## Sri Venkateshwar International School <br> Sector-18, Dwarka, New Delhi-78 <br> SUMMER HOLIDAYS HOMEWORK (2020-21)

## ENGLISH - IX

1. Read poems composed by Kedar Gurung, a celebrated and renowned Indian poet who was born in Sikkim. Use words and phrases you like and then arrange them to compose your own poetic masterpiece! You may use an A3 or A4 sheet or any other resource for creative presentation.
2. Recite your favourite poem from 'Beehive' and create your own podcast! Waiting to hear you...

## MATHEMATICS

(A) During this vacation amidst Corona time, take a virtual tour of the Land of Flowers i.e. Sikkim.

To keep the memories of this virtual tour with you forever, explore more about the traditional handicrafts of Sikkim@ (Carpets of Sikkim, Wood Carving, Thangka Painting, Handlooms, Choktse Tables, etc).
Perform the following activities in a group of 4-5 students. Each member of the group to contribute 2-4 pages of work based on their skill and interest. The report should be finally compiled in the project file/power point presentation of each group. Mention sites/sources from where you have taken the information.

1. You need to explore wood carving art form of Sikkim* and draw a design or any object like a mask, painting, etc. with a design from the art form of Sikkim.
i) Identify and name the geometrical shapes you have used in your design (if any).
ii) If one design/object has to be chosen among the art form designed by all members of your class for an inter-school event, calculate the probability of your design/object being chosen, assuming all design will have equal chances of being chosen. Express this in the form of a rational number.
iii) Without actual division mention the type of decimal representation of the rational number obtained by you in part ii) above.
iv) Observe the designs/objects created by you and your group members and complete the following table:

| Name of the <br> student | Name of the art form chosen <br> (for e.g. wood carving, carpet <br> designing, Thangka Painting, <br> etc) | Line(s) of <br> symmetry in <br> the design | Order of <br> rotational <br> symmetry of the <br> design |
| :--- | :--- | :--- | :--- |
| 1. |  |  |  |
| 2. |  |  |  |
| 3. |  |  |  |
| 4. |  |  |  |
| 5. |  |  |  |

*[Wood carving is done on a range of products like 'Choktsis'(carved table), 'bakchok'(square table), wooden masks, decorative screens, lucky signs, alters, lamp stands and other decorative items in typical traditional designs like dragons, birds, phoenix etc.]
2. Discuss with the members of your group and complete the following table:

| Name of the student | Time spent (in minutes) online by each child while exploring about <br> the art forms of Sikkim. |
| :--- | :--- |
| 1. |  |
| 2. |  |
| 3. |  |
| 4. |  |
| 5. |  |

Represent this data graphically using a suitable scale.
3. The following table shows the data published in a journal in 2014.

Table 1: Total number of government handicraft products in Sikkim

| Sl.no | Name of product | Total number of <br> government <br> handicraft units |
| :---: | :--- | :---: |
| $\mathbf{1}$ | Carpet | 12 |
| $\mathbf{2}$ | Wood carving | 7 |
| $\mathbf{3}$ | Thanka painting | 4 |
| $\mathbf{4}$ | Bamboo and cane crafts | 6 |
| $\mathbf{5}$ | Multicrafts | 6 |
|  | Total | $\mathbf{3 5}$ |

## (Source: Internet)

i) Represent the above data in the form of a pie chart by rounding off the angle of each sector to the nearest whole number.
ii) Suppose your school plans to organize a trip to one of these handicraft units shown in the above table. Find the probability that the handicraft unit chosen will be:
a) a wooden carving unit
b) Thanka Painting unit
iii) Which two units have an equal probability of being chosen?
4. The total sale of handicrafts products from 2002-2012 (in lakhs of rupees) is given below:

