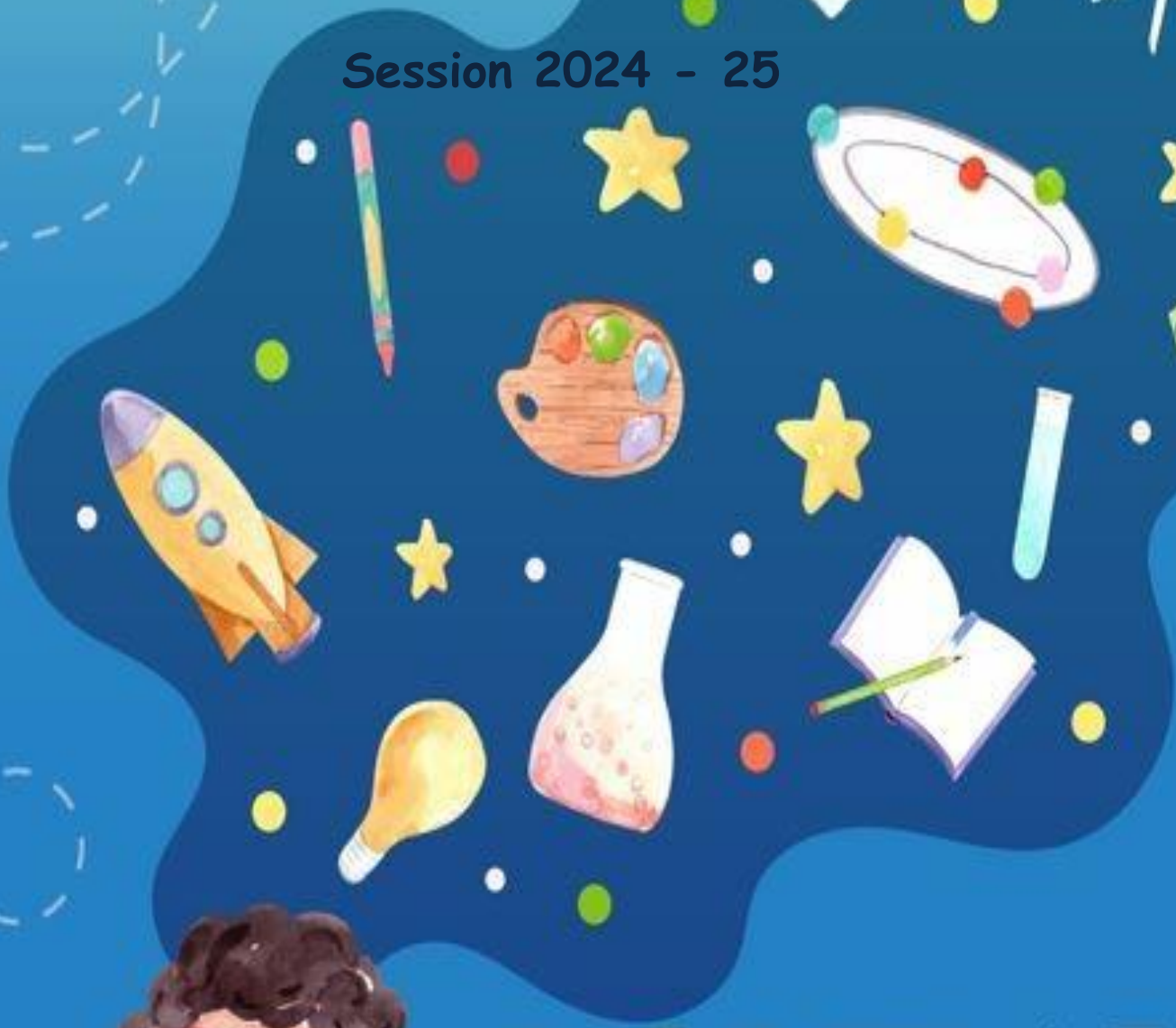


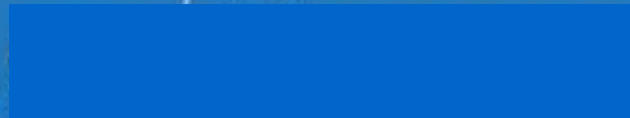
DAV PUBLIC SR. SEC. SCHOOL, BINA PROJECT, NCL,
SONBHADRA

Class - 9th

Session 2024 - 25



HOLIDAY HOMEWORK





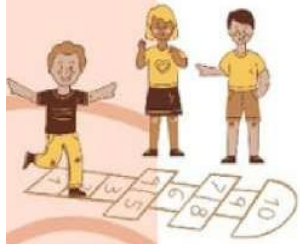
Month of May brought long, hot
days,
And now we have our summer
holidays

Summer holidays mean no to
school,
Waking up late with no set rule.

