



DR A.Q .KHAN SCHOOL AND COLLEGE BAHRIA TOWN PHASE-8, ISLAMABAD
SUMMER VACATION HOMEWORK TASK, 2022
SUBJECT: COMPUTER SCIENCE
CLASS: VIII

1. Read Chapter 1 & 2 and write at least 20 MCQs. Cover all Info boxes given in the chapter for it.

2. Define and learn the following terms:

Computer Network, Communication, Client, Server, LAN Network, MAN Network, WAN Network, Modem, Network Card, Twisted Pair Cable, Coaxial Cable, Fiber Cable, Cellular Communication, Bluetooth, Adware, Hacker, Data Transmission Flowchart.

3. Differentiate between the following: Sender and Receiver, Message and Medium, Client and Server, Guided and Unguided Media, LAN and WAN, Virus and Worms, Virus and Antivirus.

4. Write down the advantages and disadvantages of the following:- Twisted Pair Cable, Coaxial Cable, Fiber Cable.

5. Practice the activity (Ms. Excel) given on Page # 36 Chapter 2 Working with Spreadsheets. Enter the scores of top 5 Pakistani Batsmen in a table & apply the formulas & function as directed in the Activity. Reference pgs for Formulas & Functions are:- Pg 27 (Creating a table & Charts) Pg 28 (Calculating total score by AutoSum). Pg 31 & 32 Average , Max/Min Functions.



**DR A.Q .KHAN SCHOOL AND COLLEGE BAHRIA TOWN PHASE-8, ISLAMABAD
SUMMER VACATION HOMEWORK TASK, 2022**

SUBJECT: ENGLISH

CLASS: VIII

Studies have shown that learning a language keeps the brain in good shape and enhances our cognitive skills and memory. The main four skills to learn a language are: **listening, speaking, reading and writing**. These four skills serve many purposes: they give learners support, opportunities to create, contexts in which to use the language for exchange of real information, evidence of their ability and, most important confidence. Keeping in mind these skills, the summer task has been designed.

LISTENING:

Watching English movies has positive impact on improving listening skill as well as on speaking. Correct pronunciation is also enhanced by watching English movies. So students are advised to watch the movie '**Moby Dick**'. After watching movie they will write what **lesson** they have learnt from it.

SPEAKING:

Practice public speaking at least twice a week. Select for yourself very simple topics such as: **family life, hobbies, current situation, kindness** etc. First think and then speak. Develop a habit of thinking in English. Use internet to get information about art of public speaking.

PRESENTATION:

By doing presentations, students learn how to speak in front of a group. To polish their skills, they are advised to make a power point presentation on '**Generosity**'. Acts of generosity, such as giving your time, talent or resources, and expecting nothing in return, have been proven to be good for health. Generous individuals are personally more fulfilled, happier and more peaceful within themselves. While working on this presentation student will learn to be **tender-hearted**.

READING:

Reading not only helps us to gain knowledge but also empowers us with the power of reasoning. To inculcate the habit of reading in students novels '**Moby Dick**' by '**Herman Melville**' and '**The Alchemist**' by '**Paulo Coelho**' are suggested.

WRITING:

Writing skill equips students with communication and thinking skill. It fosters their abilities to explain and refine their ideas to others and their selves.

- i. Students will **write review** of any one of the suggested novel. (reference pg:115 of text book for book review writing)
- ii. They will **write a paragraph** with the help of 'word cloud (given on page 100 of text book). They will also give a suitable title to it.
- iii. They will **write their own poem(4-6 lines)** giving advice to someone that they care for.
- iv. They will **make three 'career clusters'** and answer the given questions:(reference pg:91 of textbook)
 - a. What type of skills, training and education is needed in your selected profession?
 - b. What are three things that you like about this job?
 - c. What are three things that you dislike about this job?