Table 2: The sale within state and outside the state in year 2002 to 2012

| $\mathbf{2 0 0 2 - 2 0 0 3}$ | 1785250 |
| :---: | :---: |
| $\mathbf{2 0 0 3 - 2 0 0 4}$ | 1950730 |
| $\mathbf{2 0 0 4 - 2 0 0 5}$ | 2023800 |
| $\mathbf{2 0 0 5 - 2 0 0 6}$ | 2204450 |
| $\mathbf{2 0 0 6 - 2 0 0 7}$ | 2156625 |
| $\mathbf{2 0 0 7 - 2 0 0 8}$ | 2380782 |
| $\mathbf{2 0 0 8 - 2 0 0 9}$ | 1835092 |
| $\mathbf{2 0 0 9 - 2 0 1 0}$ | 2407135 |
| $\mathbf{2 0 1 0 - 2 0 1 1}$ | 3384985 |
| $\mathbf{2 0 1 1 - 2 0 1 2}$ | 2871454 |

(Source: Internet)
(i) Rewrite the above data in tabular form by rounding it to the nearest tenthousands.
(ii) Represent the data obtained above (after rounding off) in the form of a bar graph. Choose a suitable scale.
(iii) Also find the average sale of handicrafts products (in lakhs of rupees).
(iv) In which year was the highest sale recorded?
(v) Refer to the table where you have rounded off the sales to the nearest tenthousands in (i) and answer the following questions:
a) What is the ratio of sales recorded in the year 2004-2005 to the sales recorded in the year 2005-2006?
b) In which year was the lowest sales recorded?
c) Find the difference between the sales recorded in the year 2009-10 and 2008-2009.
5. What kind of data have you collected in 1.) and 2.) above? (Primary/ Secondary). How is it different from the data given in 3.) and 4.) above?
@ You can explore about the various art forms/handicrafts by visiting the following links: https://artsandculture.google.com/story/buddhist-art-in-sikkim-dastkari-haatsamiti/cAVh26tn61iSSQ?hl=en, http://sikkimcrafts.gov.in/handicrafts.html, https://sikkim.gov.in/KnowSikkim/about-sikkim/art-culture, http://sikkimcrafts.gov.in/woodcarving.html
(B) Do the given worksheets 1 and 2 in your HW notebook.
(C) Prove the algebraic identity $(a+b+c)^{2}=a^{2}+b^{2}+c^{2}+2 a b+2 b c+2 a c$ in your Mathematics Activity Lab Manual/sheets. You may refer to the following link to make your understanding better. https://www.youtube.com/watch?v=trwBQ95O2H0

## MATHEMATICS HHW Worksheet-1

- Each of the following questions has four alternatives. Select the most appropriate alternative.

1. The rationalising factor of $\sqrt[6]{a^{2} b^{3} c^{4}}$ is
(a) $\sqrt[6]{a^{4} b^{3} c}$
(b) $\sqrt[6]{a^{4} b^{3} c^{2}}$
(c) $\sqrt{a^{4} b^{3} c^{2}}$
(d) $a^{4} b^{3} c^{2}$
2. The value of $x$, when $(2)^{x+6} \cdot(3)^{x+3}=10368$ is
(a) 1
(b) -1
(c) 0
(d) None of these
3. $0.21 \overline{7}$ can be expressed in rational form as
(a) $\frac{217}{900}$
(b) $\frac{217}{999}$
(c) $\frac{217}{9}$
(d) None of these
4. $\sqrt[3]{27}$ is a polynomial of degree
(a) $\frac{1}{3}$
(b) 3
(c) 1
(d) 0
5. If $p(x)=3 x^{3}-\sqrt{3} x+\sqrt{3}$, then $p(2 \sqrt{3})$ is equal to
(a) $71 \sqrt{3}$
(b) $72 \sqrt{3}$
(c) $73 \sqrt{3}$
(d) None of these
6. If $\boldsymbol{x}^{\mathbf{7 1}}+\mathbf{7 1}$ is divided by $\boldsymbol{x}+\mathbf{1}$, the remainder is
(a) -1
(b) 1
(c) 70
(d) 71
7. If $x+\frac{1}{x}=8$, then the value of $x^{2}+\frac{1}{x^{2}}$ is :
(a) 64
(b) 63
(c) 62
(d) None of these
8. One of the zeroes of the polynomial $x^{2}+x-6$ is:
(a) 2
(b) 3
(c) 4
(d) none of these
9. The maximum number of digits in the repeating block of $\frac{7}{27}$ is
(a) 20
(b) 26
(c) 27
(d) None of these
10. Evaluate $\frac{2^{38}+2^{37}+2^{36}}{2^{39}+2^{38}+2^{37}}$
(a) $\frac{1}{2}$
(b) 2
(c) can't say
(d) None of these
11. The perpendicular distance of the point $Q(-8,-7)$ from $x$-axis is
(a) -8
(b) 8
(c) -7
(d) 7
12. The value of $\frac{32^{0.2}+81^{0.25}}{256^{0.5}-121^{0.5}}$ is
(a) 5
(b) $\frac{5}{27}$
(c) 1
(d) None of these
13. Which of the points $A(-5,0), B(0,-3), C(3,0)$ and $D(0,4)$ are closer to the origin?
(a) A
(b) B
(c) D
(d) Both B and C
14. The distance of the point $A(14,48)$ from the origin is $\qquad$ units.
(a) 14
(b) 48
(c) 49
(d) 50
15. The coordinates of the fourth vertex of a square when three of its vertices are given by $(1,2),(5,2)$ and $(5,-2)$ are
(a) $(1,-2)$
(b) $(-2,1)$
(c) $(4,4)$
(d) None of these
16. The mirror image of a point $R(-7,-8)$ about $x$-axis is
(a) $(7,8)$
(b) $(-7,8)$
(c) $(-7,-8)$
(d) None of these
17. The difference between the distance of point $D(-8,-6)$ from the $\mathbf{x}$-axis and $\mathbf{y}$-axis is $\qquad$ units.
(a) -14
(b) -2
(c) 2
(d) 14

