number system with an activity of performing arithmetic operations (Addition, Subtraction, Multiplication and division) on them. **<u>Activity (to support learning):</u>** • Demonstration of decimal to binary conversion and vice versa. • Explanation of rules to perform binary addition, subtraction, multiplication and division. **<u>Activity / Assignment (to assess learning):</u>** • Conducting multiple choice question activity through Google forms.	**<u>Student will:</u>** • Be able to convert binary number into decimal number. • Be able to perform binary addition, subtraction, multiplication and division. • Understand the face value, positional value of the digits in the number. • Understand the concept of base of the number system.	**<u>Activity / Assignment (to assess learning):</u>** • Conducting multiple choice question activity through Google forms. • Presentation on Number System, types with features of every number system. **<u>Parameters:</u>** • Has a step by step approach to solve a problem. • Is able to apply theoretical knowledge into practical usage. • Understanding • Active participation in technology related events

				• Presentation on Number System, types with features of every number system.		

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September-24	Working with MSAccess 2007 **Sub-theme:** Database, types of database, Components of Database, Features of MS Access, Blank Database, Table Templates Field, Record, File, DBMS, Creating a blank database, datatypes, primary key, sorting data	• To make students able to understand terms like Database, real life utility of Database, Field, Record, DBMS. • To make students aware about features of MS Access. • To enable students to create a blank database by using table templates.	• To enable students to organize, manage and access data. • To enable students to differentiate between Flat file Database and Relational Database.	**Activity (to introduce the lesson):** • Discussion about usage of database in daily life by giving example of personal address diary, telephone directory, dictionary, Mobile phone contact list, attendance register, scholar number record, Library management software. **Activity (to support learning):** • Creating a database of Classmates. • Patients Database. **Activity / Assignment (to assess learning):** • Employee Database for an organization.	**Student will:** • Be able to understand terms like Database, real life utility of Database, Field, Record, DBMS. • Be aware about features of MS Access. • Be able to create a blank database by using table templates. **Student will learn :** • To organize, manage and access data. • To differentiate between Flat file database and Relational Database.	**Activity / Assignment (to assess learning):** • Employee Database for an organization.

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October-22	**Continued……** Working with MSAccess 2007 **Sub-theme:** Database, types of database, Components of Database, Features of MS Access, Blank Database, Table Templates Field, Record, File, DBMS, Creating a blank database, datatypes, primary key, sorting data	• To enable students to use different data types to store different kinds of data in the database. • To make students able to create a table in design view and to maintain data entries in datasheet view.	• To enable students to arrange data in ascending or descending order. • To make students able to prevent duplication of data.	**Activity (to introduce the lesson):** • Power point presentation on database and its importance including features of MS Access. • Demonstration on data types and how to declare types of data. **Activity (to support learning):** • Creating database named "Information System" consists of following fields:- Name, Relationship, Address, City, State, Contact number, Date of birth, Anniversary, EMail Id. • Database on 5 Favorite books (Price, Author's name, Publisher's name, Name of the book, Type of book) **Activity / Assignment (to assess learning):** • Create Class and Subject Teacher's Database (Teacher Id, Name, Gender, Subject, Classes taught and hobbies)	**Student will:** • Use different data types to store different kinds of data in the database. • Be able to create a table in design view and to maintain data entries in datasheet view. **Student will learn :** • To arrange data in ascending or descending order. • To prevent duplication of data.	**Activity / Assignment (to assess learning):** • Create Class and Subject Teacher's Database (Teacher Id, Name, Gender, Subject, Classes taught and hobbies) **Parameters:** • Attributes Relativity • Decision Making • Data Analysis and Accuracy • Logical Approach

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November-20	HTML 5 Subtheme: HTML tools, Creating a Web page, Tags, Elements, Attributes, Background Properties	• To understand the concept of web pages and websites. • To create a webpage using HTML coding language. • HTML elements: html, head, title, body. • To understand tags, attributes and elements in HTML. • How to create HTML documents.	• To show creativity by designing webpages. • To understand design aspects of webpages. • To know various languages that is used to design webpages.	**Activity (to introduce the lesson):** • Students should have clear understanding of World Wide Web, Web browser and basic terminology related to Internet. • Discussion about the difference between Webpage and Website. • Discussion about the languages being used to write scripts of web pages. • To make students understand what is client and server. **Activity (to support learning):** • Create a webpage named as "My Teacher" by using various attributes and tags to make it attractive. • Create a webpage to give description about 'Endangered Species'.	**Student will** • Understand the concept of web pages and websites. • Be able to create a webpage using HTML coding language. • Learn HTML elements: html, head, title, body. • Understand tags, attributes and elements in HTML. • Learn creating HTML documents. **Student will:** • Show creativity by designing webpages. • Understand design aspects of webpages. • Come to know various languages that are used to design webpages.	**Activity / Assignment (to assess learning):** • Create a web page for the website of your school, which will display the 1st three rank holders of classes from 1 to 12. The title of the page should be "Achievers of the Year" by using all the attributes of font tags.

				<u>Activity / Assignment (to assess learning):</u> • Create a web page for the website of your school, which will display the 1st three rank holders of classes from 1 to 12. The title of the page should be "Achievers of the Year" by using all the attributes of font tags.		