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SUMMER VACATION HOMEWORK TASK, 2022
SUBJECT: GENERALSCIENCE
CLASS: VIII

NOTE : Do read your text book thoroughly to attempt the following worksheet.

Q1 Fill in the blanks.

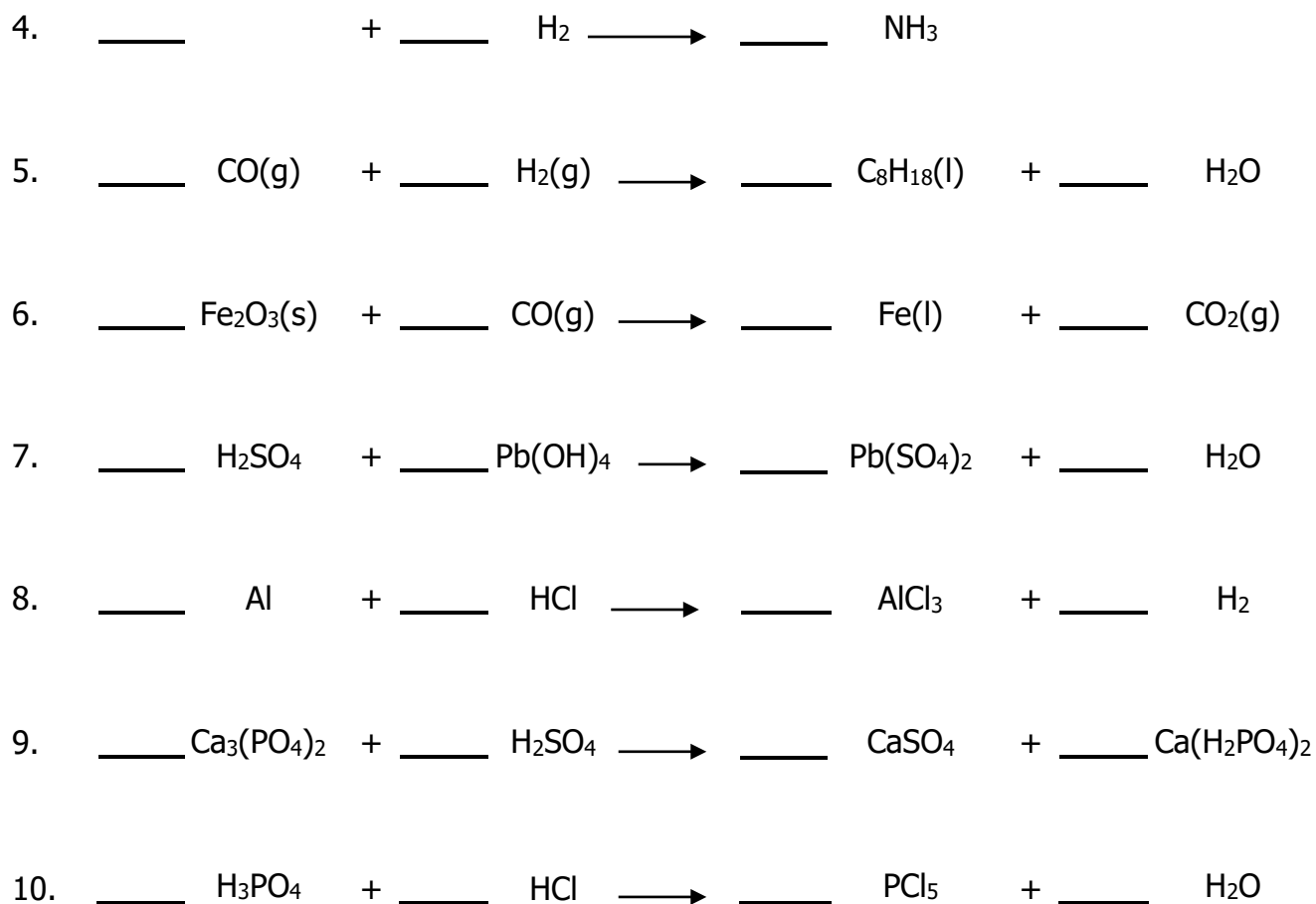
- i. The major function of kidney is to control the concentration of body_____.
- ii. _____neuron carries messages from the spinal cord to an effector.
- iii. The series of actions in human body are controlled and coordinated by_____system.
- iv. _____cells in sense organ are sensitive to specific stimuli.
- v. _____ responds to a stimulus according to the instructions given by the nervous system.
- vi. CNS is made up of _____ and_____.
- vii. Brain and spinal cord are wrapped in three layers of connective tissues known as_____.
- viii. _____of the brain is made up of two cerebral hemisphere.
- ix. The floor of the cerebral hemisphere is called_____.
- x. The function of Pons is to regulate the_____.
- xi. The_____gland is attached to the hypothalamus.
- xii. The_____makes connection between sensory neuron and motor neuron.
- xiii. The two halves of the cerebrum are joined by a bundle of tissues called_____.
- xiv. The chemical equation is the representation of a chemical_____.
- xv. In balancing chemical equation, do not change the chemical_____.
- xvi. In structure of neuron, the small extensions of the cell body are called_____.
- xvii. A_____change is referred as a chemical reaction.
- xviii. A chemical reaction in which two or more substances combine to form a single compound is called _____reaction.
- xix. Synthesis reaction is also known as_____reaction.
- xx. A chemical reaction in which a single compound breaks down into two or more simple substances is called a _____reaction.