## MATHEMATICS HHW Worksheet-2

Q1. Fill in the blanks:
(a) Every non-zero constant can be expressed as a polynomial of degree $\qquad$ .
(b) A polynomial of degree $\qquad$ is a quadratic polynomial.
(c) A polynomial of degree one is a $\qquad$ polynomial.
(d) A quadratic polynomial $a x^{2}+b x+c, a \neq 0$ can have at most $\qquad$ real zeroes.
(e) A polynomial of degree $n$ can contain at most $\qquad$ terms.
(f) Degree of a $\qquad$ polynomial is not defined.

Q2. Tick the correct answer in each of the following:
(i) The zero of the binomial $p y+q$ is:
(a) 0
(b) $q / p$
(c) $-p / q$
(d) $-q / p$
(ii) Which of the following expressions is not a polynomial?
(a) $(\sqrt{3}) y^{2}+2 \sqrt{y}+5$
(b) $y^{2}-5 y+5$
(c) $y^{4}+5 y^{3}-2(\sqrt{3}) y+8$
(d) $3 y+11$
(iii)The degree of a non-zero constant polynomial is:
(a) 0
(b) 1
(c) 2
(d) 3
(iv) One of the zeroes of the polynomial $2 x^{2}+\mathbf{7 x}-4$ is:
(a) 2
(b) $1 / 4$
(c) 4
(d) None of these
(v) One of the factors of $a^{7}+a b^{6}$ is:
(a) $a^{2}+b^{2}$
(b) a
(c) both a and b
(d) neither a nor b
(vi) For what value of $k, x-1$ is a factor of $p(x)=x^{2}-3 x+k$ ?
(a) 2
(b) -2
(c) 0
(d) 3
(vii) If one factor of $a(x+y+z)+b x+b y+b z$ is $(x+y+z)$ then the second factor is :
(a) $a x+a y+a z$
(b) $b x+b y+b z$
(c) $b x+b y-b z$
(d) $a+b$
(viii) In the method of factorisation of an algebraic expression, which of the following statement is false?
(a) Taking out a common factor from two or more terms.
(b) Taking out a common factor from a group of terms.
(c) Using remainder theorem.
(d) Using standard identities.
(ix) The common quantity that must be added to each term of $a^{2}: b^{2}$ to make it equal to $\boldsymbol{a}: \boldsymbol{b}$ is :
(a) $a b$
(b) $a+b$
(c) $a-b$
(d) $\frac{a}{b}$
(x) If $x+\frac{1}{x}=5$, then the value of $x^{2}+\frac{1}{x^{2}}$ is:
(a) 26
(b) 23
(c) 30
(d) 22

Q3. If the remainder equals 5 , when $2 x^{3}-2 x^{2}+x-a$ is divided by $x-2$ then find the value of $a$.
Q4. If $(x-3)$ and $(x-1 / 3)$ both are factors of $a x^{2}+5 x+b$, show that $a=b$.
Q5. If $f(x)=5 x^{2}-4 x+5$, find $f(1)+f(-2)+f(0)$.

