

## Dear Parent/Guardian,

 lookWinter Break is an extremely exciting time, filled with adventure, excitement, and catching up with friends and family you have not visited for a very long time. The refreshing cool winter breeze, hilly snow peaks and winter activities add much warmth and colour to life. As much as winter is an exciting time to spend quality moments with our friends and family, it is also a time to enjoy and work on winter vacation homework and carefully designed winter activities for our learners.

Though winter vacation is a great time to do new things, and enjoy the long-awaited tasks on our lists, yet it is important to be in touch with a little revision of the concepts taught during the term and get involved in few thought-provoking research projects.

We have composed a list of informative and interesting academic assignments to reinforce the core concepts taught to keep your child positively engaged during the period. Fun filled learning tasks to be done at home under your guidance can make them more exciting, engaging and significant.

Wishing you a pleasant time together.


Director Teaching \& Learning
The Millennium Education - TME


## Grade 1 /

- Read page 13 to 14 of Learner's Book and underline the Action words (verbs)
- Read page 19 to 20 of Learner's book and underline the Naming words (nouns).
- Read the poems on page 96 of Learner's Book and underline the rhyming words.
- Read Page 92 of Learner's Book and underline sound words.
- Read at least 2 pages of the given readers at home on the daily basis.
- Write five sentences in Nelson script on a daily basis describing what you did today.


## Grade 2

- Read the story "Power cut" given on Learner's Book's pages 16-17.
- Draw the pictures of characters in "Power cut" and write one dialogue for each in speech bubbles.
- Write at least 6 describing words about your favourite food.
- Write a story that includes the following:
- $\rightarrow$ "You are out to search for food. Explain who you met on your way and what happened after
- that..."
- Watch news on TV, make a headline for any one of the news and write the story in your own words.
- Read the poem "Words to Whisper" on Learner's Book's page 92.
- Find the rhyming words from the poem "Words to Whisper."
- Write 10 line about your favourite game and mention the rules and regulations of the game.
- Read the story 'The litter Queen' at home.
- Act out the story with your cousins/ friends/siblings
- Discuss the moral lesson behind that story.


## Grade 3

- Write a paragraph on the following topics:
$\rightarrow$ My favourite season.
$\rightarrow \quad$ The best day of my life.
$\rightarrow \quad$ My hobby.
- Paragraph writing: Write two paragraphs on advantages and disadvantages of mobile phones.
- Write a letter to your friend telling him/her about your holidays.
- Write a letter to the author of your favourite book and tell him/her about the reasons you like his/her book.
- Read a storybook of your choice. Underline 10 nouns, pronouns, verbs, and adjectives each in it. Make a list of each in your notebook.
- Finally write a review of the storybook you read.


## Grade 4

- Select five powerful verbs and use them in your sentences.
- Write five sentences using quoted words and punctuate them (direct speech).
- Write a rhyming poem or Tanka about your school.
- Write 5 sentences using personification in them.
- Write a note to your favorite celebrity convincing him to send a short video in which he wishes you happy birthday.
- Write five similes about your family members.
- Change above similes into metaphors.
- Read 'Centerville Ghost' and write a book review.
- Write instructions on how to make your favourite food using words given in list (firstly, secondly, next, later, after, that, finally)
- Write a story on any of the following topics:
$\rightarrow \quad$ Left alone at home
$\rightarrow$ The lottery ticket
- Weekly practice Nelson handwriting script, starting from unit 1 of the book on notebook.


## Grade 5

- Find the Synonyms of the following words.

| $\rightarrow$ Nibble | $\rightarrow$ Assist | $\rightarrow$ Fiercely |
| :--- | ---: | :--- |
| $\rightarrow$ Desolated | $\rightarrow$ Obliged | $\rightarrow$ Marvellously |

- Rewrite the paragraph and punctuate it where necessary
"my heart leaps up when I behold a rainbow in the sky wrote william words worth the famous poet and the most of us share his feelings when we are lucky enough to see a rainbow there is an old saying that a pot of gold is buried at the end of the rainbow but have you ever tried to reach a rainbows end of course it's impossible because a rainbow is really just the result of the raindrops refracting and reflecting light from our sun there are seven colors in the rainbow red orange yellow green blue indigo and violet"

- Write a story in which your main character faced a hilarious situation.
- Write a diary entry, explaining how you felt when you participated in a sports event.


## Grade 6

- Re-read 'Oliver Twist' and describe one moment, in the novel, when you empathized with Oliver Twist.
- Vocabulary lists:
- Make a presentation as per the given guidelines.
'Pakistan is a land of beauty'. Support this statement by describing, at least, 5 beautiful places which are a source of tourist attraction e.g. Malam Jabba, Shangrilla, Skardu, Shandoor, etc. You can Google your research by studying, the most beautiful places of Pakistan. Your description must include the following:
$\rightarrow$ geographical location
$\rightarrow$ main characteristics of the land
$\rightarrow$ brief description of the local people
- Watch the movies stated below and do the assignment stated with each:


## $\rightarrow$ Small Foot

Imagine that you are a baby Yeti, and you have heard about the human beings for the first time in
 your life. Express your feelings and state your views about this strange creature, man, as described in the movie.

## Grade 6

$\rightarrow \quad$ Spirit
After enjoying this beautiful movie, jot down all the characteristics that are common in the horse and the hero e.g. courage, determination, etc.

Note: All the homework assignments are to be done in the composition copies.


## Grade 7

- Based on what you read in 'Harry Potter and the Philosopher's stone', write a news report about the escape of the snake, from its cage, in the zoo. (200-250 words)
- Vocabulary lists:
$\rightarrow$ January week 2,3 and 4
- Write a magazine article on healthy habits for teenagers.
- Write a one-day diary entry, every week of your vacations.
- Watch the following movies and do the assignment related to each movie.



