SUMMER VACATION HOLIDAY H.W.

CLASS - IX

It's time for a fun filled and relaxing summer break. However, during the long scorching summer months, when you are at home, time must be spent meaningfully and interestingly so that you keep in touch with school work and have lots of fun. The teachers have worked upon some ways of keeping you busy!

ENGLISH

Q1. Choose any author of your choice and read any of his or her work. Create any one of the following:
- ❖ Poem based on the book
- ❖ Game based on the book
- ❖ A series of paintings based on it - minimum 4

Q2.'The Diary of Anne Frank' is a 1959 film based on Pulitzer prize winning play of the same name, which is based on the diary of Anne Frank. This diary is the long reading text prescribed by CBSE for extensive study. Make sure that you read the book as well as watch the movie.

HINDI

- ❖ 'दुःख का अधिकार' पाठ के आधार पर लेखक और बुढ़िया में अपनी कल्पना से संवाद लिखिए | चित्र भी बना कर अपने कार्य को आकर्षक बनाइए |

- ❖ पोशाक के माध्यम से हर व्यक्ति का दूसरों से प्रथम परिचय होता है |इस कथन को भिन्न –भिन्न चित्रों के माध्यम से स्पष्ट कीजिए |

- ❖ अपना परिचय देते हुए एक समाचार वाचक की तरह समाचार प्रस्तुत करते हुए चार से पाँच मिनट की अपनी विडिओ बनाओ | अपनी प्रस्तुति को प्रभावशाली बनाने के लिए आप समाचार से सम्बन्धित चित्र भी दिखा सकते हैं |

- ❖ रैदास के पदों में जिन संतों कवियों का परिचय दिया गया है उनकेचित्रों के साथ संक्षेप में उनके परिचय पर आधारित पावर पॉइंट प्रस्तुति तैयार कीजिए जैसे नामदेव ,सधना ,सैनु ,नामदेव ,तिलोचन |

  सारा परियोजना कार्य आकर्षक ,सृजनात्मक और कलात्मक होना चाहिए| कार्य को आकर्षक बनाने के लिए आप भिन्न –भिन्न रंगों और चित्रों का प्रयोग कर सकते हैं
  सारा कार्य आंतरिक मूल्यांकन के अंतर्गत जांचा जाएगा |

MATHS

- ❖ Do the given assignments in your register.

NUMBER SYSTEM

1. Find a rational number between 4 and 5.
2. Find three rational numbers between 7 and 8.
3. Find five rational numbers between $\frac{4}{5}$ and $\frac{6}{5}$.
4. Find ten rational numbers between $\frac{-2}{3}$ and $\frac{1}{4}$.

5. Find the decimal representation of $\dfrac{-16}{45}$.

6. Express each of the following decimals in the form $\dfrac{p}{q}$:

    a) 8.0025

    b) 0.6 (6 bar)

    c) 0.001 (001 bar)

    d) 0.00352 (52 bar)

    e) 0.621 (621 bar)

7. Explain how irrational numbers differ from rational numbers?

8. Give two rational numbers lying between 0.23233233323333…… and 0.21211211121111……

9. Find two irrational numbers between 0.5 and 0.55

10. Find two irrational numbers lying between 0.1 and 0.12.

11. In a cricket match, a batsman hits a boundary 8 times

PROBABILITY

1. Tom draws a marble from a bag containing 12 marbles. There are three red marbles, 4 blue marbles and 5 green marbles. Find the probability that he will draw blue marble.

2. A basket has 5 apples, 10 oranges and 5 bananas. Find the probability of getting out an apple.

3. One card is drawn from a well shuffled deck of 52 cards then find the probability that the card will be a king.

4. Mr and Mrs X stay in a house along with their seven children. The female to male ratio in the family is 1:2. Find the probability that all the children are either boy or girl.

5. The record of weather station shows that out of past 200 consecutive days, its weather forecast were correct 150 times then find the probability that on a given day it was correct.

6. The record of a weather station shows that out of past 200 consecutive days, its weather forecast were correct 150 times then find the probability that a given day was not correct.

7. A drawer contains 8 red socks, 3 white socks and 5 blue socks. Without looking Mayank draws out a pair of socks. Find the probability that the pair of socks is white.

8. Two coins are tossed simultaneously hundred times and we get the following outcomes:

i) One head = 20

ii) Two heads = 50

Find the probability that there is no head.

9. Two coins are tossed simultaneously 100 times then we get the following outcomes:

i) No head = 30

ii) Two heads =50

Find the probability that there is only one head.

10. Two coins are tossed simultaneously 100 times then we get the following outcomes:

i) No head = 30

ii) One head = 20

Find the probability of getting two heads.

