



Delhi Public School JHANSI

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Summer Holiday Homework Class-IX

***Note for Students*:** Summer Holidays are a well deserved opportunity to relax and rewind by indulging in activities that are pleasurable at the same time educative. We would like to thank all of you for making online classes and virtual Assessment a success. It's a sincere request to all to complete holiday projects and home assignments on time. Engage yourself wholeheartedly as you will learn a lot through it. Practice your hobbies or inculcate new hobbies. Please ensure that you complete the assignment neatly.

***Note for Parents*:** Summer Holidays Homework is an initiative on our part, to inculcate innovativeness, creativity and interest in the tasks assigned to our students. It will not only enable them to recapitulate what was taught but will also help them to connect themselves to the various learning processes.

ENGLISH:

Write down essay on the following topics in about 300-350 words in your grammar notebook.

1. A Visit to a hill station.
2. Indian Festivals.
3. Books are our good friends.
4. My Hobby.
5. The Funniest experience of my life.

HINDI:

अपनी पाठ्य पुस्तक के कवि एवं लेखकों की कोई अन्य कृति (रचना) की सहायता से निम्नलिखित बिंदुओं के आधार पर सचित्र पत्रिका तैयार करिए:

- 1- आभार
- 2- विषय सूची
- 3- कोई पांच रचनाएं(कविता, निबंध, संस्मरण, एकांकी, हास्य व्यंग्य ,कहानी, दोहे) चित्र सहित लिखिए।

क्षितिज - पाठ- 2 लहासा की ओर पढ़िए तथा प्रश्नों के उत्तर प्रश्नों के उत्तर छांटिए

कृतिका - पाठ 1 इस जल प्रलय में- पाठ पढ़िए तथा प्रश्नों के उत्तर छांटिये



MATHEMATICS:

- Find five rational numbers between $\frac{3}{5}$ and $\frac{4}{5}$.
- Find six rational numbers between 3 and 4.
- Question 1: Express the following rational numbers as decimals.
(i) $\frac{42}{100}$ (ii) $\frac{327}{500}$ (iii) $\frac{15}{4}$
- Express the following rational numbers as decimals.
(i) $\frac{2}{3}$ (ii) $-\frac{4}{9}$ (iii) $-\frac{2}{15}$ (iv) $-\frac{22}{13}$ (v) $\frac{437}{999}$ (vi) $\frac{33}{26}$
- Express each of the following decimals in the form $\frac{p}{q}$:
(i) $0.\overline{4}$ (ii) $0.\overline{37}$
(iii) $0.\overline{54}$ (iv) $0.\overline{621}$
(v) $125.\overline{3}$ (vi) $4.\overline{7}$
(vii) $0.4\overline{7}$
-
- Represent $\sqrt{6}$, $\sqrt{7}$, $\sqrt{8}$ on the number line in a separate diagram.
- Visualise the representation of $5.3\overline{7}$ on the number line up to 5 decimal places, that is upto 5.37777 .
- Express $2.36363636\dots + 0.2323232323\dots$ as a fraction in simplest form.
- Add:
(i) $(2\sqrt{3}-5\sqrt{2})$ and $(\sqrt{3}+2\sqrt{2})$
(ii) $(2\sqrt{2}+5\sqrt{3}-7\sqrt{5})$ and $(3\sqrt{3}-\sqrt{2}+\sqrt{5})$
(iii) $(23\sqrt{7}-12+6\sqrt{11})$ and $(13\sqrt{7}+32\sqrt{2}-\sqrt{11})$
- Simplify
(i) $(3-\sqrt{11})(3+\sqrt{11})$
(ii) $(-3+\sqrt{5})(-3-\sqrt{5})$
(iii) $(3-\sqrt{3})^2$
- (iv) $(\sqrt{5}-\sqrt{3})^2$
(v) $(5+\sqrt{7})(2+\sqrt{5})$
- Rationalise the denominator of each of the following.
- $\frac{1}{\sqrt{7}}$
- $\frac{1}{2+\sqrt{3}}$
- $\frac{1}{\sqrt{5}-2}$



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17. $\frac{1}{5+3\sqrt{2}}$

18. $\frac{\sqrt{5}}{5-3\sqrt{2}}$

19. $\frac{\sqrt{5}+2\sqrt{3}}{\sqrt{5}+2\sqrt{3}}$

SCIENCE:

BIOLOGY:

Write (in your notebook) and prepare following questions

Q. Which cell organelle is called "power house of cell"? Why?

Q. Chloroplast is called "Kitchen of cell". Why?

Q. Ribosomes are called

1- Organelle within Organelle and

2- Protein factory of cell.

Explain?