## $\rightarrow$ Brave

This movie is about a young girl who bravely fights against all odds to bring her mother to her normal self. Express your views on the mother-daughter relationship.

## $\rightarrow$ Seabiscuit

Although Seabiscuit is a horse, it plays an important role in keeping a number of strangers together, as members of one family. Support this statement with evidence from the movie.

## Note: All the assignments are to be done in the composition copies.

## Grade 8



- Write a one-day diary entry, every week of your vacations.
- Read the play 'Macbeth' and write a detailed account of how Macbeth's ambition led to his destruction. Your analysis must include:
$\rightarrow$ Macbeth as a person when first introduced in the play
$\rightarrow$ Influence of the witches and Lady Macbeth
$\rightarrow$ the transformation of his personality as he continues committing crimes
$\rightarrow$ his reaction to his wife's death and his own end
- $\rightarrow \mathrm{Coco}$

After watching the movie, Coco, how can you say that the love of family is very important for people, even after death?
$\rightarrow$ Moana
The bravery and spirit of young Moana proves that every child has the power to change the world. Support this statement with reference to the incidents in the movie.

Note: All the assignments are to be done in the composition copies.


## $\geqslant 000$ <br> MATGEMATCS



## Grade 1

- Write the number spellings from 21-50.
- Solve the following addition questions.

$55+7=$
$48+6=$
- Solve the following subtraction questions.

$25-18=$
$22-9=$
- Write 10 more and 10 less of the following numbers.

- Draw and name any four 2D shapes and four 3D shapes. Look around your house and write the names of the 2D shapes and 3D shapes. Also, draw any three things.
- Learn and write the tables of 2,5 and 10.
- E - links

Practicing Math via following websites will help learners stay in touch with the basic concepts done during the first term.
$\rightarrow$ www.education.com/games/math/first-grade/
$\rightarrow$ www.math-play.com/1st-grade-math-games.html
$\rightarrow$ www.turtlediary.com/grade-1-games/math-games.html

## Grade 2

- Write tables from 2 to 6 .
- Practice of addition and subtraction.
$\rightarrow$ Add and subtract sums 2-digit numbers with the multiples of tens. (10 questions)
$\rightarrow$ Add and subtract 2- digit numbers to/from a single digit number. (10 questions)
$\rightarrow \quad$ Add and subtract 2 -digit numbers to/from 2-digit numbers. (10 questions)
- Addition and Subtraction

Learners will be asked to go to any near by shop or shopping mall. They must be given Rs. 100 and shall be asked to purchase things like lays and chocolate. Later they will create their own story

- out of it. How much total money they had? What they purchased and how much money was left?
- Make models of 3-D shapes (cube, cuboid, cone, cylinder)
- E- links
concepts done during the first term will be practiced using the below mentioned links.
$\rightarrow$ http://www.turtlediary.com
$\rightarrow$ http://www.mathblaster.com/
$\rightarrow$ http://www.math-play.com/2nd-grade-math-games.html


## Grade 3

- Revise all the concepts done in class.
- Write tables from 2 to 12.
- Practice of addition and subtraction.
- Add and subtract sums 3-digit numbers with the multiples of 10 and 100. (10 questions) with borrowing and carrying.
- Add and subtract 3 -digit numbers to/from 2-digit numbers. (10 questions) with borrowing and carrying.
- Make models of 3-D shapes (cube, cuboid, cone, cylinder, pyramid)
- Practice multiplying 2 and 3 digit numbers by a single digit number. (10 questions) with carrying.
- Practice divide 2 and 3 digit numbers by a single digit number.(10 questions) R.A should be done neatly on a rough register)
- E - links
concepts done during the first term will be practiced using the below mentioned links.
$\rightarrow$ http://www.turtlediary.com
$\rightarrow$ http://www.mathblaster.com/
$\rightarrow$ http://www.math-play.com/2nd-grade-math-games.html


## Grade 4

Do the following questions on R.A notebook.

- Name the following shapes and write down any 3 properties of each.
a)

b)

c)

d)

e)

f)

- Solve.

| 01. | $65+6+56=$ | 06. | $77+19+2=$ |
| :---: | :---: | :---: | :---: |
| 02. | $39+5+9=$ | 07. | $89+29+9=$ |
| 03. | $90+78+11=$ | 08. | $13+34+98=$ |
| 04. | $8+18+57=$ | 09. | $51+17+18=$ |
| 05. | $23+36+11=$ | 10. | $63+52+14=$ |

- Write down tables of (2-12).
- Solve.

| 01. | $90 \times 5=$ | 06. | $70 \times 7=$ |
| :---: | :---: | :---: | :---: |
| 02. | $40 \times 9=$ | 07. | $4 \times 80=$ |
| 03. | $6 \times 30=$ | 08. | $80 \times 2=$ |
| 04. | $80 \times 6=$ | 09. | $2 \times 300=$ |
| 05. | $70 \times 2=$ | 10. | $600 \times 8=$ |



Start with 63 Add 2 Subtract 10 Divide by 5

## Start with 100

 Half itDivide by 5 Add 6

- Write a number in thousand and write it in expanded form, standard form and Word form.

| Standard form |  |  |
| :--- | :--- | :--- |

- Using each of $1,2,3,4,5$, and 6 once and only once, fill in the circles so that the sums of the numbers on each side of the three sides of the triangle are equal.

- Fill the grid by applying given mathematical operations

| 78 | $\div$ | 39 | $=$ |  |
| :---: | :---: | :---: | :---: | :---: |
| $\times$ |  | $\div$ |  | $\times$ |
| 37 | $\times$ | 13 | $=$ |  |
| $=$ |  | $=$ |  | $=$ |
|  | $\div$ |  | $=$ |  |

- Project:
$\rightarrow \quad$ Make a 2D or 3D model of cube, cuboid and cylinder using chart paper.


## Grade 5

- Identify all the Prime Number by applying Divisibility Rules.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

- Solve the multiplication pyramid.

