

# DAV Global School

## Holiday Homework

Name : \_\_\_\_\_

Class : IX

Session : 2018-19

Dear children, Here are some activities for you to keep you engaged positively and your energies directed. Use your imagination for doing creative work that will reflect your own latent talent and make you earn a golden ☆ as a grade. We wish you a wonderful time ahead!

### General Instructions:

- Parents are requested to only guide children while doing the assignment.
- Originality of the work will be appreciated.
- Project / Homework will be assessed on the basis of neatness, creativity & originality of ideas.

### English: (to be done in your Eng. Lang. Notebook)

Prepare a Power Point Presentation selecting one of the following well known figures of literature:

- |                      |                         |
|----------------------|-------------------------|
| a) Mulk Raj Anand    | e) Katherine Mansfield  |
| b) Robert Frost      | f) William Butler Yeats |
| c) R.K. Laxman       | g) A.K. Ramanujan       |
| d) Subramania Bharti | h) Oscar Wilde          |

Your Power Point Presentation should include the following points:

- |         |              |                    |                 |
|---------|--------------|--------------------|-----------------|
| a) Life | b) Education | c) Important works | d) My favourite |
|---------|--------------|--------------------|-----------------|

BBC - a) Complete comprehensions (Reading Section) 5 to 10

b) Select any 3 diary entries of your choice (from BBC) and complete them.

c) Select any 2 topics for story completion from writing skills section of BBC and complete them.

Revise complete syllabus of April and May.

### Punjabi : (to be done in your Punjabi Lang. Notebook)

1. ਸਮਾਜਿਕ ਕੁਰੀਤੀਆਂ ਨਾਲ ਸੰਬੰਧਤ ਕੋਈ ਇੱਕ ਲੇਖ ਲਿਖੋ।
2. ਕੋਈ ਇੱਕ ਚਿੱਤਰ ਚਿਪਕਾ ਕੇ ਲਗਭਗ 50-60 ਸ਼ਬਦਾਂ ਵਿੱਚ ਉਸਦਾ ਵਰਣਨ ਕਰੋ।
3. ਦਫ਼ਤਰੀ ਪੱਤਰ ਅਤੇ ਲੇਖ ਯਾਦ ਕਰੋ।

### Hindi :

ਕ੍ਰਿਤਿਕਾ – ਪਾਠ 2, 4 ਯਾਦ ਕਰੋ।

ਕ੍ਰਿਤਿਕਾ – ਪਾਠ 2 ਯਾਦ ਕਰੋ।

ਵਿਆਕਰਨ ਕੌਪੀ ਮੇਂ ਪਾਂਚ ਪ੍ਰਥ ਸੁਲੇਖ ਲਿਖੋ।

ਨਿਬੰਧ ਯਾਦ ਕਰਕੇ ਵਿਆਕਰਨ ਕੀ ਕੌਪੀ ਮੇਂ ਲਿਖੋ—

ਪਰਵ-ਵਯੋਹਾਰ: ਹਮਾਰੀ ਸੰਸਕ੍ਰਿਤਿ ਕੇ ਰਖਕ

ਬੇਰੋਜ਼ਗਾਰੀ: ਸਮਸਯਾ ਔਰ ਸਮਾਧਾਨ

ਵਿਭਾਜਨ ਔਰ ਹਮਾਰਾ ਜੀਵਨ

### Math : (to be done in your Maths Notebook)

1. Simplify:  $\frac{(25)^{\frac{3}{2}} \times (243)^{\frac{3}{5}}}{(65)^{\frac{4}{5}} \times (8)^{\frac{4}{3}}}$
2. Show that:  $\frac{x^{a(b-c)}}{x^{b(a-c)}} \div \left(\frac{x^b}{x^a}\right)^c = 1$
3. Prove that:  $\frac{a^{-1}}{a^{-1}+b^{-1}} + \frac{a^{-1}}{a^{-1}-b^{-1}} = \frac{2b^2}{b^2-a^2}$
4. Find value of  $x$ , if  $5^{x-3} \cdot 3^{2x-8} = 225$
5. If both  $a$  and  $b$  are rational numbers, find the values of  $a$  and  $b$ .  $\frac{3+\sqrt{7}}{3-\sqrt{7}} = a + b\sqrt{7}$
6. If  $\frac{\sqrt{2}+\sqrt{3}}{3\sqrt{2}-2\sqrt{3}} = a - b\sqrt{6}$ . Find the values of  $a$  and  $b$ .
7. If  $\frac{5+\sqrt{3}}{7-4\sqrt{3}} = 47a + \sqrt{3}b$ . Find the value of  $a$  and  $b$ .
8. Simplify:  $\frac{4+\sqrt{5}}{4-\sqrt{5}} + \frac{4-\sqrt{5}}{4+\sqrt{5}}$
9. Simplify:  $\frac{3}{5-\sqrt{3}} + \frac{2}{5+\sqrt{3}}$
10. Prove that:  $\frac{1}{3-\sqrt{8}} - \frac{1}{\sqrt{8}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{6}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2} = 5$
11. If  $x = 2 + \sqrt{3}$ , find the value of  $x^2 + \frac{1}{x^2}$
12. If  $x = \frac{1}{2-\sqrt{3}}$ , find the value of  $x^3 + 2x^2 - 7x + 5$
13. Evaluate:  $0.54 \times 0.54 - 0.46 \times 0.46$

