



DAV POLICE PUBLIC SCHOOL PANCHKULA



Summer Holiday Assignment
Grade -10 (2021-22)

Dear Children

*Summer Vacation is a time full of
fun games and activity. With that
there are a lot of other things
which you can do. For that we have
planned some interesting work and
activities to make your summer full
of creativity.*

Have a great Summer Vacation



IMPORTANT TIPS FOR PARENTS AND STUDENTS

- **Take good care of your health and hygiene. Avoid heavy and oily food and increase intake of fresh fruits and water to keep yourself well hydrated and energetic.**
- **The holidays home work must be done in a very neat and presentable manner. Questions must be done in the given sequence.**
- **The child will be assessed for the presentation , neatness completion of all the given questions and timely submission.**
- **Communication will play pivotal role in grooming the overall personality of children. Converse your child preferably in English.**
- **Maintain a beautiful decorated folder for holiday homework. It should be labelled properly indicating clearly the name , class , section and subject.**
- **English, Maths, Science, Social Science, Hindi, Sanskrit, Punjabi Information Technology and Music are given. Make your ward do the same.**

HOLIDAY HOMEWORK SUBMISSION SCHEDULE

S.NO	SUBJECT	Page No	SUBMISSION DATE
1	English	4	July 13, 2021
2	Mathematics	5 - 7	July 15 ,2021
3	Science	8-11	July 12, 2021
4	Social Science	12	July 8, 2021
5	Hindi	13	July 7, 2021
6	Punjabi	14	July 5, 2021
7	Information Technology	15	July 9, 2021
8	Music	16	July 14 ,2021
9	Sanskrit	17	July 6, 2021

ENGLISH

Do the following Modules from BBC – COMPACTA 10

Module One – Classroom Assignment (CA) 1,2,3, 7,8 & 9 (page no 4 to 9 & 16 to 21)

Module One A – Type I 1&2 (page no. 56.2 to 56.7)

Type II 3&4 (page no. 56.22 to 56.29)

Module Six – Classroom Assignment 32 (page nos. 234-235)

Classroom Assignment 33 (page nos. 240-241)

Classroom Assignment 34 (page nos. 246-247)

Classroom Assignment 35 (page nos. 252-253)

Practice Assignment 26 (page no. 260- 261)

Classroom Assignment 37 (page nos. 264-265)

Literature Modules - Eight, Nine & ten – Attempt all the questions of the Literature chapters covered in class in Practice Notebook.

Make Mind Map of All the Literature Chapter covered in the class before Vacation in Practice Notebook. (please refer to pdf discussed in class.)

MATHEMATICS

General Instructions:

- 1. Minimum learning level assignment to be done in Maths HW notebook.*
- 2. Art integration activity to be done in A4 size sheet. Every student has to make ONE design only.*
- 3. Activities of various topics to be done in maths practice file.*

Minimum Learning Level Assignment

Attached below

Art Integration Activity

Mark different designs using parabolic curves with the help of straight lines. Related links for your reference are given.

<https://www.youtube.com/watch?v=cutqlk8KSsA>

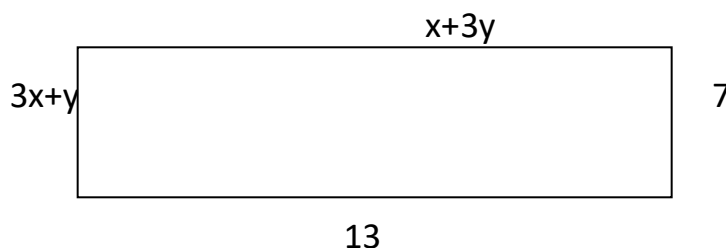
<https://www.youtube.com/watch?v=gvMKSPD8KV4>

Activities

1. To verify the Pythagoras theorem by the method of paper folding, cutting and pasting.
2. To verify using the method of paper cutting, pasting and folding that the lengths of tangents from an external point to circle are equal.
3. To find the conditions for consistency and inconsistency for system of linear equations in two variables by graphical method.