- Fill the grid by applying given mathematical operations.

- Use a factor tree to find the prime factorization.
a) 20
b) 54
c) 72
d) 100
e) 70
f) 24
- Find HCF and LCM of the following
$\rightarrow 45,75$
$\rightarrow$ 30,100
$\rightarrow 150,225$
$\rightarrow 36,54$
$\rightarrow$ 30,36
$\rightarrow 50,56$
$\rightarrow 105,75$
- Make a power point presentation on topic of Fractions and give all the details about fractions and their addition and subtraction.

Note : Please practice all the above topics on the given games links as well.
$\rightarrow$ https://www.mathgames.com/skill/5.14-convert-numbers-with-hundreds-thousands-millions

## Grade 6

Place value/Rounding

- Round the following numbers to the accuracy of the underlined digit.
$\rightarrow$ For example, $56 \underline{7} 8$ means you round to the nearest ten.
a. $6 \underline{81411}$
b. 965031
c. 645940
d. $4344 \underline{4} 9$
e. $2567 \underline{5} 2$
f. 356479
g. 539770
h. 195927
- Find,
$\rightarrow$ The difference between the first two perfect squares that ends with a 9 .
$\rightarrow$ The sum of the first three perfect squares that ends with a 4 .
$\rightarrow$ The first two perfect squares whose difference is 20 .
$\rightarrow$ The product of first two perfect cubes that ends with 1 .
$\rightarrow \quad$ The difference between the first perfect squares and first perfect cube that ends with a 5 .
- Using prime factorization, find the square root of each of the following.
a. 2304
b. 7056
c. 2025
d. 9216
- Estimate mentally the following.
a. $51^{2}$
b. $69^{2}$
c. $398^{3}$
d. $19^{2}$
- Add the following.
$\rightarrow \quad(-2)+(-2)$
$\rightarrow \quad(-5)+(-9)$
$\rightarrow(-2) \times(-3) \times(-4) \times(-5)$
$\rightarrow 625 \div(-5)$
$\rightarrow(-9) \times(-4) \div(-12)$
- An airplane descended 150 m from an altitude of 650 m and then ascended 830 m immediately. At what altitude was the airplane flying?
- Five students participated in a science quiz. Marks were deducted for wrong answers. Their scores in 3 quizzes are shown below.

| Quiz No. | Alan | Bob | Carol | Ellen |
| :---: | :---: | :---: | :---: | :---: |
| Quiz 1 | -22 | -15 | 90 | 71 |
| Quiz 2 | 34 | -30 | -11 | -19 |
| Quiz 3 | -18 | -7 | -21 | 33 |
| Total Scores |  |  |  |  |

i) Fill the total score of each student in the table.
ii) Who had the total lowest score?
iii) The winner of the quiz was the student with the highest total score. Who was the winner?

- Simplify the following
i) $\{(-91 / 4)-(-73 / 5)\} \div 23 / 4$
ii) $\quad(-25 / 7) \div\{11 / 3 \times(-3 / 4)\}$
- Arrange the following in descending order.
i) $14 / 25,26 / 59,11 / 20,53 / 100$ ii) $17 / 24,5 / 8,2 / 3,11 / 6$
- Express the following fractions as recurring decimals.
i) $37 / 44$
ii) $19 / 48$
iii) 100/999
iv) 11/12
v)
$23 / 45$
- Simplify the following.
i) $5 a+3 a-6 a$
ii) $12 x y-13 x z+5 y z-4 x z$

Note : Please practice all the above topics on the given games links as well.
https://www.mathgames.com/skill/5.14-convert-numbers-with-hundreds-thousands-millions

## Grade 7

- Complete each of the following
i) $7.3 \mathrm{~cm}^{2}=$ $\qquad$
ii) $4650 \mathrm{~mm}^{2}=---------------\mathrm{cm}^{2}$
iii) $0.054 h a=---------------------m^{2}$
- Find perimeter of each of the following squares of the area are.
i) $64 \mathrm{~cm}^{2}$
ii) $0.25 \mathrm{~m}^{2}$
iii) $1.44 \mathrm{~m}^{2}$
- The perimeter of a semicircle is 61.68 cm . Find
i) Its diameter
ii) Its area.
(take $\pi=3.14$ )
- A sum of money is divided among Peter, Paul and Jane in the ratio 13: 12: 7. Calculate how much Paul gets if the amount Peter gets more than Jane is,
i) \$ 78
ii) $\$ 126$
iii) $\$ 360$
iv) $\$ 540$
- The length and breadth of a hall are 28 m and 21 m respectively. If the ratio of its length to its height is $7: 6$, find the height and the ratio of its breadth to its height.
- Express 40 minutes after $5: 55 \mathrm{p}$. m using the 24 hours clock notation.
- 45 men working 8 hours a day can finish a project within a given time, five men unable to report for work. How long should the rest work a day to finish the project on time.
- Decrease
i) $\$ 88$ by $5 \%$
ii) 124 litres by $25 \%$
- Increase
i) $\$ 60$ by $10 \%$
ii) 50 m by $125 \%$
- In a constituency there are 12000 eligible voters. In a particular election, the following results were obtained.

| Candidates | \%age of voters. |
| :---: | :---: |
| A | $7 \%$ |
| B | $39 \%$ |
| C | $42 \%$ |

$\rightarrow$ Find the actual number of voters for each candidate given that $12 \%$ of them did not vote.