Q. How is prokaryotic cell different from a eukaryotic cell?

Q. Draw diagram of

1. Bacterial cell

2. Animal cell

3. Plant cell

Project work

Topic- 1- Plasma membrane

2- Nucleus

3- Plastids

4- Mitochondria

5- Plant tissues

6- Fertilizers

7- Apiculture (culture of Honey bee)

Select any one topic from above topics and prepare project file with diagram.

PHYSICS:

1. How many types of motion do we see around us? Write about the few things which are in motion and write the type of motion they performing.

2. Write down names of few devices that works upon principle of Motion (may be of any type). Why there is a requirement of knowing about various kind/types of motion.

3. Write down reasons why these quantities are categories under Scalar and vector quantities:

I. Temperature



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II. Speed

III. Mass

IV. Velocity

V. Distance

VI. Length

VII. Current, Density, Power, Acceleration, Momentum, Force, Work, Energy, Power, Pressure, Impulse, Waves (Radio / light).

4. Write down about the impact of following motions:-

I. Earth's rotation and revolution

II. Electrons in an atoms

5. Imagine a situation when the moon of the earth suddenly disappears. What impact it would bring to the Earth.

6. What makes the Moon is go around the earth? Can the movement of moon be treated to be equivalent to a (perpetual) free-fall?

7. Write down list of at least 6 devices that woks upon Light waves, Sound waves, Radio waves

8. What is the co-relationship between work energy and power?

9. We are spending electric energy, Coal energy, Petrol diesel etc. How is it impacting nature?

CHEMISTRY

1. Make a Pictionary of 50 new words related to chemistry from the chapters of NCERT and also paste pictures related to the topic.

2. Draw a 3D chart of A3 size on any one of the topic – Fractional distillation, chromatography, sublimation, evaporation, inter conversion of states of matter.

3. Do the practice questions given in the book in blue colour of Chapter- 1 (Matter in our surroundings) and Chapter 2(Is matter around us is pure?) in chemistry notebook.

Assignment

Q1 Account for the following in your copy.

- Dogs generally hang out their tongue in summer
- Smell of lighted incense stick spreads several meters away
- Sponge though compressible is a solid

Q2 Water as ice has a cooling effect whereas water as steam may cause severe burns. Explain these observations.

Q3 Discuss the effect of increasing temperature and pressure on the liquid state of a substance. Are these effects similar? If not assign reasons.



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Q4 5ml of water was taken in a test tube and china dish separately. These samples were then kept under different conditions as below

- i. Both the samples are kept under a fan
 - ii. Both the samples are kept inside a cupboard
- a) State in which case evaporation will be faster? give reasons
 - b) How will the rate of evaporation change if above activity is carried out on a rainy day? Justify

Q5 Explain how will you separate Ammonium chloride and common salt using sublimation

Q6 Write an activity to prove that liquids of different densities diffuse at different states.

Q7 All of us are familiar with LPG cooking gas cylinder used at home

- a) What is the full form of L.P.G?
- b) What is it composed of?
- c) In what form gas is stored? What are the factors responsible for it?
- d) What is the change observed when regulator is opened? Why?

Q8 Convert

- a) 5°C to Kelvin
- b) 345 K to $^{\circ}\text{C}$

Q9 At What temperature on the kelvin scale does ice melt? Draw a diagram to show set up of melting point of ice.

SOCIAL STUDIES:

Topic:

Disaster Management

Objectives:

The main objectives of giving project work on Disaster Management to the students are to:

- a) create awareness in them about different disasters, their consequences and management

Instructions:

- A. Make a milky file and compile all the topics related to the project in it.
- B. Integrate various ways of art in the project work.
- C. It is to be noted here by all students that the projects and models prepared should be made from eco-friendly products without incurring too much expenditure.



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D. The Project Report should be handwritten.

COMPUTER

Q1. Define MS Office package. What do you mean by word processing software, spreadsheet software and presentation software?

Q2. Make a presentation in MS PowerPoint on the following topics: -

Roll no. 1 – 9 Input, Output and Storage devices

Roll No. 10 – 18 Software and its types

Roll No. 19 and above Computer generations, computer languages and translators

Q3. Solve the following questions in our notebook.

i. Define characteristics of a computer. Also define its weaknesses.

ii. Define types of digital computer.

iii. What do you mean by Memory? Write at least five units of Computer Memory. What is the smallest unit of memory?

iv. What are the types of software? Define its types.

v. Difference between RAM and ROM. Also write difference between Primary and secondary

vi. Define various storage devices. Like Floppy, hard disk, CD, DVD, Blu-ray, flash drive, memory stick and cloud storage.

vii. What is the difference between preemptive and non-preemptive scheduling? viii. What are the types of operating system?

ix. What are the types of networks?

x. What are the medium of transmission? Explain both the types with examples.

Thank you

Mr. Ankur Agarwal

Class-IX