11. A coin is tossed 23 times and observed that 10 times head comes up. Find the probability that a tail comes up.

12. A coin is tossed a hundred times. It is observed that 60 times head comes up and 40 times tail comes up then find the probability that neither a head nor a tail comes up.

13. A coin is tossed hundred times with the following frequencies:

    Head: 45,   Tail: 55

    Compute the probability for each event.

14. The percentage of marks obtained by a student in monthly unit tests is given below:

Unit test:	1	2	3	4	5
Percentage:	69	71	73	68	76

    Find the probability that the student gets more than 68% marks.

15. A die is thrown 200 times with the following frequencies, for the outcomes: 1, 2, 3, 4, 5, 6 as given below:

Outcomes: 1 2 3 4 5 6
Frequency: 30 40 50 20 30 30
Find the probability that outcome is less than 5.

16. 1000 families with 2 children were selected randomly and the following data was recorded: Number of girls in a family: 0 1 2
Number of families: 200 500 300
If a family is chosen at random, compute the probability that it has
i) No girl   ii) at least one girl

17. To know the opinion of students about mathematics, a survey of hundred students was conducted. The data is recorded in the following table:
Opinion: Like Dislike
Number of students: 70 30

Find the probability that a student chosen at random
i) Likes mathematics.
ii) Dislikes mathematic.

SCIENCE

❖ Perform simple Science activities (as discussed in the class) using waste material or material available at home. Click pictures and prepare a video explaining the concept behind the activity you performed.
   ▪ You can refer to the following youtube links (https://www.youtube.com/watch?v=ZWAMqZJdxv8
   ▪ https://www.youtube.com/watch?v=okFqabrc1BU
   ▪ https://www.youtube.com/watch?v=Cg2WTInk7UE&t=19s)

❖ There's nothing like fun riddles and brain teasers. When it comes to riddles for kids there are so many benefits that go further than the initial laugh! Following are some fun Science riddles
   ● When the son of the water returns to the parent, it dies. What is it?
   ● What did the fox scientist name his laboratory?
   ● What is the most uninteresting of all the periodic elements?
   ● I am a God, a planet and I can measure heat. What am I?
   ● Many have heard it, but nobody has ever seen it. It will not speak back until spoken to. What is it?

❖ To understand that the displacement of an object is less than the distance travelled by the object. – A Students will go from one corner of their Living room to the opposite corner by different routes possible. They will measure the distance travelled with a measuring tape. Now students will measure the length of diagonal of the living room and note their observations. They can try same in other rooms also.

❖ Prepare a model to compare plant cell and animal cell using common household items like grains and pulses etc.

❖ Prepare the notes of the topics covered up in the class so far.

❖ Prepare a 3-D model showing any one of the following topics:

● Sublimation
● Separating funnel
● Distillation
● States of matter
● Fractional distillation
● Interconversion of states of matter
● Centrifugation

SOCIAL SCIENCE

- ❖ **Prepare a project on POPULATION**
- ❖ **Your project should include the following topics:**
- ❖ **India's population size and distribution.**
- ❖ **Population Growth in India and Processes of Population Change**
- ❖ **Positive and negative impact of a large population for a country.**
- ❖ **Instructions:**
- ❖ **You can use graphs, pie charts, diagrams to show the distribution of population in India.**
- ❖ **Your project should be made on A4 size sheet and can use colourful pictures and diagrams to make it more meaningful and attractive.**

ARTIFICIAL INTELLIGENCE

All the activities are to be done on A4 sheets to be added in the portfolio.
ACTIVITY # 1: SMART HOME:
       Watch the following videos:
       https://www.youtube.com/watch?v=mQR8hxMP6SY
       https://www.youtube.com/watch?v=Wcz4kPRMrQU
       https://www.youtube.com/watch?v=hRY-ZUlJXY0
       https://www.youtube.com/watch?v=1CajaUoI3vU
       https://www.youtube.com/watch?v=U6pJtQLBhWA
Note the observations and prepare a layout of your own smart city / smart home floor plan.
Prepare it on A4 sheet, write all the features on the back side.

ACTIVITY#2: IoT DEVICES
       Search on the internet what all modern IoT devices are around or in making. Note down your findings on A4 sheet.

ACTIVITY#3: SUSTAINABLE DEVELOPMENT GOALS
       Go to the link https://go-goals.org/downloadable-material and download the material for Go-goals board game to understand SDGs better. Prepare and play the game with your family members / friends online.

ACTIVITY#4: BIG AI PLAYERS
       Prepare a brief write up on Facebook AI Research (FAIR) (research.fb.com) describing what they do as AI companies.