- The $A B C$ dress company determines the selling price of its dresses by adding $32 \%$ to the cost. Calculate the selling price of a garment that costs $\$ 25$.
- A television set is sold for $\$ 1998$ and a $11 \%$ profit is made. Find the original cost of the television set.

| Shapes | Area | Perimeter |
| :---: | :---: | :---: |
| Square | $\mid \times I$ | $I+I+I+\mid$ |
| Rectangle | $I \times b$ | $2 \mid+2 b$ |
| Triangle | $1 / 2 \times b \times h$ | $a+b+c$ |
| Circle | $\pi r 2$ | $\pi \mathrm{~d}$ |
| Semi-circle | $\pi \mathrm{r} 2 / 2$ | $\pi \mathrm{~d} / 2+\mathrm{d}$ |
| parallelogram | $\mathrm{b} \times \mathrm{h}$ | Sum of all the sides |
| Trapezium | $1 / 2 \times \mathrm{h}$ (sum of parallel sides) | Sum of all the sides |

## Grade 8

- Practice the following.
$\rightarrow$ I. Chapter 2
$\rightarrow$ II. Chapter 3
$\rightarrow$ III. Chapter 4
- Use this link to practice the concepts
$\rightarrow$ www.ixl.com
- Practice the past papers




## Grade 1

- Make a list of the clothes in your cupboard. Write the name of the season in front of each item.
- Draw an outline of yourself and label all of the body parts and their functions.
- Find out what the following animals and birds eat.
$\rightarrow$ Bear, Crow, Squirrel, Sparrow, Mouse
- Collect two pictures of animals that live on land, in water and fly in the air. Paste them in your notebook.
- Draw a fruit basket. Draw and colour the fruits that you like to fill the basket.
- Collect leaves of different plants. Paste them in your notebook. List size and colour under each leaf.
- Collect two pictures of living and non-living things from old newspapers and magazines and paste them in your notebook.
- Visit a park. Write what you like about it. What would you change?
- Draw a picture that helps to keep the world clean.
- Write 5 sentence about traffic rules.


## Grade 2

- Explain why does a mattress have springs inside? What happens to a spring if you push it?
- Find out what happens when you stretch elastic bands by different amounts?
- Collect different types of rocks. Explain their texture and name the minerals present in them.
- Collect different materials and write their properties.
- Take two magnets and predict when they attract or repel.
- Find the difference between transparent opaque and translucent objects
- Find materials around you which make shadows and write their names in your notebook.
- Make a 3D chart of a village of Pakistan.
- Write 10 lines about Abdul Sattar Edhi.


## Grade 3

- Draw a skeleton on a chart paper and label all the bones that you have discussed in the class.
- Make list of 10 vertebrates and invertebrates. You may take help from any book or internet.
- Draw and write about any 3 habitats on a chart paper.
- Draw a food chain on A4 page. Name the producer consumer prey and predator.
- Separate the mixture of sand and marbles by using a sieve.
- Write 5 names of thermal insulators and thermal conductors.
- Use any recyclable stuff from your home and convert it into a useful thing. (For example a tin can be converted into a pencil holder)
- Make a list of ten goods and ten services.
- Write down the do's and don'ts of a classroom and also write five ways in which you can show kindness to others.



## Grade 4

- Look at the plants growing around and see if you can spot any fallen seeds. Now, with the help of your parents learn to grow a plant from any seed you pick. Have fun watching the seed grow into a seedling. What you need: Seeds of your choice such as pumpkins seeds, sunflower seeds, beans, etc. Good quality soil, a container to hold the soil and seeds. Water, sunlight. Then draw life cycle of plant on a chart paper and label it.
- Search on internet and make a powerpoint presentation on;
$\rightarrow$ Earth, Sun and Moon
$\rightarrow$ Different phases of moon.
$\rightarrow$ Also write the vocabulary words in your notebooks about these topics.
- Draw a food Pyramid and colour it on a chart paper and describe every food group in detail.


## Grade 5

- Build a plane.


## Use the link

https://www.steamsational.com/clothespin-airplane-engineering-challenge/
to learn how to do it.

- Soil erosion Experiment


## Use the link

https://www.lifeisagarden.co.za/soil-erosion-experiment/ to learn how to do it.

- Write the things used, steps followed and learning points of the above activities.
- Collect different types of soil samples and identify them as to which type it belongs. Which soil do you think will be best for an earth worm? Why do you think so?
- Explore the site http: www.bbc.co.uk/bitesize/subjects/z488hv and compose power point presentations comprising of 810 slides for the mentioned topic. Make sure you will use your own words while producing the same information. "Ecosystems and Habitat"
- Carrot is one of the different types of roots. Grow a carrot and save pictorial evidence of every step of the process. Also note down the importance of roots in your notebooks.
- Make a search on the internet on the given topics.
i) Reversible and irreversible changes
ii) Balanced and unbalanced forces
iii) Light and shadows.
- And note down the scientific vocabulary, important points, examples and important learning points on your notebooks.

Look at the picture. It shows a number of unhygienic ways in which germs can travel into food and cause illness. List all of the ways this could happen in the picture.

## SCIENCE INVESTIGATION

- Take extra care - ask an adult to supervise you.
- Design and conduct an experiment to see what type of bread grows mold the best. Obtain different samples of bread. Make sure to wash your hands before and
 after each time you experiment. Explain why mold grows better on some bread than on others.


## THE GOOD MICROBES

## Background knowledge

- Microbes, or microorganisms, are living things that are often too small to be seen. Common types of microbes are bacteria, viruses, and some fungi. These organisms need food, warmth, and moisture to grow and reproduce. Some microbes feed on things that were once living, such as fallen leaves and dead animals, causing them to breakdown or decay. The decayed materials mix with soil, providing essential nutrients for plants to use. Without this process, the nutrients in the soil would run out. These types of organisms are called decomposers. They are the natural recyclers of living things on our planet.
- Microbes also help us make some of our foods, such

Science ACTVITY
Donna put the following items into a large polythene bag. She took them out again after two weeks. In the boxes below, write D for the items that would have decayed and U for those that would be unchanged.


Why have some of the items not decayed?
...............................................................................
 as bread, cheese, yogurt, beer, and wine. They feed on the sugar in grain, fruit, or milk, giving these foods a special texture and taste.

