CHOITHRAM SCHOOL, MANIK BAGH, INDORE
ANNUAL CURRICULUM PLAN SESSION 2020 – 2021

CLASS: IX
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 A.I • Definition of AI / Meaning of the term AI. • Difference between Human intelligence and Artificial Intelligence. • Why AI and Why not AI ?	• Students able to understand about Artificial Intelligence • Various application of AI • How AI can helps you to go about your daily life • What is human Intelligence. • Difference between Human and Artificial Intelligence • Limitation of AI.	• Understand the problems and try to solve with AI • Learn how human depend on machine.	**Activity (to introduce the lesson):** • Power point presentation on Introduction to AI. • Videos • Videos related to Dream smart home **Activity (to support learning):** • Video will be shown to students for layout of floor plan of their dream smart home.(Ice Breaker Activity) **Activity / Assignment**	**Student will:** • Able to understand about Artificial Intelligence. • Various application of AI. • How AI can helps you to go about your daily life. • Understands human Intelligence • Difference between Human and Artificial Intelligence. • Explain Limitation of AI **Students will able to** • Understand the problem its solution in better wa • Learn how human depe machine.	• Students to design a rough layout of floor plan of their dream smart school.(Ice Breaker Activity) Parameters: • Creativity • Is innovative in ideas • Originality • Content Knowledge and Topic Relevance

				(to assess learning): • Students to design a rough layout of floor plan of their dream smart school.(Ice Breaker Activity)		

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July -26	Introduction to A.I • Real life Utility of AI in various fields effectively and smartly to make work easy. • Six domains of AI covering (Fuzzy logic, Robotics, Expert systems and Neural Networks in brief) and (NLP and Computer Vision in detail).	• Students able to understand domains of AI. • To make students understands how data systems works and processes, in which the system collects numerous data, maintains data sets and derives meaning/sense out of them. • Student understands how information can be extracted from data that is used to make a decision. • Students learn the capability of a machine	• Understands how machine understands human language. • Understands how machine can manipulate visual information and convert it into data.	**Activity (to introduce the lesson):** • Power point presentation on Domains of AI. • Story Speaker **Activity (to support learning):** • Create a story using the Google Extension of Story Speaker for Google docs. • Students will go through three AI games in the form of a challenge. ▪ Rock, Paper & Scissors ▪ Mystery Animal	**Students will:** • Students will understands domains of AI. • Students will understands how data systems works and processes, in which the system collects numerous data, maintains data sets and derives meaning/sense out of them. • Students will understands how information can be extracted from data that is used to make a decision. • Students will learn the capability of a machine to get and analyses visual information and afterwards predict some decisions about it. • Students will understands how	**Activity / Assignment (to assess learning):** • Create a story using the Google Extension of Story Speaker for Google docs.

		to get and analyses visual information and afterwards predict some decisions about it • Student understands how artificial intelligence deals with the interaction between computers and humans using the natural language.		▪ Emoji Scavenger Hunt **<u>Activity / Assignment (to assess learning):</u>** • Create a story using the Google Extension of Story Speaker for Google docs.	artificial intelligence deals with the interaction between computers and humans using the natural language. **<u>Students will able to:</u>** • Understand the problem and its solution in better way. • Learn how human depend on machine.	

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August-20	AI project Cycle	• Students know how they can get started on an AI project • To make students understands various steps of AI Project Cycle. • To make students understands 4Ws canvas.	• Student able to learn how to solve particular problem step by step.	**<u>Activity (to introduce the lesson):</u>** • Video will be shown to students to understand the problem what will be solution for the same.	**<u>Students will:</u>** • Students will know how they can get started on an AI project • Students willunderstands various steps of AI Project Cycle • Students willunderstands 4Ws canvas. • Students	**<u>Activity / Assignment (to assess learning):</u>** Students will be able to set goal for their AI projects to solve problems around them with the help of 4Ws problem Canvas Statement template.