Q6. If ( $x-2$ ) is a factor of both $x^{2}+a x-6$ and $x^{2}-9 x+b$ then find $a+b$.
Q7. Give possible expressions for the length and breadth of the rectangle whose area is given as $16 a^{2}-32 a+15$ sq. units.
Q8. Factorise:
(a) $\frac{a^{2}}{9}-\frac{b^{2}}{9}$
(b) $8 x^{3} y^{3}-27 u^{3} t^{3}$
(c) $64 m^{2}+144 m+81$
(d) $x^{2}-1-2 a-a^{2}$
(e) $\quad a^{3}(b-c)^{3}+b^{3}(c-a)^{3}+c^{3}(a-b)^{3}$

Q9. Without actually calculating the cubes, find the value of $(30)^{3}+(-12)^{3}+(-18)^{3}$.
Q10. If $\frac{a}{b}+\frac{b}{a}=1$, find the value of $a^{3}+b^{3}$.
Q11. Evaluate: $39^{3}-21^{3}$ using the identity $(a+b)^{3}-(a-b)^{3}=2\left(b^{3}+3 a^{2} b\right)$.
Q12. If $a x^{2}+2 a^{2} x+b^{3}$ is exactly divisible by $x+a$, then prove that $a=b$ or $a^{2}+a b+b+a b+b^{2}=0$.
Q13. If $x+y+z=1, x y+y z+z x=-1$ and $x y z=-1$, find the value of $x^{3}+y^{3}+z^{3}$.
Q14. Find the square root of $\left(x^{2}+4 x+4\right)\left(x^{2}+6 x+9\right)$.
Q15. If the polynomials $\left(3 x^{3}+a x^{2}+3 x+5\right)$ and $\left(4 x^{3}+x^{2}-2 x+a\right)$ leave the same remainder when divided by ( $x-2$ ), find the value of $a$. Also find the remainder in each case.

## SCIENCE

## A. Project:

Research and compare between Sikkim and Delhi on the basis of the following key points:
i) Biodiversity (Any 5 birds or animals).

Write about their habitat and feeding habits.Also mention any other interesting feature you come across.
ii) Natural resources, soil and minerals.

Compile your findings in the form of a project report. Authenticate your report with valid data and photographs.
Project report should be handwritten, should not be more than 10-15 pages and is to be presented neatly under the following headings:
i) Project title, student information
ii) Index
iii) Acknowledgement
iv) Theory, relevant information under various subheadings
v) Conclusion
vi) Bibliography

## B.WORKSHEET on tissues

1. Give reason/s for the following:
a) Meristematic cells have a prominent nucleus and dense cytoplasm but they lack nucleus.
b) Intercellular spaces are absent in sclerenchymatous tissue.
c) We get a gritty and granular feeling when we chew pear fruit.
d) Branches of a tree move and bend freely in high wind velocity.
2. Write characteristic features of xylem and phloem. Also draw neat and well labelled diagram.

## C.WORKSHEET <br> CHAPTER - 9 ( FORCE AND LAWS OF MOTION )

1. Define unit of force.
2. A ball is moving over a horizontal smooth surface with a constant velocity. What type of forces are acting on the ball?
3. In a tug of war, the rope does not move in any direction. Why?
4. When a rubber ball is pressed, which force is applied?
5. What can aforce acting on an object do?
6. Name the physical quantity that measures inertia.
7. Name the property of a body to resist the change in the velocity of the body.
8. When a stationary bus starts moving suddenly, the passenger sitting in the bus may fall backward. Why?
9. When a moving bus stops suddenly then the passengers sitting in the bus may fall or jerk forward. Why?
10. When branch of a tree is shaken vigorously then some of the fruits and leaves may get detached from the branch. Why?
11. Why does a wet piece of cloth is shaken before drying?
12. Name the principle on which a rocket works.
13. Action and reaction are equal and opposite but even then they do not cancel each other. Why?
14. It is difficult to balance our body when we accidently step on a peel of banana. Explain, why?
15. Name and state the action and reaction in following cases:
(a) Firing of a bullet from a gun
(b) Hammering a nail
(c) A book lying on a table
(d) Moving rocket
(e) A person moving on the floor
16. Apply Newton's third law of motion to the following problems:
(a). Swimming in the river
(b). Flight of a bird.
(c) Walking on the road.