## SCIENCEINVESTIGATION

- Take a large coffee can and obtain some soil, food samples, and non-food items. Bury the food and non-food items in different layers of soil placed in the coffee can. Add about 1/4 cup of water. Place a cover with punched holes on top of the can so air can get in. After 2-3 months, determine what has decayed.


## DISSOLVING

## Background knowledge

- Substances that can be dissolved in a liquid are said to be soluble. Substances that do not dissolve are insoluble. The liquid in which a substance dissolves is called the solvent. The substance that dissolves is called the solute. When mixed together, they make a solution. Water is an excellent solvent. It dissolves
 many substances. Sugar and salt are very soluble in water, while substances such as sand and chalk are insoluble.
- Science Activity
- Rosa collected two different plant fertilizers from a garden center. The directions said to mix each
- fertilizer with water and to sprinkle the solution on her plants. When she mixed the first fertilizer in
- the water, it seemed to disappear. However, when she mixed the second fertilizer, she noticed it
- sank to the bottom of the watering can
- Which fertilizer should Rosa use for her plants? Explain..


## Science Activity

- When Juan gets out of the shower, he notices that the mirror is all "steamed up." He also notices that when he drinks iced tea, there is moisture on the outside of the glass. Explain Juan's observations.


## A BURNING MATTER

## Background knowledge

- Oxygen from the air is needed for something to burn. Burning is an irreversible process that forms new substances. Some of these substances are solids, such as ash or soot, and some are gases, such as water vapor and carbon dioxide. When paper burns, it produces soot (mostly carbon), water vapor, carbon dioxide, a small amount of other gases, and ash (minerals that do not burn).
- Look at the drawing. It shows a candle burning inside an upturned jam jar.

- What is produced when a candle burns? What is a possible explanation as to why the candle went out?


## SCIENCE INVESTIGATION

Take extra care ask an adult to supervise you.

- Light a candle right and place a jar over it. Time how long it takes for the candle to go out. When the flame goes out, let the jar cool down a bit. Carefully lift the jar, keeping the open end facing downward and placing it quickly on a table. Relight the candle. Place the jar over the candle. does the candle burn now? if so, time how long it burns explain your observations.


## Grade 6

- Activity 1: Make 3D model of "Structure of Earth"
- Activity 2: Make a chart on Topic
"Acids and Alkalis"
Give example of acids and alkalis which you use in daily life along with their pictures.
- Activity no 3:

Make a project on Erupting Volcano For this you can use following materials.

1) empty bottle
2) Newspapers
3) paints
4) baking soda
5) vinegar

- Do make a video and share it with me

Read chapter 04, 08 and 11 from course book 7 underline/highlight all the bold/ difficult terms given in chapter

## Grade 7

- Sign-up at www.kahoot.com and play game of the following topics. Don't forget to save your scoreboard as same will be required to produce in evidence of your learning once the school reopens.
a. The particle theory
b. Elements and atoms
- Link: create.kahoot.it/search?query=Science\&topics=7\%2C8
- A mind map is a graphical way to represent ideas and concepts. It is a visual thinking tool that helps structuring information, helping you to better analyse, comprehend, synthesize, recall and generate new ideas. For example, the mind map of digestive system is shown as under.

- Create mind maps of the given topics, linking 7-10 relevant ideas, employing the following site.
https://www.mindmeister.com/
a. Photosynthesis
b. The circulatory system
c. Elements, atoms and compounds
- Produce 3-D models depicting the mentioned concepts.
a. Chemistry in everyday life
b. Rainbow formation
- Explore the site https://www.bbc.co.uk/bitesize/subjects/z4882hv and compose power point presentations comprising of 8-10 slides for each of the mentioned topics. Strict plagiarism check would be made to ensure the use of your own words while producing the same information.
$\rightarrow \quad$ Nutrition, digestion and excretion
$\rightarrow$ Respiration and gaseous exchange
$\rightarrow$ Ecosystem and Habitats (https://www.bbc.co.uk/bitesize/subjects/zh2xsbk)


## Grade 8

- Sign-up at www.kahoot.com and play game of the following topics. Don't forget to save your scoreboard as same will be required to produce in evidence of your learning once the school reopens.
a. Classification and variation
b. Endothermic and exothermic reactions
- A mind map is a graphical way to represent ideas and concepts. It is a visual thinking tool that helps structuring information, helping you to better analyse, comprehend, synthesize, recall and generate new ideas. For example, the mind map of digestive system is shown as under.

- Create mind maps of the given topics, linking 7-10 relevant ideas, employing the site. https://www.mindmeister.com/
a. Photosynthesis
b. Reproduction in flowering plants
c. Adapting to a habitat
- Produce 3-D models depicting the mentioned concepts.
$\rightarrow$ Pressure
$\rightarrow$ Density
- Practice the following past papers from the past paper booklet. 2018,2019,2020 (Relevant questions only)
- Explore the site https://www.bbc.co.uk/bitesize/subjects/z4882hv and compose powerpoint presentations comprising of 8-10 slides for each of the mentioned topics. Strict plagiarism check would be made so make sure to use your own words while producing the same information.
$\rightarrow$ Ecosystems
$\rightarrow$ Inheritance and genetics
$\rightarrow$ Atoms, elements and the periodic table
- https://www.bbc.co.uk/bitesize/subjects/znxtyrd



## Grade 1

- Go to https://studio.code.org/join and type in your 6-letter section code
a. 1 Baku: SRSWDD
b. 1 Islamabad: TZWZNZ
c. 1 Athens: HQZWXF
d. 1 Rome: VPTZZN
- Choose your name:
- Choose your secret picture:
(20)
- Click the sign in button.
- Create Word documents (any two of the following)
$\rightarrow$ My favourite Toy
$\rightarrow$ My favourite Book
- Create PowerPoint presentations (any two of the following)
$\rightarrow$ My Hobbies
$\rightarrow$ My family