		• Students understands importance of data to solve the problem.		**<u>Activity (to support learning):</u>** PPt on AI project cycle. **<u>Activity / Assignment (to assess learning):</u>** • Students will be able to set goal for their AI projects to solve problems around them with the help of 4Ws problem Canvas Statement template.	willunderstandsimportance of data to solve the problem. **Student will be able to learn:** • Student will able to learn how to solve particular problem step by step.	**Parameters:** • Creativity • Is innovative in ideas • Originality • Content Knowledge and Topic Relevance

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September-24	AI project Cycle. Continue……	• Student able to learn how to construct system map. • Student can differentiate between AI, Machine Learning and Deep Learning • Student will understand how to classify models into Rule-based approach and Learning approach.	• Students able to learn how things may change (ups and downs) with the help of system map.	**<u>Activity (to introduce the lesson):</u>** Examples will be shown how system map works. **<u>Activity (to support learning):</u>** Activity will be conduct to show how system map works. **<u>Activity / Assignment (to assess learning):</u>** To ask students to construct	**<u>Student will learn</u>** • Student will able to learn how to construct system map. • Student will differentiate between AI, Machine Learning and Deep Learning. • Student will understand how to classify models into Rule-based approach and	**<u>Activity / Assignment (to assess learning):</u>** To ask students to construct system map for the given elements.

				system map for the given elements.	Learning approach. **<u>Student will be able to learn:</u>** • Students will able to learn how things may change (ups and downs) with the help of system map.	

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October-22	Revision…..	•				

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November-20	UN sustainable development goals	• Students understands how AI is related to SDGS goals. • Students understands that AI has potential to help in lifting people out of poverty, reduce energy consumption and promoting clean, affordable energy. • Appreciate the complexity of social issues • Be able to determine where AI solutions would be appropriate	• Students understands how to solve real world problem in our surroundings with AI.	**Activity (to introduce the lesson):** Look at the pictures of SDGS and try the students to give the theme of each picture. **Activity (to support learning):** • Power point presentation on SDGS goal with brief discussion. • Kahoot quiz **Activity / Assignment (to assess learning):** • Student has to create job advertisement for a firm describing the nature of job and the skill-set required for it 10 years down the	**Student will** Students will: • Students understands how AI is related to SDGS goals. • Students understands that AI has potential to help in lifting people out of poverty, reduce energy consumption and promoting clean, affordable energy. **Student will be able to learn:** • Students willunderstands how to solve real world problem in our surroundings with AI.	**Activity / Assignment (to assess learning):** • Student has to create job advertisement for a firm describing the nature of job and the skill-set required for it 10 years down the line. They need to describe the impact of AI on the nature of jobs.

				line. They need to describe the impact of AI on the nature of jobs.		

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December-20	Python Programming	• To understand the programming concept of python. • Various uses of python programming. • Learn how to install Python in computer. • To learn two ways to work in Python (Interactive Mode and Script mode). • Understands the use of interpreter, Print () function, Variables,	• To make student realize the importance of repeated actions in daily life. • To make students learn about the advantages of using looping technique in programming is that it reduces the number of instructions and the memory space. • Understand the problem and its	**Activity (to introduce the lesson):** • Demonstration on features of Python Language, Working Mode in Python. • Demonstration on Variable and Data Types, operators in python, precedence of operator, types of control structures. **Activity (to support learning):** • Program to print the string entered by the user 5 times. • To find the sum, product and difference of two numbers. • To find the area of rectangle and	**Student will learn:** • Learn programming concept of python. • Learn various uses of python programming. • Learn how to install python in computer. • Learn two ways to work in python (interactive mode and script mode). • Understands the use of interpreter, print ()	**Activity / Assignment (to assess learning):** • Program to check if a number input by the user is a positive or a negative number. • Program to check whether a number is completely divisible by 10 or not. • Program to calculate and print the area of a rectangle ,if user enters 1 and print the