Ch – 3(Linear Equations in 2 Variables)

1. Find the value of k for which the system of equations have infinitely many solutions $2x+3y=7$ and $(k+1)x+(2k-1)y=4k+1$.
2. For which values of, do the following pair of equations $x+y=$ and $x+ y=1$ have
i) no solutions? ii) unique solution?
3. A motor boat can travel 30 km upstream and 28 km down stream in 7 hours. It can travel 21 km upstream and return in 5 hours. Find the speed of the boat in still water and the speed of the stream.
4. A shopkeeper gives books on rent for reading. She takes a fixed charge for the first two days, and an additional charge for each day thereafter. Latika paid Rs. 22 for a book kept for 6 days, while Anand paid Rs. 16 for the book kept for 4 days. Find the fixed charges and charge for each extra day.
5. In a competitive exam, one mark is awarded for each correct answer while $\frac{1}{2}$ mark is deducted for every wrong answer. Jayanti answered 120 questions and got 90 marks. How many questions did she answer correctly.
6. Find the values of x and y in the following rectangle.



7. Solve the following systems of equations:
 - i) $7(y+3) - 2(x+2) = 14$ and $4(y-2) + 3(x-3) = 2$
 - ii) $\frac{3}{x+y} + \frac{2}{x-y} = 2$ and $\frac{9}{x+y} - \frac{4}{x-y} = 1$
 - iii) $\frac{2}{3x+2y} + \frac{3}{3x-2y} = \frac{17}{5}$ and $\frac{5}{3x+2y} + \frac{1}{3x-2y} = 2$
8. If $x+1$ is a factor of $2x^3 + ax^2 + 2bx + 1$, then find the values of a and b given that $2a - 3b = 4$.
9. Solve the equations graphically:
 - i) $x+y = 3$ and $2x + 5y = 12$
 - ii) $2x + 3y = 4$ and $x - y + 3 = 0$

Ch – 8(Trigonometry)

1. Evaluate the following:

i) $(\operatorname{cosec}^2 45 \sec^2 30)(\sin^2 30 + 4\cot^2 45 - \sec^2 60)$

ii) $2\sin^2 30 - 3\cos^2 45 + \tan^2 60$

iii) $4(\sin^2 30 + \cos^2 60) - 3(\cos^2 45 - \sin^2 90) - \sin^2 60$

1. If $A = 30$ and $B = 60$, verify that $\cos(A+B) = \cos A \cos B - \sin A \sin B$

2. Find the value of x if $\sqrt{3}\sin x = \cos x$.

3. Prove that $(\sqrt{3}+1)(3 - \cot 30) = \tan^3 60 - 2\sin 60$.

4. Prove that: $\tan 1 \tan 2 \tan 3 \dots \tan 89 = 1$.

5. Evaluate: $\frac{3\cos 55}{7\sin 35} - \frac{4(\cos 70 \operatorname{cosec} 20)}{7(\tan 5 \tan 25 \tan 45 \tan 65 \tan 85)}$

6. Prove the following trigonometric identities:

i) $(1+\tan^2 A)(1+\sin A)(1-\sin A) = 1$

ii) $\sec^4 A - \sec^2 A = \tan^4 A + \tan^2 A$

iii) $\frac{\sin \theta}{1+\cos \theta} + \frac{1+\cos \theta}{\sin \theta} = 2\operatorname{cosec} \theta$

iv) $(1+\cot A - \operatorname{cosec} A)(1+\tan A + \sec A) = 2$

v) $\frac{1}{\operatorname{cosec} A - \cot A} - \frac{1}{\sin A} = \frac{1}{\sin A} - \frac{1}{\operatorname{cosec} A + \cot A}$

7. If $\tan A + \sin A = m$ and $\tan A - \sin A = n$, show that $m^2 - n^2 = 4\sqrt{mn}$.

8. If $\sin A + \cos A = p$ and $\sec A + \operatorname{cosec} A = q$, show that $q(p^2 - 1) = 2p$.

9. If $\frac{\cos \alpha}{\cos \beta} = m$ and $\frac{\cos \alpha}{\cos \beta} = n$ show that $(m^2 + n^2)\cos^2 \beta = n^2$.