## Grade 2

- Go to https://studio.code.org/join and type in your 6-letter section code
a. 2 Paris: DTGKRC
b. 2 Tokyo: DSJNYQ
c. 2 Berlin: NQYZYR
d. 2 Doha: DSDQJB
- Choose your name:
- Choose your secret picture:

- Click the sign in button.
- Download stop motion studio from app store of your phone. Watch tutorial using this link to create stop motion animations
$\rightarrow$ https://www.youtube.com/watch?v=e8twWmb3s5g
$\rightarrow$ https://www.youtube.com/watch?v=bL8H57Msj0c
- Use the following online photo editors to edit photos
$\rightarrow$ www.fotor.com
$\rightarrow$ www.ipiccy.com
- Use MS 3D paint to create graphical model (any two of following)
$\rightarrow$ A city park
$\rightarrow$ Ground floor plan of your school
$\rightarrow$ Your dream school building


## Grade 3



- Go to https://studio.code.org/join and type in your 6-letter section code
a. 3 London: HFQLXF
b. 3 Ottawa: TBLRTR
c. 3 Moscow: LQYTHC
- Choose your name:
- Choose your secret picture:

- Click the sign in button.
- Make PowerPoint presentations (any four of the following topics)
$\rightarrow$ How to stay safe online.
$\rightarrow$ Advantages and disadvantages of social media.
$\rightarrow$ What are computer viruses and how to protect your computer from viruses?
$\rightarrow$ Roots MATRIX-LMS (student portal/mobile application)
$\rightarrow$ What is instant messaging service and what are the advantages of the instant messaging service.


## Grade 4

- Go to https://studio.code.org/join and type in your 6-letter section code:
a. 4 Istanbul: TJXVFV
b. 4 Dubai: CBQWBN
c. 4 Manila: KWZQYW
- Choose your name:
- Choose your secret picture:

- Click the sign in button.
- Create a blog post
$\rightarrow$ Go to https://go.fan.school/kidblog and sign in with your Microsoft id and password.
$\rightarrow$ Select the categories and create a blog post about what you like and share your blog post link with your friends, parents, and teacher.


## Grade 5

- Go to https://studio.code.org/join and type in your 6-letter section code:
a. 5 Amman: CJNRYH
b. 5 Bangkok: RBYXCC
c. 5 Tehran: PDHXPM
- Choose your name.
- Choose your secret picture:

- Click the sign in button.
- Insert the following tables into a spreadsheet and insert different charts

|  | Grade 8 | Grade 7 | Grade 6 | Grade 5 | Grade 4 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Students (whose favourite subject is ICT) | 40 | 36 | 47 | 20 | 36 |
| Students (whose favourite subject is Mathematics) | 20 | 18 | 17 | 21 | 28 |
| Students (whose favourite subject is Robotics) | 42 | 34 | 47 | 18 | 34 |

- You need to create and format the above table into a spreadsheet. Then, produce three or more different charts or graphs of the data as given in the above table.

Note: Remember to add headings and make sure all the data is visible in graphs.

## Grade 6

- Go to https://studio.code.org/join and type in your 6-letter section code:

> a. Riyadh: CMKYCS

b. Nairobi: SJHZZX

- Choose your name.
- Choose your secret picture:

- Click the sign in button.

Search data over internet and compile the collected data in Spreadsheet software
Search online shopping, banking, and auction websites in Pakistan over internet using Google search engine. Make a list of all the websites.
Categories each website into the following:
$\rightarrow$ Online shopping
$\rightarrow$ Online banking
$\rightarrow$ Online auction

After categorization of the website, write the following about each website in tabular format:
$\rightarrow \quad$ Name of the site:
$\rightarrow$ Where it is located:
$\rightarrow$ What they do?
$\rightarrow$ What payment methods do they accept?
$\rightarrow$ One other fact about online payment security.
$\rightarrow$ Compile all the above data in a spreadsheet using MS Excel.

## Grade 7

- Go to https://studio.code.org/join and type in your 6-letter section code:
a. Oslo: XRFKBP
b. Cairo: GDRDMD
- Choose your name.
- Choose your secret picture:

- Click the sign in button.
- Create a python program of the below given scenario
- Ali is ready to go shopping. Before leaving home, Ali needs to make a shopping list of grocery items. You need to help Ali in making a list of grocery items for shopping.
$\rightarrow$ Create a shopping list program using python using some online python editor, which Ali will use to enter the grocery item for shopping and program should display all the entered item.
$\rightarrow$ You need to create shopping list python program using both Array and List data structures separately. Also, tell which method is best for creating a shopping list.

Note: Submit the code of the running program with output (screenshots).

## Grade 8

- Go to https://studio.code.org/join and type in your 6-letter section code:
a. Jakarta: KBHFDG
b. Ankara: KGJHKS
- Choose your name.
- Choose your secret picture:

- Click the sign in button.
- Visit the following links to learn more about operating system
$\rightarrow$ https://youtu.be/GFAKuciQYTk
$\rightarrow$ https://www.guru99.com/operating-system-tutorial.html


## Case Study

Study the impact of ICT in Banking Applications with reference to:
$\rightarrow$ ATM
$\rightarrow$ Internet Banking
$\rightarrow$ Telephone banking
$\rightarrow$ Chip and PIN technology
$\rightarrow$ Cheques Processing
$\rightarrow$ Electronic money transactions

- Visit your nearby bank with your parents to understand the above procedures in detail. Present a detailed report discussing the advantages/disadvantages of each.
$\rightarrow$ Considering the role of Employees, Employers, and the Customers, associated with the Banking Application System.
- Format of the report: The report should be presented under the following headings in softcopy using presentation, spreadsheet, and word processing tools:
$\rightarrow$ a) Aim of the study
$\rightarrow$ b) Introduction
$\rightarrow$ c) System Analysis (Data Collection/Input, Process and Output required by the system)
$\rightarrow$ d) Role of ICT in different banking applications, advantages, and disadvantages
$\rightarrow$ e) Impact on Bank Employers, Employees, Customers, Associated companies
$\rightarrow$ f) Working in real life (with facts from visits to concerned authorities/data/pictures/reports etc)