14.  $x + \frac{1}{x} = 6$ , find  $x^2 + \frac{1}{x^2}$
15. If  $3x + 2y = 12$  and  $xy = 7$ , find the value of  $9x^2 + 4y^2$
16. If  $x^2 + \frac{1}{x^2} = 7$ , find the value of  $x^3 + \frac{1}{x^3}$
17. If  $2x + 3y = 13$  and  $xy = 6$ , find the value of  $8x^3 + 27y^3$
18. If  $x = \frac{4}{3}$  is a root of the polynomial  $f(x) = 6x^3 - 11x^2 + kx - 20$ , find the value of  $k$ .
19. Show that  $(x - 2)$  is a factor of the polynomial  $f(x) = 2x^3 - 3x^2 - 17x + 30$  and hence factorize  $f(x)$ .
20. If  $a + b = 10$  and  $a^2 + b^2 = 58$ , find the value of  $a^3 + b^3$ .

**Activities:**

1. To show using paper folding, paper cutting and pasting activities that the area of a parallelogram is given by:  
Area = Base  $\times$  Height
2. To use cutting / pasting method to verify the following properties of a parallelogram:
  - a) The diagonals of a parallelogram divides it into two congruent triangles.
  - b) Opposite angles of parallelogram are equal.
  - c) Adjacent interior angle of a parallelogram are supplementary.
3. To verify the algebraic identity:  
 $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$ , using unit cubes and their cubical / cuboidal formations.
4. To show using paper cutting and pasting activity that the area of a circle is half the product of its circumference and radius.
5. To make a right circular cylinder of a given height and circumference of the base.
6. To verify, using activity of paper cutting and pasting that –
  - a) The sum of three angles of a triangle =  $180^\circ$
  - b) The sum of angles of a quadrilateral =  $360^\circ$

**Science :** (to be done in your Science Notebook)

**Activities:**

1. Prepare a true solution, suspension and colloidal solution and to distinguish between them. Write their differences in tabular form.
2. Write the steps you would use for making tea. Use the words – solution, solvent, solute, dissolve, soluble, insoluble, filtrate and residue.
3. Prepare a saturated and unsaturated solution using salt or sugar. Does an increase in temperature influence the amount of solute dissolved in water? Write your observations.
4. Try to visit a milk dairy nearby your home and find out how is cream separated from milk and answer the following questions –
  - a) What happens when milk is churned ?
  - b) How does the separation of cream from milk take place?
5. Describe an activity to study the reflection of sound.
6. Give the graphical representations of uniform and non-uniform motion on distance time graph and velocity time graph.

**Models / Projects (Any 2):**

1. Make a 3D model for plant cell.
2. Make a 3D model for animal cell
3. Prepare a model to demonstrate the movement of particles in solids, liquids and gases.
4. Electric generator.

Note: Revise all the lesson already done in class.

**Social Science:**

1. Take a thin notebook and make a 'Historical Calendar'. Note down the important dates of history from the topics covered so far. (use sticky notes to write date and event)
2. Project on disaster management:- 'Prepare a detailed project report on any one natural disaster'.
3. Prepare a questionnaire of minimum 25 marks from each chapter covered. (use A-4 size sheet)

**Art & Craft:**

1. Draw and colour any two landscapes with water colours in art file.
2. Make any one best out of waste thing.

**ICT:** Prepare a presentation on "Climate change."

Or

"Energy Conservation"