10. If $\cot \theta + \tan \theta = x$ and $\sec \theta - \cos \theta = y$, prove that $(x^2 y)^{2/3} - (xy^2)^{2/3} = 1$.

11. If $\sin A + \cos A = \sqrt{2}$, then prove that $\tan A + \cot A = 2$.

SCIENCE

MODEL AND CHART WORK:

Prepare a model/chart on following topics according to Roll No mentioned with section A or B in brackets using cardboard or thermo coal sheet or flex printing whichever you found appropriate.

1. States of matter (Section A-1,2,3)
2. Process of Photosynthesis (Section A-4,5,6)
3. Charts depicting various properties of matter(Section A-7,8,9)
4. Open, closed, Series and parallel circuit (Section A-10,11,12)
5. Process of chemical change with example (Section A-13,14,15)
6. Process of Physical change with example(Section A-16,17,18)
7. Liquid state of matter with example and picture(Section A-19,20,21)
8. Solid state of matter with example and picture(Section A-22,23,24)
9. Gaseous state of matter with example and picture (Section A-25,26,27)
10. Conductors and insulators(Section A-28,29,30)
11. Different ways of heat transfer(Section B- 1,2,3)
12. Process of balancing chemical equations(Section B- 4,5,6)
13. Types of chemical equations (Section B- 7,8,9)
14. Process of electrolysis of water(Section B- 10,11,12)
15. Complete pH chart(Section B- 13,14,15)
16. Human Digestive System(Section B- 16,17)
17. Breakdown of glucose by various pathways(Section B- 18,19,20)
18. Human Respiratory System(Section B- 21,22,)
19. Symbols of commonly used components in circuit diagram(Section B- 23,24,25)
20. Resistors in Series and parallel with formula(Section B- 26,27,28,29,30)
21. Nutrition in Amoeba(Section B- 31,32,33,34,35)

LEARNING WORK:

Learn and revise Chapter 1, 2, 6 and 12 complete and prepare Chapter 2, 6 and 12 for Unit test

“IMMUNITY BOOSTING MEASURES FOR SELF CARE DURING COVID-19 CRISIS”, In the wake of the COVID-19 outbreak, entire mankind across the globe is suffering. Enhancing the body’s Immunity plays an important role in maintaining good health.

- Keeping this in mind, prepare a diet chart of a 15 years old child. The diet chart should be balanced and should include food items which are not expensive and are commonly available in your area.
- To ensure the general health of your family, you should make sure that all the members of the family increase the intake of water. Suggest five measures to increase water intake.
- Also suggest other methods which enhance our immunity
- Write the details in your holiday notebook.

Worksheet 1: Chemical Reactions and Equations

Balance the following chemical equations:-

1. $H_3PO_4 + KOH \rightarrow K_3PO_4 + H_2O$
2. $HCl + NaOH \rightarrow NaCl + H_2O$
3. $Na + NaNO_3 \rightarrow Na_2O + N_2$
4. $Na + O_2 \rightarrow Na_2O$
5. $NaOH + H_2CO_3 \rightarrow Na_2CO_3 + H_2O$
6. $C_6H_6 + O_2 \rightarrow CO_2 + H_2O$
7. $Al_2(OH)_3 + H_2CO_3 \rightarrow Al_2CO_3 + H_2O$
8. $NH_4OH + H_3PO_4 \rightarrow (NH_4)_3PO_4 + H_2O$
9. $Na + Cl_2 \rightarrow NaCl$
10. $NH_3 + O_2 \rightarrow N_2 + H_2O$

Write the balanced equation for the following chemical reactions.