Q2. Balance the following chemical equations.



→





Q3. Define the following terms.

- i. Response : _____

- ii. Central nervous system (CNS) : _____

- iii. Reflex Action : _____

- iv. Voluntary action : _____

- v. Motor neuron : _____

- vi. Receptors: _____

- vii. Effector: _____

- viii. Stimulus: _____

- ix. Chemical reaction: _____

- x. Reactants: _____

- xi. Products: _____

- xii. Chemical equation: _____

- xiii. Synthesis reaction: _____

- xiv. Decomposition reaction: _____

- xv. Exothermic reaction : _____

- xvi. Endothermic reaction : _____

Q4. State the difference between the following.

i. Reflex action Reflex arc

ii.i CNS PNS
i
.

iii.i Receptor Effector
i
i
.

iv.i Cranial nerves Spinal nerves
v
.

v. Voluntary action Involuntary action

vi.v Sensory neuron Motor neuron
i
.

vii.v Ureter Urethra
i
i
.

x.	Exothermic reaction	Endothermic reaction
xi.	Combustion	Burning

Q5. Write the functions of the following organs/ organ system.

ORGAN/ORGAN SYSTEM	FUNCTION
FORE BRAIN	
Cerebrum	
Thalamus	
Hypothalamus	
Pituitary gland	
MIDBRAIN	
Optic lope	
HIND BRAIN	
Cerebellum	
Pons	
Medulla oblongata	
KIDNEY	
Renal Vein	
Renal artery	
Renal pelvis	
Ureter	
Urinary bladder	

Urethra	
Blood vessels	
NEPHRON	
Bowman's capsule	
Glomerulus	
Tubular portion	
Collecting tubule	
PARTS OF NEURON	
Cell body	
Dendrites	
Axon	
Myelin sheath	

Q6. Enlist ten main organ systems of the human body.

- | | |
|-----------|------------|
| I _____ | ii _____ |
| Iii _____ | iv _____ |
| V _____ | vi _____ |
| Vii _____ | viii _____ |
| Ix _____ | x _____ |

Q7. What are functions of spinal cord?

Q8. Describe the division of the peripheral nervous system.