Little home work, easy to be done,
Lesser studies and lot's of fun.

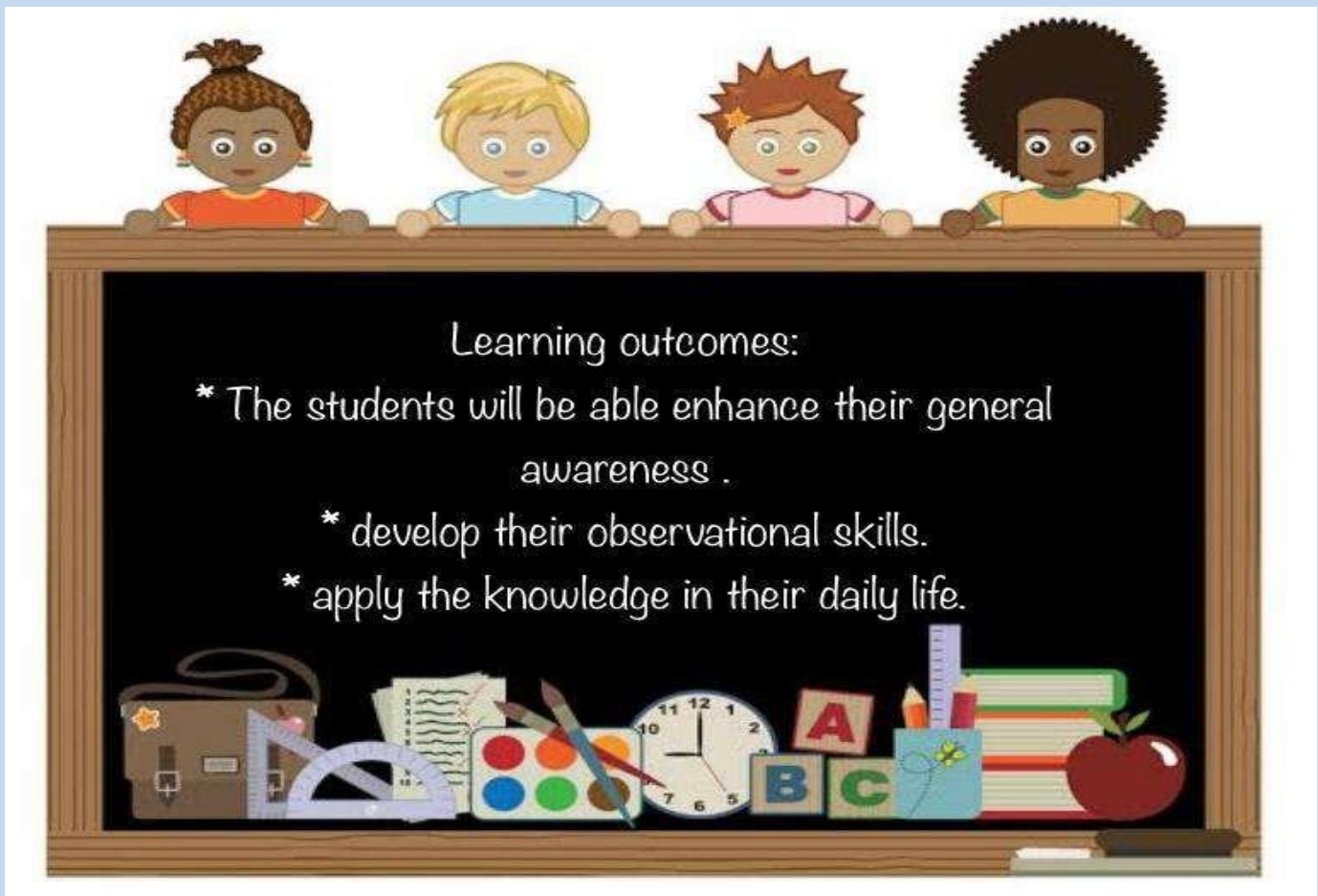
Playing and talking and watching
cartoon,
Fun continues till the end of June.

Beautiful time comes once in a
year,
Summer holidays are best days to
cheer.



Dear Parents,

Vacation is a time to reinvigorate and revive, however the duties of a student must not be forgotten either. A balance, therefore, recreation and work must be found to ensure a break that is productive as well as relaxing. The holiday homework has been shared to keep the children indulged in the learning process. Do ensure the child is involved with your guidance



English

Instructions:

*Groups are made to complete the project works

*Give your best n presentable projects

As per discussion in class, the following homework is assigned for students.

* Collect pebbles, stones, of different shapes n sizes, villas , best sellers to showcase the lessons.