		Data types and Input() function. • To learn the advantage and importance of Python language over Qbasic Language. • Learn how to store a value in computer memory. • Write small program using python.	solution in better way. • Understand flow of steps or procedure to solve any problem.	square. • Marks scored by student and find the percentage • Program to display the name of the day according to the number given by the user. **<u>Activity / Assignment (to assess learning):</u>** • Program to check if a number input by the user is a positive or a negative number. • Program to check whether a number is completely divisible by 10 or not. • Program to calculate and print the area of a rectangle ,if user enters 1 and print the area of a square if user enters 2. • Program to calculate and print circumference and area of circle.	function, variables, data types and input() function • Learn the advantage and importance of python language over Qbasic language. • Learn how to store a value in computer memory. **<u>Student will</u>** • To make student realize the importance of repeated actions in daily life. • To make students learn about the advantages of using looping technique in programming is that it reduces the number of instructions and the memory space. • Understands when we nee work with multiple tests c conditions	area of a square if user enters 2. • Program to calculate and print circumference and area of circle. **Parameters:** • Logical Approach • Has a step by step approach to solve a problem • Understanding • Topic Relevance

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January-23	Python Programming	• Write small program using python. • Develop programming skill • Will understand the flow of data. • Various operators with the help of examples. • Importance of various Control Statement while writing programs in Python.	• Understand flow of steps or procedure to solve any problem. • Understands the possible conditions and to transfer to a specific location depending on the outcomes • Understands either of two different actions is to be performed depending upon the result of the condition. • Understands when we need to work with multiple tests on a conditions	**Activity (to introduce the lesson):** •Discussion on conditional statement. •Program to store any value in variable and display its output. **Activity (to support learning):** • To print the sum of all even and odd number in a range. • Program to swap values of given two numbers. • Program in Python to find if a year is a leap year or not. • To calculate simple interest. • To calculate restaurant bill. **Activity / Assignment (to assess learning):** • Program to calculate and print circumference and area of circle. • Program to find greater number among 4numbers.	**Student will learn :** • Write small program using python. • Develop programming skill. • Understand the flow of data. • Understands various operators with the help of examples. • Learn importance of various control statement while writing programs in python. **Student will:** • Understands when we need to work with multiple tests on a conditions • Understand the problem and its solution in better way. • Understands the possible conditions and to transfer to a specific location depending on the outcomes.	**Activity/Assignment (to assess learning):** ●Program to calculate and print circumference and area of circle. ●Program to find greater number among 4 numbers. ●To check whether a person is eligible to vote. ●Conversion of Frehrenheit to Celsius.

				• To check whether a person is eligible to vote. • Conversion of Frehrenheit to Celsius.		

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February-23	Neural Network	• Introduce students to the neural network. • To make the students difference between Neural Networks Vs Human Nervous System • To make students learn Features of a Neural Network. • To make students understands common AI models (1. **REGRESSION** 2. **CLASSIFICATION** 3. **CLUSTERING**)	• To make students learn how Artificial Intelligence enables computers to mimic humanintelligence.	**Activity (to introduce the lesson):** PPt and videos will be shown to students related to Neural Network. **Activity (to support learning):** • Kahoot Quiz or Google Form Quiz. • Students will now experience how Neural networks work with the help of an activity. Each of the students will be	**Student will learn:** • Learn about neural network. • Difference between Neural Networks Vs Human Nervous System. • Learn Features of a Neural Network. • Understands common AI models • 1. **REGRESSION** • 2. **CLASSIFICATION** • 3. **CLUSTERING**	**Activity/ Assignment (to assess learning):** • Kahoot Quiz or Google Form Quiz.

				considered as the node of either Input Layer, 1st Hidden Layer, 2nd Hidden Layer or the Output Layer. After arranging the students at their positions and handing them sticky notes to write, show the sample image print-out to the input layer students. No two nodes can discuss anything. Each one of them has to use their own discretion to understand and play. **<u>Activity / Assignment (to assess learning):</u>** • Kahoot Quiz or Google Form Quiz.	**Student will learn:** • Students will learn how Artificial Intelligence enables computers to mimic humanintelligence	