	Delhi Public School, Gandhinagar **Academic Session-2022-23** **Class : IX**
Subject	**Holiday Homework**
English	You have attended online classes for almost two years due to pandemic outbreak. Taking hint from the lesson 'The Fun they had' write a diary entry in 120-150 words describing your experience of virtual classroom and remembering all the fun you have in the school. Also draw/paste related pictures of virtual/ physical classroom on an A4 size paper.
Hindi	मानवीय संवेदना पर आधारित एक सचित्र कहानी लिखिए |(शब्द सीमा 200-250, A4 size paper)
Maths	**ANSWER THE FOLLOWING ON AN A4 SIZE PAPER** **CASE STUDY 1** A teacher conducted an activity on real numbers where each student has to pick a card from a bunch of cards and frame a question related to the number which is written on cards for the rest of the students. The number cards picked up by first five students and their questions on the numbers have been recorded and given below. Answer these questions to find what number they got. Q.1 Convert $0.5\overline{7}$ in $\frac{p}{q}$ form. Q.2 Rationalise the denominator of $\frac{2+\sqrt{3}}{2-\sqrt{3}}$ Q.3 Simplify : $(7-\sqrt{5}) - (3\sqrt{5} - 14))$ Q.4 Simplify : $(3 + \sqrt{3})(7 - \sqrt{3})$ Q.5 Find: $7^{\frac{1}{2}} . 7^{\frac{2}{5}}$ **CASE STUDY 2** One day, the Principal of a particular school visited the classroom. Teacher was teaching the concept of polynomials to students. He was very much impressed by her way of teaching. To check, whether the students understood the concept taught by her or not, he asked various questions to students. Some of them are given below. Answer them. Q.1 If x= 3 is a factor of the polynomial $\quad$ f(x) $= 2x^2 - 4ax + a$, find the value of a. Q.2 Factorise: $x^3 + 6x^2 + 11x + 6$ Q.3 Compute the value of $16x^2 + 4y^2$, if $xy = 3$ and $4x - 2y$. Q.4 Evaluate: 104×96 Q.5 Without actually calculating the cubes, find: $(-13)^3 + 8^3 + 5^3$

Science	**To be done on A4 size paper.** **Chemistry:** Prepare a 2D model of particles of matter to differentiate the three physical states of matter on the basis of: a) Inter-particle space & Inter-particle force of attraction. b) Rate of diffusion. Students can make use of eco-friendly products like lentils, seeds etc. to present their 2D model. **Biology:** a) Make a 2D model of an animal cell using beads, clay, straws, toothpick, etc. b) Find alternative names for each of the following cell parts according to the functions they perform: cell membrane, mitochondria, nucleus, golgi body, ribosomes, chloroplast, and lysosomes. **Physics:** Plot distance-time graphs on graph paper using colourful woollen thread, match sticks, straws etc. for the following statistical data. <table><tr><td>Distance (km)</td><td>0</td><td>0.5</td><td>1</td><td>1.5</td><td>2</td></tr><tr><td>Time(min)</td><td>0</td><td>6</td><td>12</td><td>18</td><td>24</td></tr></table> <table><tr><td>Distance (km)</td><td>0</td><td>4</td><td>9</td><td>16</td><td>25</td></tr><tr><td>Time(s)</td><td>0</td><td>2</td><td>3</td><td>4</td><td>5</td></tr></table> <table><tr><td>Distance (km)</td><td>6</td><td>6</td><td>6</td><td>6</td><td>6</td></tr><tr><td>Time(hour)</td><td>0</td><td>6</td><td>12</td><td>18</td><td>24</td></tr></table>

Social Science	**Topic: Know your Country and her International trade relationship**
	1. Mark 28 states, 8 Union Territories and all the Neighbouring countries of India on the outline map of India.
	2. Write about India's trade relationship with the following Neighbouring countries:
	    (1) Pakistan
	    (2) Bangladesh
	    (3) Sri Lanka
	    (4) China
	Write it on A4 size paper.

Sanskrit	1) Prepare a chart of वर्ण-उच्चारणस्थान on A4 Size Paper 2) शब्दरुप-लेखनम् -बालक, कवि, साधु, पितृ, लता, नदी, मति, मातृ, फलम्, किम् (कः/का/लिं), तत् (सः/सा/तत्) अस्मद्, युष्मद् to be done in Notebook
Computer Science	Classification of computer system.(Create a chart in your notebook)