11. Hydrogen + Chlorine \rightarrow Hydrogen chloride
12. Barium chloride + Aluminium sulphate \rightarrow Barium sulphate + Aluminium chloride

- 13 Sodium + Water \rightarrow Sodium hydroxide + Hydrogen
- 14 Calcium hydroxide + Carbon dioxide \rightarrow Calcium carbonate + Water
- 15 Zinc + Silver nitrate \rightarrow Zinc nitrate + Silver
- 16 Aluminium + Copper chloride \rightarrow Aluminium chloride + Copper
- 17 Barium chloride + Potassium sulphate \rightarrow Barium sulphate + Potassium chloride
- 18 Potassium bromide(aq) + Barium iodide(aq) \rightarrow Potassium iodide(aq) + Barium bromide(s)
- 19 Zinc carbonate(s) \rightarrow Zinc oxide(s) + Carbon dioxide(g)
- 20 Magnesium(s) + Hydrochloric acid(aq) \rightarrow Magnesium chloride(aq) + Hydrogen(g)

Worksheet 2: Acids, Bases and Salts

1. You have two solutions, A and B. The pH of solution A is 1 and pH of solution B is 14. Which solution has more hydrogen ion concentration? Which of this is acidic and which one is basic?
2. Why do HCl, H₂SO₄, etc., show acidic characters in aqueous solutions while solutions of compounds like alcohol and glucose do not show acidic character?
3. Why does an aqueous solution of an acid or base conduct electricity?
4. How can we increase concentration of H⁺(aq) ions in a solution?
5. Why does dry HCl gas not change the colour of the dry litmus paper but changes to red when it is moist?
6. What precaution one must keep while diluting an acid and why?
7. What is the concentration of hydronium ions (H₃O⁺) affected when a solution of an acid is diluted?
8. Explain the role of water in the ionization of acids and bases.
9. Which indicator is used to find out the strength of an acid or base? How?

Worksheet 3: Life Processes

1. What is the role of following in digestion? A) Trypsin, B) HCl C) Bile D) Intestinal Juice
2. Name the type of respiration in which the end products are A) Ethyl Alcohol (B) CO₂ and H₂O (C) Lactic Acid Give one example of each case where such respiration can occur.
3. Name the substances present in gastric juice. Explain their function.
4. Why does raw bread taste sweet after chewing in the mouth?
5. Where is bile secreted from? What is its function?
6. Give one word for (A) getting rid of undigested waste from body (B) movement of food molecules into blood
7. Where do you find stomata and lenticels?
9. Food moves down the gut by peristaltic movement. Which part of the brain controls this

movement?

10. Which of the four chambers in the human heart have thickest muscular walls?

11. Why it is not advisable to give excess water to water plants?

12. Which of the organs performs the following functions in humans? (a) Absorption of food (b)

Absorption of water

13. Write one feature which is common to each of the following (A) Glycogen and Starch (B)

Chlorophyll and hemoglobin

14. Why does not the lung collapse after forceful expiration?

15. A particular tissue blocked and the leaves start to wilt. Identify the tissue that got blocked.

Worksheet 4: Electricity

1. Two resistances of $4\ \Omega$ and $8\ \Omega$ are connected in parallel. What would be the combined resistance of the system?
2. Two identical resistors each of resistance $2\ \text{Ohm}$ are connected in turn (1) in series (2) in parallel to a battery of $12\ \text{V}$. Calculate the ratio of power consumed in two cases.
3. (i) A $100\ \text{W}$ electric bulb is connected to $220\ \text{V}$ mains power supply. Calculate the strength of the electric current passing through the bulb.
(ii) If the same bulb is taken to U.S.A where the main power supply is $110\ \text{V}$, how much electric current will pass through the bulb when connected to mains?
4. Calculate the resistance of $2\ \text{km}$ long copper wire of radius $2\ \text{mm}$. (Resistivity of copper $= 1.72 \times 10^{-8}$)
5. A wire of length $3\ \text{m}$ and area of cross-section $1.7 \times 10^{-6}\ \text{m}^2$ has a resistance $3 \times 10^{-2}\ \text{ohm}$.
 - a. What is the formula for resistivity of the wire and what is the unit of it
 - b. Calculate the resistivity of the wire
6. Two electric lamps of $100\ \text{W}$ and $25\ \text{W}$ respectively are connected in parallel to a supply voltage of $200\ \text{V}$. Calculate the total current flowing through the circuit.