* *prepare a comic strip presentation of stories

* make a model of any of the lessons from text.

* design activities and games based on chapters

* make an animated film of the lessons.

Hindi

1. परियोजना कार्य -

चार्ट पर सचित्र

कबीर का जीवन परिचय

एवं 'साखियों' का सुलेखन

(पोस्टर स्वरूप में)

2. अनुच्छेद लेखन-

* जल ही जीवन है

* भाग्य और पुरुषार्थ

* समय का महत्त्व

Sanskrit

1. दूरदर्शने प्रसारितानां संस्कृत-कार्यक्रमाणां विषये अधीत्य एकं प्रतिवेदनं निर्माय ददातु।
2. रेडियो माध्यमेन प्रसारितानां संस्कृत-कार्यक्रमाणां विषये अधीत्य एकं प्रतिवेदनं निर्माय ददातु।
3. संस्कृत पत्र-पत्रिकाणां नामानि तेषां संक्षिप्त परिचयश्च लेखनीयः।

Mathematics

General Instructions:

- (i). Solve questions 1 – 17 in a separate copy other than classwork copy or homework copy.
- (ii) 2. Solve/ write the given activity in file paper or in a activity copy as instructed.
- (iii). Revise the exercises of the chapters taught.
- (iv). In a separate A4 size unruled paper, write the algebraic identities. Decorate the border.

1. Define an irrational number. Give four examples.

2. Explain how rational numbers differ from irrational numbers with examples.
3. In the following equations, state if the variables x, y, z etc represent rational or irrational numbers:

(a) $x^2 = 5$ (b) $y^2 = 9$ (c) $z^2 = 0.04$ (d) $u^2 = \frac{16}{8}$ (e) $v^2 = 0.9$

4. Give two rational numbers and two irrational numbers lying between:

(a) 0.161616..... and 0.151515..... (b) 1.412 and 1.413

(c) 6.8151151115..... and 6.81331833318..... (d) 0.88 and 0.89

5. With an example for each, show that for two irrational numbers:

- | | |
|---|--------------------------------------|
| (a) difference is a rational number. | (e) product is a rational number. |
| (b) difference is an irrational number. | (f) product is an irrational number |
| (c) sum is a rational number. | (g) quotient is an rational number |
| (d) sum is an irrational number. | (h) quotient is an irrational number |

6. Simplify: (a) $(3a^4 b^3)^{10} \times 5 (a^2 b^3)^3$ (b) $(2x^{-2}y^3)^3$ (e) $(a^{3x-9})^6$
 (a^{2x-4})

(c) $\frac{(4 \times 10^7) \times (6 \times 10^5)}{(8 \times 10^4)}$

(d) $\frac{(4ab^2) \times (-5ab^3)}{(10a^2b^2)}$

7. If $a = 3$ and $b = -2$, find the values of: (a) $a^a + b^b$ (b) $a^b + b^a$ (c) $(a + b)^{ab}$

8. Prove that: $(\sqrt{3 \times 5^{-8}} \div \sqrt[3]{3^{-4}} \sqrt{5}) \times \sqrt[6]{3 \times 5^6} = \frac{3}{5}$

9. Expand: (a) $(ab + bc + ac)^2$ (b) $(m + 2n - 5p)^2$

10. If $a + b + c = 0$ and $a^2 + b^2 + c^2 = 16$, find the value of $ab + bc + ca$

11. If $a^2 + b^2 + c^2 = 16$ and $ab + bc + ac = 10$, find the value of $a + b + c$.

12. If $2x + 3y = 13$ and $xy = 6$, find the value of $8x^3 + 27y^3$.

13. If $3x - 2y = 11$ and $xy = 12$, find the value of: $27x^3 - 8y^3$

14. If $x + y + z = 8$ and $xy + yz + xz = 20$, find the value of : $x^3 + y^3 + z^3 - 3xyz$.

15. If $a + b + c = 0$, then write the value of : $\frac{a^2}{bc} + \frac{b^2}{ca} + \frac{c^2}{ab}$

16. Using factor theorem, factorise : (a) $p(x) = x^4 + 2x^3 - 13x^2 - 14x + 24$.

(b) $Q(x) = 2x^4 + x^3 - 14x^2 - 19x - 6$.

17. Factorise : $R(x) = 4x^3 + 20x^2 + 33x + 18$ given that $(2x + 3)$ is a factor .

ACTIVITY-1

OBJECTIVE To construct a square root spiral.

MATERIALS REQUIRED A piece of plywood, Geometry box, drawing pins, nails, coloured threads, sketch pens, marker, adhesive etc.

STEPS OF CONSTRUCTION

STEP-I Take a piece of plywood of convenient size.