## Grade 4

1. Draw a map of Pakistan on a chart and show the following things:
$\rightarrow$ Provinces and non-provincial units
$\rightarrow$ The Capital City of Pakistan and the capital cities of all the provinces.
$\rightarrow$ Neighboring countries
$\rightarrow$ Majordams
$\rightarrow$ Important rivers
$\rightarrow$ Desert areas
$\rightarrow$ Mountainous regions
$\rightarrow$ Seaports
$\rightarrow$ Major crops in every province
$\rightarrow$ China Pakistan economic corridor (CPEC) route
Read out Chapter 11, 'Our Country and the World' on the book page \# 52 till 56 for help and guidance.
2. Make a Power Point Presentation on the topic 'Major Landforms of Pakistan'. Make sure to add information regarding the following landforms:
$\rightarrow$ Forests
$\rightarrow$ Rivers
$\rightarrow$ Plateaus
$\rightarrow$ Plains
$\rightarrow$ Deserts
$\rightarrow$ Coastalareas
$\rightarrow$ Delta
You are encouraged to add pictures and maps showing these landforms in Pakistan.
Read out Chapter 12, 'Major Landforms of Pakistan' on the book page \# 57 till 61 for help and guidance.
3. Read out Chapter 13, 'People and Environment' on book page \# 62 till 67 and complete the following tasks:

Choose 20 difficult words from the chapter and write the meanings on notebook.
Make a list of the major landforms of Pakistan and the compare the lifestyle of people in any two landforms.

## Grade 5

1. a) Explain three ways in which global warming and climate change is affecting us.
b) Tell one human activity that contributes to global warming.
c) How to reduce global warming.
2. Population growth impacts the progress of a country. Give five reasons supporting this statement.
3. Using internet, research and make a Power Point Presentation of the goods that Pakistan imports and exports.
4. Think of a product or service you would like to create. List its unique features and write how it would benefit people.


## HISTORY

## Grade 6

1. Make Folded Cards Timeline of Unit 5 "The Crusades" and Unit 7 "The Ottoman Empire" and learn it by heart.
2. Make a narrated PowerPoint Presentation on the topic "The Ottoman Empire".
3. Write down the achievements of all the leaders of Ottoman Empire. Write about whom do you think has the most important role in the rise of Ottoman Empire and justify your answer.
4. Research how Islam was first brought to the subcontinent. Find out how Mohammad Bin Qasim conquered Sindh and explain how Mahmud of Ghazni expanded his empire into the subcontinent.

## Grade 7

1. Make flashcard booklets of your own and write the dates of important events for Unit 5" The Challenges to British Raj" and Unit 6 "The First World War".
2. Make a narrated PowerPoint presentation on the topic "The First World War".
3. Collect pictures of five Muslim leaders who played important roles in "The Struggle for Independence" and write about their contributions in detail. Present your findings on chart.
4. Explore the reasons for the demand for a separate nation for the Muslims of the subcontinent and write your findings based on solid points

## GEOGRAPHY

## Grade 6

1. Make a narrated PowerPoint Presentation on topic "The Culture of Pakistan". It should be of 2-3 minutes.
2. Make a project showing how different types of mountains are formed.
3. Make a project presentation on topic "Mapping the World", showing the essential elements and steps to read a map.
4. Collect some facts about different forests of the world and find a few pictures of each. You are to complete the following tasks for this question.
a) Research about the different types of forests in the world.
b) Find out about the different features of each forest and how climate and physical features affect a forest.
c) Explain how forests and woodland improve the quality of environment.

## Grade 7

1. Make a narrated PowerPoint Presentation on Weathering and Erosion.

It should include.
$\rightarrow$ Difference between weathering and erosion. $\quad \rightarrow$ The different ways in which weathering occurs
$\rightarrow$ Different types of erosion
2. Discuss the following points about minerals and mineral industry.
(a). Discover about the 'five-point test' used to decide whether a material is a mineral or not.
(b). Differentiate between metallic and non-metallic minerals.
(c). Find pictures of different minerals found in Pakistan. In which provinces of Pakistan are these minerals mined? Write about the uses of these minerals.
3. Narrate the story of a snowflake and a hailstone and illustrate through diagrams how these are formed on a chart.

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## Grade 6

1. Memorize last 10 Surahs of 30th Parah from the Holy Quran.
2. Read chapter Personalities of Islam from textbook and make a booklet and write short notes on all the personalities in that booklet.

## Grade 7

1. Memorize last 7 Surahs of 30th Parah from the Holy Quran.
2. Read chapter Personalities of Islam from textbook and make a booklet and write short notes on all the personalities in that booklet.

## Grade 8

Read the topic: Hazrat Abu Bakr and his caliphate from Islamiyat textbook-2. Also search on internet the important battles fought during Abu Bakr's caliphate, make a booklet and write your findings in that booklet.
Read about the life of Holy Prophet (s) from textbook-1 and write about all the battles he fought in Madinah.

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## MAPHRICULATHON Pre SSC

## English:

Read Unit 9, 10 and underline all the important information.
Paragraph writing

- Write a paragraph on the following topics.