Social Science

Q.1. Read the chapter Forest and Wildlife resources. . Make one word questions and write their answers also. Do the work in the geography notebook.

Q.2. Trace the political map of India in 1947 and compare it with the map of India in 2013. Paste the map in your civics copy. And write the points of comparison and differences.

Q.3. Why is democracy the most successful form of government in the world. With examples, highlight the topic and supplement the same with pictures in your civics notebook.

Q.4. Prepare a picture book on any one of the following topics;

(i) different types of government

(ii) natural vegetation found in India

Keep the following points in mind while making the picture book:

(a) Number of pages 4-7

(b) Illustrate with the help of maps, pictures and diagrams

(c) Draw a beautiful cover page.

- Revise Chapter 2 of geography and ch-2 of democracy(Federalism).
- Share the ways to keep yourself healthy and hygienic with atleast 10 people.
Stay safe Stay healthy

हिंदी

1. व्याकरण पुस्तक (व्याकरण परिचय) में दिए गए पहले 5 अपठित गद्यांश व उनके प्रश्नोत्तर अपनी व्याकरण उत्तरपुस्तिका में लिखें।
2. व्याकरण पुस्तक (व्याकरण परिचय) में दिए गए पहले 5 संवाद अपनी व्याकरण उत्तरपुस्तिका में लिखें
3. व्याकरण पुस्तक (व्याकरण परिचय) में से पदबंध, समास, रचना के आधार पर वाक्य भेद सहित लिखें व याद करें
4. पाठ बड़े भाई साहब, हरिहर काका, साखी कबीर, मीरा के पद के प्रश्नोत्तर याद करें।
5. प्रतिदिन एक पेज, सुलेख के रूप में लिखें।
6. आपकी छोटी बहन या छोटा भाई छात्रावास (हॉस्टल) में रहता है/रहती है उसकी पढाई लिखाई के सम्बन्ध में उसे एक पत्र लिखें।
7. मीठी वाणी /बोली सम्बन्धी व ईश्वर प्रेम सम्बन्धी दोहों का संकलन कर चार्ट पर लिखे व चित्र भी बनाएँ।
8. भगवान विष्णु के दस अवतार माने जाते हैं जिन में राम और कृष्ण प्रमुख हैं अन्य आठ अवतारों के बारे जानकारी प्राप्त करके एक चार्ट बनाएँ।
9. अनुक्रमांक 1 से 7 बड़े भाई साहब पाठ पर p.p.t बनाएँ, 8 से 14 कबीर की साखी पाठ पर p.p.t बनाएँ अनुक्रमांक 15 से 21 मीरा के पद्य पाठ पर p.p.t बनाएँ अनुक्रमांक 22 से 28 बिहारी के दोहे पाठ पर p.p.t बनाएँ, अनुक्रमांक 29 से 35 हरिहर काका पाठ पर p.p.t।
10. कबीर के दोहों को चार्ट पर लिखें।
11. पाठ बड़े भाई साहब में जितने मुहावरे आए हैं उनको वाक्य में प्रयोग करके लिखें।