STEP-II Assuming certain scale, say 2 cm = 1 unit, draw a line segment AB of length one unit.

STEP-III Construct a perpendicular BX at B on the line segment AB using set squares or compasses.

STEP-IV From BX , cut off $BC = 1$ unit.

STEP-V Join AC . Take a coloured thread of length equal to AC and fix it along AC using adhesive.

STEP-VI Using set squares or compasses, draw CY perpendicular to AC .

STEP-VII From CY , cut-off $CD = 1$ unit and join AD .

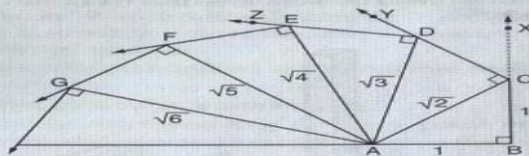


Fig. 1.12

STEP-VIII Take another thread of different colour and length equal to AD . Paste this thread along AD with adhesive.

STEP-IX Using set squares or compasses draw DZ perpendicular to AD .

STEP-X From DZ , cut-off $DE = 1$ unit and join AE .

STEP-XI Take a thread of some other colour and length equal to AE . Paste this thread along AE with adhesive. Repeat this process for a sufficient number of times to construct a square root spiral.

Science

Physics

1. Make a working model on different types of motion.
2. Distinguish between speed and velocity.
3. Define acceleration and retardation.
4. Convert (i) 80 km/h into m/s (ii) 10 m/s into km/h
5. Draw the following (i) distance-time graphs for uniform and non uniform motion.
(ii) Velocity -time graph for uniform velocity.
(iii) Velocity -time graph for uniform acceleration.
6. Obtain the following equations of motion for constant acceleration using the graphical method
(i) $v = u + at$ (ii) $s = ut + \frac{1}{2} at^2$ (iii) $v^2 - u^2 = 2as$,
where u is initial velocity, v is final velocity, t is time and a is acceleration.
7. A bus starting from rest moves with uniform acceleration of 0.1 m/s^2 for 2 minutes. Find (a) the speed acquired (b) the distance travelled.

Chemistry

1. PROJECT: Do an activity- 1.12(how can matter change its state)
2. Answer the intext questions and exercise questions of chapter 1 in homework copy
3. Memorize the common ion provided to you and write five formula and name of common acids bases and 20 formula and name of salts from chart of ions.

Biology

1. Project:-Make a model of any one—
 - a. Plant cell/Animal cell
 - b. Mitochondria
 - c. Nucleus
 - d. Plastid
2. Make 20 questions of two marks each from your chapter- 1
3. Complete your practical record.
 - i. Activity of plant cell from onion peel.
 - ii. Activity of animal cell from cheek cells.

Social science

Find out

- (i) Why $82^{\circ}30'E$ has been selected as the Standard Meridian of India?
- (ii) Why is the difference between the durations of day and night hardly felt at Kanyakumari but not so in Kashmir?

2. PROJECT/ACTIVITY

- (i) Find out the longitudinal and latitudinal extent of your state.
- (ii) Collect information about the 'Silk Route'. Also find out the new developments, which are improving communication routes in the regions of high altitude.

WE THE PEOPLE....“THE PREAMBLE OF THE CONSTITUTION READS LIKE A POEM ON DEMOCRACY. IT CONTAINS THE PHILOSOPHY ON WHICH THE ENTIRE CONSTITUTION HAS BEEN BUILT. IT PROVIDES A STANDARD TO EXAMINE AND EVALUATE ANY LAW AND ACTION OF GOVERNMENT, TO FIND OUT WHETHER IT IS GOOD OR BAD. IT IS THE SOUL OF THE INDIAN CONSTITUTION.” **ACTIVITY: DESIGNING A POETIC PREAMBLE FOR SCHOOL.** Design a poetic preamble for your school abiding by all the students' rights and duties in school. You can also take hints from the preamble of 'Constitution of India'.

MODE OF SUBMISSION: hard copy to be submitted to the Subject teacher, best one to be displayed on the class board.

LEARNING OUTCOME: It will develop an understanding of the Constitution, Its Significance. It will reflect the creativity and thinking of students Application & Analytical Skills: Based on the Constitution of India, children will design the Preamble for their class and will implement them.

LINK:

<https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.pinterest.com%2Fpin%2F344243965238670734%2F&psig=AOvVaw1ZiuWDaPWIFSQBOeiDf701&ust=1653420588341000&source=images&cd=vfe&ved=0CAwQjRxqFwoT>

- Imagine that you are a middle level wheat farmer in Russia after collectivisation. You have decided to write a letter to Stalin explaining your objection to collectivization. What would you write about the condition of your life? What do you think would be Stalin's response to such a farmer?