Life in a big city
A Visit to Historical Monument
Save wildlife

- Proverbs
- Below are the starts of some proverbs, finish these proverbs in your homework journal and write their meanings as well.
$\rightarrow$ A stitch in time.
$\rightarrow$ A bird in the hand.
$\rightarrow$ Look before.
$\rightarrow$ You can't teach an old dog.
$\rightarrow$ Look after the pennies.
$\rightarrow$ Don't look a gift horse.
- Write a dialogue between you and your friend regarding your future plans after the declaration of SSC result
- Write rules of Tenses and Active/Passive Voice with examples.
- Attempt past paper/model paper of year 2018


## Islamiyat:

- Revise Aayaat 1 till 58 (with translation) of Surah Anfaal.
- Revise all words/compounds of Aayaat 1 till 58.
- Learn Hadith \# 1 - 5.
- Make notes of the following topics:
$\rightarrow$ The Holy Quran
$\rightarrow$ Love for Allah and His Prophet(s)
$\rightarrow$ Knowledge and its excellence


## Pakistan Studies:

Write answers of the following questions in your homework journal:

1. What is meant by Two Nation Theory in the historical perspective of Sub continent?
2. How did Quaid-e-Azam get the title of ambassador of peace?
3. How did the provincial groups form in Cabinet Mission?
4. How did India occupy Kashmir?
5. Discuss two causes of war of 1965.
6. What is meant by Union Council and Union Committee?

## Mathematic:

Q1) Identify the property used in the following

1) $a+b=b+a$
2) $7 \times 1 / 7=1$
3) $a>b=a c>b c$
4) $x>y$ or $x=y$ or $x<y$
5) $5+(-5)=0$

Q2) Express each complex number in standard from a+ib

1) $(2+3 i)+(7-2 i)$
2) $2(5+4 i)-3(7+4 i)$
3) $(2-(-4 i))(2+(4 i))$

Q3) If $x+1 / x=3$ then find the value of $x^{3}+1 / x^{3}$
Q4) Factorize the following

1) $x^{3}-y^{3}-x+y$
2) $8 x^{3}-1 / 27 y^{3}$

Q\#5) Simplify each of the following

1) $\mathrm{A}^{-1}$ where $\mathrm{A}=\frac{a+1}{a-1}$
2) $\frac{1}{x^{2}-8 x+15}+\frac{1}{x^{2}-4 x+3}-\frac{2}{x^{2}-6 x+5}$

Q\#6) Revise Theorem 1-4 on rough note books.

## Biology:

1. Explore more about Unit 3 and write detailed notes on Five kingdom classification and conservation of biodiversity.
2. What do you know about cells and tissues? Write detailed notes on plants and animals' tissue?

Define and explain cellular structures and functions?
3. Write more about cell cycle and draw diagrams of mitosis and meiosis.
4. Make a 3-D model or a chart paper drawing of any topic from Chapter 3.
5. Interactive Simulations for Fun Learning:

## PhET Simulations Biology

httpo//phet.colorado.edu/en/simulations/category/biology

## Chemistry:

1. Practice Dot and Cross structures
$\rightarrow \mathrm{NaCl}$
$\rightarrow \mathrm{MgF}$
$\rightarrow \quad \mathrm{O} 2$
$\rightarrow \mathrm{H} 2 \mathrm{O}$
$\rightarrow \mathrm{CH} 4$
$\rightarrow \mathrm{CO} 2$
2. Make a 3-D model of either Ruther Ford atomic model or structures of an atom. Help can be taken from Pinterest or Youtube.
3. Revise unit \# 3,4 and 5 and attempt all exercise questions of these units.

Physics:

1. Numerical Practice

- Chapter \#2
- Chapter \#3
- Chapten\#4
- Chapter\#5 pg\#115+116Q1-10
- Chapten\#6 pg\#142 Q1-10

3. Differentiate between Distance-Time and Speed-Time graphs by plotting them on a chart paper.
4. Attempt physics model paper for 2021.

Computer Science:
A. Try out revision challenges on the following links.

1. Hardware http://www.bbc.co.uk/education/topics/zkq2p44
2. Software
http://www.bbc.co.uk/education/topics/z87mn39
B. Do all exercises of Chapter 3-Office Automation in homework journal.

Urdu:

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## INTHFRNATHONAL

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## English: 0500

- Reading books is a best way to improve writing style and vocabulary. Following books are recommended to read during the winter break.

1. Alice in the Wonderland.
2. Anne of Green Gables
3. The Book Thief
4. A Journey to the Centre of the Earth
5. Keeper
6. Time Travelling with a Hamster

- (Be ready to share the Book Reviews with the class after the winter break)
- Make a "Word Wall" of all the new words learned from the books you read and be ready to share the words with your class mates.
- Keep a journal to record your Holiday routine (at least 10 entries)


## Mathematics: 0580

- The only way to learn Math is to do Math (Paul Halmos)
- Keep practicing the below mentioned exercises.

1. Review Exercise 5
2. Review Exercise 6
3. Review Exercise 12
4. Review Exercise 14
5. Review Exercise 16

## Physics: 0625

- Revise and Practice: Unit \# 1 - Unit \# 6
- Make 1 project from any area of Physics and be ready to present it on Project Display Day.


## Chemistry: 0620

- Derive chemical formulas of any 20 compounds.
- Calculate Relative Molecular Mass of any 10 compounds.
- Construct 10 chemical equations and balance them.
- Solve exercise questions of Unit \# 3 and 4.
- Make a 3D model of Diamond and Graphite.


## Biology: 0610

- Construct a dichotomous key by collecting different types of leaves from your surroundings.
- State the main features of the five groups of vertebrates. Collect and Paste their pictures in your notebook.
- Make a 3D model of an animal and a plant cell.
- Make a 3D model of transverse section of a leaf.


## Computer Science: 0478

- Make an interactive presentation in any software other than PowerPoint on Artificial Intelligence.
- Develop a website on ecommerce related to online shopping. (Any platform can be used)


## Islamiyat: 0493

- Write detail note on all six articles of Faith and five Pillars of Islam.
- Make a PowerPoint presentation on caliphate of Hazrat Ali (A.S) and Hazrat Usman (R.A).


## Pakistan Studies: 0448

## HISTORY

- Practice questions from Chapter \# 6 and 7 in your notebooks. (Question bank is already given)


## Geography

- Practice questions from Chapter \# 2 and 7 in your notebook. (Question bank is already given)