PUNJABI

- (1) ਵਰਿਆਮ ਸੰਧੂ ਦੀ ਅੰਗ ਸੰਗ ਤੇ ਸੁਜਾਨ ਸਿੰਘ ਦੀ ਕੁਲਫੀ ਕਹਾਣੀ ਨੂੰ ਯਾਦ ਕਰੋ।
- (2) ਸਮਾਸੀ ਸ਼ਬਦ ਤੇ ਬਹੁਰਥਕ ਸ਼ਬਦਾਂ ਨੂੰ ਯਾਦ ਕਰੋ।
- (3) ਇਸ਼ਤਿਹਾਰਾਂ ਦਾ ਲਿਖ ਕੇ ਅਭਿਆਸ ਕਰੋ।
- (4) ਮੁਹਾਵਰਿਆਂ ਦਾ ਲਿਖ ਕੇ ਅਭਿਆਸ ਕਰੋ।
- (5) ਹੁਣ ਤੱਕ ਕਰਵਾਏ ਗਏ ਸਾਰੇ ਕੰਮ ਨੂੰ ਯਾਦ ਕਰੋ।
- (6) ਕਰੋਨਾ ਮਹਾਂਮਾਰੀ ਦਾ ਬੱਚਿਆਂ ਦੀ ਪੜ੍ਹਾਈ ਤੇ ਕਿ ਅਸਰ ਪੈ ਰਿਹਾ ਹੈ, ਦੱਸੋ।
- (7) ਘੱਟ ਤਨਖਾਹ ਵਾਲੇ ਮਨੁੱਖ ਦੀ ਕਠਿਨਾਈਆਂ ਬਾਰੇ ਦੱਸੋ ਜੋ ਉਸਨੂੰ ਸਮਾਜ ਵਿੱਚ ਝਲਣੀਆ ਪੈਂਦੀਆਂ ਹਨ।

- 1 Memorize the chapters ang sang by wariyam sandhu and kulfi by sujaan singh
- 2 Learn bahuarthak shabads and smasi shabads
- 3 Do practice of advertisement and pamphlet making
- 4 Write and learn muhawre
- 5 Learn all the work done till now and do written practice also
- 6 Write the impacts of corona virus on education
- 7 Write the difficulties faced by a low waged man in society.

INFORMATION TECHNOLOGY

Note:- Following Assignments to be done in Practical file.

1. Write an article on “Cybercrime” in about 300 words.

- Give appropriate title, headings, and subheadings in the document.
- Apply different styles to different parts of the document.
- Customizing an existing style by changing its font properties.
- Add salutation at the end of your document, format it as per your choice , and create a new and unique style.

2. Design a poster on “Global warming “. Include appropriate images and Drawing objects in the poster.

3. Explain the MS Word interface parts . Explain about following commands Of MS Word.

- The File tab
- Ribbon tabs
- Groups
- Dialog box launcher

4. Design E-book cover pages/Magazine front/ books front/back page using cover page option in insert menu.

MUSIC

You have to complete one of the following either A OR B

A) Make a Video singing a Patriotic Song / Inspirational Song.

Instructions-

- A Dignified Song must be chosen.
- The Song Chosen must be well prepared and rehearsed.
- The Video must be prepared with your best dressing; you may choose dress according to the theme of the song.
- You have to Tell Your Name, Class & School in the video.
- Shoot the video in well lit Conditions, without Background Noise.

OR

B) Make a Power Point Presentation from one the following topics:

- Music and Religion
- Music and Cinema
- Music and Electronic Media
- Devotional aspects in Music
- Inter – relationship of Arts (Music- Dance or Theatre or Visual Arts)

Note:-

The PPT must have minimum 12 Slides (Excluding Cover Page & Thank you)

SANSKRIT

- ★ (1) प्रथमः पाठः (शुचिपर्यावरणम्) इति विषयमधिकृत्य सर्वान् श्लोकान् अर्थसहितम् लिखित्वा स्मरन्तु -
- ★ (2) एतत् , तत् एवम् किम् शब्दानाम् रूपाणि त्रिषु लिङ्गेषु लिखन्तु स्मरन्तु च -
- ★ (3) अस्मद् एवम् युष्मद् सर्वनामशब्दानाम् रूपाणि लिखन्तु स्मरन्तु च -
- ★ (4) भू , पठ् , गम् , अस् (पञ्चलकारेषु) एवम् सेव् , लभ् (आत्मनेपदी) केवलम् लट् लङ् व लृटलकारेषु लिखन्तु स्मरन्तु च -
- ★ (5) 'व्यायामस्य लाभाः' इति विषयमधिकृत्य पञ्चवाक्येषु 'संस्कृतभाषायाम्' एकम् अनुच्छेदं लिखत ।
- ★ (5) कक्षायाम् पठितपाठान् पुनरावृत्तिकार्यम् कुरु -