Q9. Give answers of the following questions briefly

i. What happens if a person loses too many neurons?

ii. What is the advantage to having relative few neurons in a reflex arc pathway?

iii. Can a person with a brain damage still have a good reflex action? Give reason for your answer.

iv. Suggest some best drinks to flush your kidneys.

v. What is urea?

vi. Why banana turns brown after few days?

vii. What is precipitation?

viii. Classify the process of snow formation.

ix. Write the byproducts of:

Kidney : _____

Liver : _____

Lungs : _____

Skin : _____

x. Give examples from daily life of :

Exothermic reaction

Endothermic reaction

xi. Write five indications which identifies the chemical change.

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

Q10. Write the balanced chemical equations for the following chemical reactions.

- i. Hydrogen and chlorine react to make hydrochloric acid (HCl)

- ii. Ethane, C_2H_6 , reacts with oxygen to make carbon dioxide and water.

- iii. Nitrogen and hydrogen react to produce ammonia (NH_3)

- iv. Iron (Fe) reacts with oxygen of the air to form iron oxide(Fe_2O_3).

- v. Sodium react with chloride to produce sodium chloride (NaCl)

- vi. Hydrogen reacts with oxygen to produce water

- vii. Silver chloride (AgCl) decomposes into silver and chlorine

- viii. Zinc (Zn) reacting with hydrochloric acid (HCl) to produce zinc chloride ($ZnCl_2$) and hydrogen gas

- ix. Sodium (Na) reacts with water and produce sodium hydroxide (NaOH) and hydrogen

- x. Natural gas (CH_4) burns in air to form carbondioxide and water.

Q11. Practice and label the following diagrams from your book on loose sheets.

Fig 1.1 , 1.2 (Pg # 7)

Fig 1.5 (Pg # 11)

Fig 1.6 (Pg # 12)

Fig 1.7 (Pg # 13)

Fig 1.8 (Pg # 14)

Fig 1.9 (Pg # 15)

Fig 1.11 (Pg # 16)

NOTE : Do prepare exercises of Unit # 1 and Unit # 2.



DR. A. Q. KHAN SCHOOL & COLLEGE, BAHRIA TOWN, PHASE-8, ISLAMABAD
SUMMER VACATION HOMEWORK TASK, 2022
SUBJECT: ISLAMIYAT
CLASS: VIII

- Memorisation and translation: سورة الإنشراح
- Dua for Safety عافيت كى دعا
- Learn the translation of Hadiths 1-3
- Write Asma ul Husna (22-33) on a scrapbook and memorize the meaning.
- Make a chart mentioning good deeds and bad deeds.
- Describe Amr bil Maroof wa nahi anil Munkar in detail.
- Mention advantages and disadvantages of Kasb-e-Halal.
- Describe some unique Qualities of Hazrat Fatimaؑ.



ء كيو خان سكول اينڈ كالج بحريه ٹاؤن فيز ۸
كام برائے تعطيلات گرما
مضمون: اسلاميات
جماعت ہشتم

حفظ و ترجمہ: سورہ الم نشرح اور عافيت كى دعا كا ترجمہ ياد كرنا ہے۔

حفظ كلمات: پانچواں كلمہ ياد كرنا ہے۔

احاديث: ۱ تا 3 كا ترجمہ ياد كرنا ہے۔

اسمائے الحسنیٰ: 22 تا 33 كو خوبصورتی سے اسكريپ بک ميں تحرير
كرنا ہے۔

طلبہ اچھی عادات اور صفات كى ايک فہرست بنا كر لائیں۔

طلبہ امر بالمعروف ونہی عن المنكر سے پانچ معروف چیزوں كى اور پانچ
منكر چیزوں كى فہرست مرتب كريں۔

سيرت طيبہ سے علم كى اہميت كى مثالیں پيش كريں۔

حضرت فاطمہ الزہراء ؑ كى سادگی، ايثار، سخاوت اور زہد و تقویٰ كے بارے
ميں تحرير كريں۔



DR. A. Q. KHAN SCHOOL AND COLLEGE BAHRIA TOWN, PHASE-8, ISLAMABAD
SUMMER VACATION HOMEWORK TASK, 2022
SUBJECT: MATHEMATICS
CLASS: VIII

SECTION A: SETS

Q1. Write the following sets in roster form.