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December-20	**Continued…..** HTML 5 Subtheme: Unordered list, ordered list, Description list, Tables and its properties	• Learn advanced HTML skills using lists. • Different types of lists and their usage. • Learn how to create a table in webpage using various attributes.	• Make comparative analysis of data. • To display the data in a specific order. • How to present information or data in a comprehensive manner.	**<u>Activity (to introduce the lesson):</u>** • Demonstration on how to create web page using list (ordered, unordered and descriptive) • Demonstration on how to display the content on web page in a glossary form. • Creating a web page to display the data in the form of TABLE • Demonstration on how we can apply properties in a table to enhance its look and appeal.	**<u>Student will</u>** • Learn advanced HTML skills using lists. • Learn Different types of lists and their usage. • Learn how to create a table in webpage using various attributes. **<u>Student will:</u>** • Make comparative analysis of data. • Learn to display the data in a specific order. • Learn How to present	**<u>Activity / Assignment (to assess learning):</u>** • Create a web page displaying the difference between INTERNET and WWW in the form of a table • Create a web page to display the PARTS OF SPEECH and PARTS OF NOUN using LIST and its properties.

				<u>Activity (to support learning):</u> • Create a webpage displaying personal profile of classmates, portraying their aims in life, their hobbies and strengths that make them unique by using the required HTML tags to beatify webpage including LIST and TABLES. • Create a webpage to display the data of employees of company in tabular form. • To display a list of stationary items. **<u>Activity / Assignment (to assess learning):</u>** • Create a web page displaying the difference between INTERNET and WWW in the form of a table • Create a web page to display the PARTS OF SPEECH and PARTS OF NOUN using LIST and its properties.	information or data in a comprehensive manner.	

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January-23	**Continued…..** HTML 5 Subtheme: Image insertion, Image alignment	• To insert images, align images and also to insert images in a table cell.	• To develop among students systematic and step-by-step approach.	**Activity (to introduce the lesson):** • Practical Demonstration on how to insert images, align images and also to insert images in table cells. **Activity (to support learning):** • Write the html code to generate webpage titled as "SAVE THE EARTH" with insertion of suitable images on webpage. **Activity / Assignment (to assess learning):** • Create a webpage on the topic, "RAMAYANA-THE EPIC" by inserting suitable images.	**Student will** • Be able to Insert images, align images and also to insert images in a table cell. **Student will:** • Reflect systematic and step-by-step approach.	**Activity/Assignment (to assess learning):** • Create a webpage on the topic, "RAMAYANA-THE EPIC" by inserting suitable images. **Parameters:** • Creativity and originality • Logical approach • Understanding • Is able to apply theoretical knowledge into practical usage.

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February-23	AI domains Subtheme: Robotics,Fuzzy logic,Neural networks,Natural language processing,Computer vision, Expert Systems	• To make students know the meaning of the term NLP and understand difference between Speech and Voice recognition. • To make students understand working of Expert Systems. • To make students know the meaning of the term Computer Vision and its utility in real world.	• To enable students to recognize apps(android applications) based on NLP. • To make students understand the importance of NLP in real world. • To make students able to use expert systems to find solutions of their daily life problems • To enable students to recognize apps(android applications) based on Computer Vision	**Activity (to introduce the lesson):** • Thing Translator application: Point camera at things to hear how to say them in a particular language. (Based on Computer Vision object recognition) **Activity (to support learning):** • Semantris game: Arcade game by Google AI: It is a Word Association game. We type the word closely related to the highlighted word of the word list being displayed. If AI doesn't find the typed word related to the highlighted word, no score will be given. (Expert System, Text classification forming keyword cloud) **Activity / Assignment (to assess learning):** • Kahoot Quiz: A free game based learning platform as multiple choice quizzes in any	**Students will :** • Understand working of Expert Systems. • Come to know the meaning of the term NLP and understand difference between Speech and Voice recognition. • Come to know the meaning of the term Computer Vision and its utility in real world. **Students will :** • Be Able to recognize apps (android applications) based on NLP. • Understand the importance of NLP in real world. • Be able to use expert systems to find solutions of their daily life problems. • Be able to recognize apps (android applications) based on Computer Vision.	**Activity/ Assignment (to assess learning):** • Kahoot Quiz: A free game based learning platform as multiple choice quizzes in any language. MCQ Quiz regarding AI smart implementation to achieve 17 UN sustainable development goals effectively.

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March-24	**Continued……** AI domains Subtheme: Robotics,Fuzzy logic,Neural networks,Natural language processing,Computer vision, Expert Systems	• To make students know the meaning of the term Fuzzy logic and its utility in designing electronic gadgets. • To make students understand difference between Biological neural network and Artificial neural network. • To make students aware about Real life applications of Robotics.	• To make students able to use fuzzy logic for gaming. • To develop interest for robot designing among students.	**Activity (to introduce the lesson):** • Thing Translator application: Point camera at things to hear how to say them in a particular language. (Based on Computer Vision object recognition) **Activity (to support learning):** • AI DUET We play a duet with the computer. We just play some notes, and the computer will respond to our melody.(Dialog systems)	**Students will :** • Come to know the meaning of the term Fuzzy logic and its utility in designing electronic gadgets. • Be aware about Real life applications of Robotics. • Understand difference between Biological neural network and Artificial neural network. **Students will :** • Take interest for robot designing. • Be able to use fuzzy logic for gaming.	**Activity / Assignment (to assess learning):** • Kahoot Quiz: A free game based learning platform as multiple choice quizzes in any language. MCQ Quiz regarding AI smart implementation to achieve 17 UN sustainable development goals effectively.

				<u>Activity / Assignment (to assess learning):</u> • Kahoot Quiz: A free game based learning platform as multiple choice quizzes in any language. MCQ Quiz regarding AI smart implementation to achieve 17 UN sustainable development goals effectively.		