- i. $A = \{x: x \text{ is an integer and } 3 < x < 7\}$
- ii. $B = \{x: x \text{ is a natural number less than } 6\}$
- iii. $C = \{x: x \text{ is two digit natural number such that the sum of its digits is } 8\}$
- iv. $D = \{x: x \text{ is a prime number which is divisor of } 60\}$
- v. $E = \text{The set of all letters in the word TRIGONOMETRY.}$
- vi. $F = \{x: x \text{ is a month of a year not having } 31 \text{ days}\}$
- vii. $G = \{x: x \text{ is an even prime number greater than } 2\}$
- viii. $H = \{7x: x \in N \text{ and } x \leq 15\}$
- ix. $R = \{x: x \in R\}$
- x. $T = \{x: x \text{ is positive integer and a divisor of } 9\}$

Q2. Write the following sets in set builder form.

- | | |
|---------------------------------|--|
| i. Union of two set A and B | ii. $X = \{53, 59, 61, 67, 71, 73, 79, 83, 89, 97\}$ |
| iii. Intersection of two sets | iv. $A = \{1, 4, 9, \dots, 100\}$ |
| v. $A - B$ | vi. $Z = \{0, 9, 18, 27, \dots\}$ |
| vii. <i>compliment of set A</i> | viii. Set of odd numbers |
| ix. $B - A$ | x. Set of integers from -13 to 1. |

Q3. Write the number of elements in the power set of the following sets.

- | | |
|--|----------------------------------|
| i. $\{\phi\}$ | ii. Set of letters of word "EGG" |
| iii. $A = \{x: x \text{ is an integer and } 3 < x < 7\}$ | iv. $\{a, b, c, d, e, f\}$ |
| v. <i>set of all letters in the word in your name.</i> | |

Q4. Write the power set of the following sets.

- | | |
|--|----------------------------------|
| i. $\{\phi\}$ | ii. Set of letters of word "EGG" |
| iii. $A = \{x: x \text{ is an integer and } 3 < x < 7\}$ | iv. $\{a, b, c, d\}$ |
| v. <i>set of all letters in the word AASIM.</i> | |

Q5. Prove the following properties of sets with the help of an example

- i. Commutative Property of union and intersection.
- ii. Associative Property of union and intersection.
- iii. Distributive law of union over intersection.
- iv. Distributive law of intersection over union.
- v. De Morgan's Law

Q6. Write atleast five properties of the following operations on sets.

- i. Union of sets
- ii. Intersection of two sets
- iii. Complement of a set.

Q7. Draw a Venn diagram containing two disjoint sets A, B and find $A', B', (A \cup B)', (A \cap B)', (A - B)', (B - A)'$.

Q8. Draw a Venn diagram containing two sets A, B such that $B \subseteq A$ and find $A', B', A' \cup B', A' \cap B'$.

Q9. If $U = \{x: x \in N \text{ and } x \leq 10\}$, $A = \{1, 2, 3, 4, 5\}$, $B = \{4, 5, 6, 7, 8\}$ then prove that:

- | | | | |
|------------------------|--------------------------------|------------------------|-----------------|
| i. $A - B = A \cap B'$ | ii. $(A \cup B)' = A' \cap B'$ | iii. $A - B' = B - A'$ | iv. $(A')' = A$ |
|------------------------|--------------------------------|------------------------|-----------------|

SECTION B: REAL NUMBERS

Q1. Write the properties of real numbers for addition and multiplication with atleast two examples

Q2. Name the property of real numbers that justifies the statement.

i. $3 + (-5) = -5 + 3$

ii. $-5(7) = 7(-5)$

iii. $25 - 25 = 0$

iv. $5 + 0 = 5$

v. $6(-10) = -10(6)$

vi. $2(6 \times 3) = (2 \times 6)3$

vii. $7.1 = 7$

viii. $\frac{1}{4} \cdot 4 = 1$

ix. $1 \cdot (5t) = 5t$

x. $3(6 + b) = 3(6) + 3b$

Q3. Use the property of real numbers to fill in the missing part of the statement.

i. Associative property of multiplication $3(6y) = \underline{\hspace{2cm}}$

ii. Commutative property of addition $10 + (-6) = \underline{\hspace{2cm}}$

iii. Commutative property of multiplication $15(-3) = \underline{\hspace{2cm}}$

iv. Associative property of addition $6 + (5 - y) = \underline{\hspace{2cm}}$

v. Distributive property $(6 + z)5 = \underline{\hspace{2cm}}$

vi. Distributive property $-3(4 + x) = \underline{\hspace{2cm}}$

vii. Commutative property of addition $25 + (-x) = \underline{\hspace{2cm}}$

viii. Additive Inverse Property $6 + (-6) = \underline{\hspace{2cm}}$

ix. Additive Identity Property $7 + 0 = \underline{\hspace{2cm}}$

x. Multiplicative Identity Property $\frac{1}{6} + (-6) = \underline{\hspace{2cm}}$

Q4. Determine whether the statement is true or false. Justify your answer.

i. $-6 + 6 = 0$

ii. $-9 + 5 = -5 + 9$

iii. $6(7 + 2) = 6(7) + 2$

iv. $-4(8 + 1) = -4(8) - 4(1)$

Q5. Think About It

i. Does every real number have a multiplicative inverse? Explain.

ii. What is the additive inverse of a real number? Give an example of the Additive Inverse Property.

iii. What is the multiplicative inverse of a real number? Give an example of the Multiplicative Inverse Property.

iv. State the Multiplication Property of Zero.

Q6. Explain how the Addition Property of Equality can be used to allow you to subtract the same number from each side of an equation.

Q7. Write given numbers in decimal form. Also separate terminating and non-terminating decimals.

i. $\frac{35}{37}$

ii. $-\frac{\pi}{7}$

iii. $\frac{1}{\sqrt{8}}$

iv. $\frac{8}{11}$

Q8. Write down the additive and multiplicative inverse of the following numbers.

i. $\frac{25}{27}$

ii. $-\frac{2}{7}$

iii. $\frac{1}{\sqrt{8}}$

iv. -1

Q9. Investigation

You define a new mathematical operation using the symbol \odot . This operation is defined as $a \odot b = 2(a + b)$

(a) Is this operation commutative? Explain.

(b) Is this operation associative? Explain.

Q10. Number Puzzle:

Think of a number between 1 and 10. Think of the product of your number and 9. Think of the sum of the digits in your answer. Think of that number minus 5. Think of the letter in the alphabet that corresponds to the number you are thinking about. Think of a state that begins with the letter. Think of the second letter in the state. Think of a big animal that begins with that letter. Think of the color of that animal. The color is gray. Explain.

SECTION C: SQUARES AND SQUARE ROOTS

Q1. Find the perfect squares between (i) 30 and 50 and (ii) 60 and 80

Q2 Without calculating square roots, find the numbers of digits in the square root of the following numbers

i. 25600

ii. 10000000

iii. 36864

Q3. Calculate

i. $\sqrt{1\frac{19}{81}}$

ii. $\sqrt{1+0.69} \times \sqrt{2-0.04}$

iii. $\frac{\sqrt{7+\frac{1}{5}}}{\sqrt{9+\frac{4}{5}}}$

Q4. Find the least number that must be subtracted from 5607 so as to get a perfect square. Also find the square root of the perfect square.

Q5. Find the greatest 4-digit number which is perfect square.

Q6. Find the smallest 3-digit number which is perfect square.

Q7. Area of a square plot is $2304m^2$. Find the length of the side of square plot.

Q8. There are 2401 students in a school. P.T teacher wants them to stand in rows and columns such that the number of columns is equal to number of rows, Find the numbers of rows.

Q9. Find the square root of the following by division method.

i. 2304

ii. 4489

iii. 3481

iv. 529

v. 3249

vi. 42025

vii. 5776

viii. 7921

Q10. Find the square root of the following decimal numbers.

i. 2.56

ii. 7.29

iii. 51.84

iv. 42.0025

v. 31.36

Q11. Find the square root of 1.7 up to three places of decimals.

Q12. What are the digits where square numbers never ends.

Section D: CUBES AND CUBE ROOTS

Q1. Volume of cube is of 4913. Find length of one side and also area of two faces.

Q2. Find the numbers whose cubes are 64 and 343.

Q3. Find the perfect cubes between (i) 20 and 50 and (ii) 70 and 100

Q4. Find the cube root of the following numbers by prime factorization.

i. 216

ii. 729

iii. 3375

iv. 2744

v. 218





Dr. A. Q. KHAN SCHOOL & COLLEGE, BAHRIA TOWN, PHASE-8, ISLAMABAD
SUMMER VACATION HOMEWORK TASK, 2022
SUBJECT: SOCIAL STUDIES
CLASS: VIII

1. Make a presentation of about 800-1000 words on the topic of “World Wars”. Your presentation must include answers to the following questions:
 - What was the immediate cause of World War I?
 - Which countries were the main contenders in WWI?
 - How did WWI come to an end and which international body was created afterwards?
 - What were the causes of World War II?
 - Which countries were the main contenders in WWII?
 - What were the most important global and political impacts of WWII?Take help from Chapter 2 of your history textbook and from the website: www.history.com

2. Take a small-sized scrapbook and divide it into two portions. In one half of your scrapbook, paste pictures of the well-known personalities from the history of subcontinent. Also write one paragraph about each of these:
 - Sir Syed Ahmed Khan and the Two-Nation Theory
 - Allama Iqbal and the idea of a separate Muslim homeland
 - Ali Brothers and the Khilafat Movement
 - Liaquat Ali Khan and his contributions for PakistanTake help from chapters 5&6 of your history textbook and from the website: www.pakhistory.com

3. For the other half of your scrapbook collect information about solar power and its uses. Summarize your info in the form of a report. Your report must include answers to the following questions:
 - Why do we say that solar is the best energy option for Pakistan?
 - Do you have solar panels installed on the rooftop of your house or any of the houses around you? If you have, talk to the owner and ask about its benefits and the impact it has on their monthly electricity bills.



اے کیو خان سکول اینڈ کالج بحریہ ٹاؤن فیز ۸

موسم گرما کی تعطیلات کا کام

مضمون: اردو

جماعت: ہشتم

نوٹ :

پہلی سہ ماہی کرواگیا اردو کا سارا کام یاد کریں۔ اور مندرجہ ذیل عنوانات پر تخلیقی لکھائی الگ پرچوں پر کریں۔ -

مضمون نویسی

i. جنگلات کے فوائد

ii. والدین کا احترام

iii. شہری زندگی کے مسائل

خطوط نویسی

i. چچا کے نام چچی کی مزاج پرسی کا خط لکھیئے۔

ii. دوست کے نام گرمیوں کی چھٹیاں ساتھ گزارنے کے لیے خط لکھیئے۔

iii. دوست کو امتحان میں کامیابی پر مبارکباد کا خط لکھیئے۔

کہانی نویسی

i. جھوٹ کی سزا

ii. خوشامد بری بلا ہے

مندرجہ ذیل عنوانات کی پڑھائی کریں اور مشکل الفاظ خط کشیدہ کر کے لغت سے ان کے معنی

تلاش کریں۔

i. اردو زبان و ادب

ii. اقبال کا تصور شاپین

iii. ذرائع مواصلات کی اہمیت۔