## D. Conference on Innovation in Science and Technology

Let's explore the latest developments and obstacles in the field together and brainstorm creative solutions.

VIRTUAL PRESENTATION
Be an oral presenter of the conference and present your research to parents and judges.


The conference is seeking submissions related to the following conference topics:
Engineering and Technology, Physical and life sciences, and Health and Medicine.
Submitted abstracts will be evaluated by the SVIS Science club. All submissions will be accepted by Electronic Submission Form.

Abstract Submission Deadline: 20thJune, 2020
Conference Dates: July 2020via Microsoft teams
Form link: https://forms.office.com/Pages/ResponsePage.aspx?id=43tr5h5Q_Um8CCJnQ1Xk3OChzdIBGBCpAN3n69pKiNURVBYVEE0Q1kyUIJQNFo2VDJEREhVS0FETi4u

Doc
link: https://docs.google.com/document/d/1hKMwBoxAAPrTCiJ yhaOT36z6ZrjrB0DuftNaiZeCjE/e dit?usp=sharing

## हिंदी कक्ष्ता-9

## निम्नलिखित गृहकार्यों से छात्रों को अपने इच्छा, रुचि एवं कौशलानुसार किन्हीं दो कार्यों का चयन करना है।

1. 'कोविड-19: प्रकृति और हम' विषय पर प्रभावशाली स्लोगन तैयार करके उसे ए-4 साइज़ शीट पर चित्रित भी करें।
2. छात्रों पर 'ऑनलाइन शिक्षा' के सकारात्मक प्रभाव को दर्शाते हुए एक प्रभावशाली विज्ञापन तैयार कीजिए।
3. निम्नलिखित में से किसी एक को चुनकर उस पर एक प्रभावी प्रसारण (पॉडकास्ट) तैयार करें- (5-6 मिनट) * अपनी पाठ्यपुस्तक के किसी पाठ की समीक्षा/ सार

* अपने स्तर की अन्य किसी हिंदी पुस्तक अथवा कहानी की समीक्षा/ सार
* पाठ्य पुस्तक में संकलित अथवा अपने स्तर की कोई सुंदर कविता या दोहे का वाचन/ गायन

4. अभिनय के इच्छुक छात्र हिंदी पाठ्य पुस्तक में संकलित पाठ- 'तुम कब जाओगो, अतिथि' के किरदारों को (अपने अपने घरों में) अभिनीत कर उसका वीडियो बनाएं० तथा सभी किरदारों के वीडियो का आपस में विलय (मर्ज) करें।

## संस्कतम

1. विभिन्न संस्थानां ध्येयवाक्यानां लेखनं चित्रांकनं च।
2. पोस्टर निर्माणम् - पर्यावरण संरक्षण विषये, मातृ दिवसः, श्रमिक दिवस:, इत्यादयः।

# SOCIAL SCIENCE <br> Disaster Management Project 

## PROJECT Details and REPORT Guidelines

## Guidelines of Project Report:

1. The total length of the Project Report will not be more than 10 pages of A-4 size paper.
2. The project report will be handwritten and credit will be awarded to original drawings, illustrations and creative use of materials.
3. The project report to be presented in a neatly bound simple folder. Please avoid plastic cover, instead use handmade paper file.
4. The project report to be developed and presented in the following order:
a. Page-1-Cover Page showing project title, student information, school and year.
b. Page-2-Contents: List of contents with page numbers.
a. Page-3-Acknowledgements: Acknowledging the institution, offices and libraries visitedandpersons who have helped.
c. Page- 4 to Page- 8 Subject Matter: Chapters with relevant headings.
d. Page-9 Conclusions and Bibliography: Based on findings. (Summary and Suggestions).
e. Bibliography should have the title, pages referred, author, publisher, year of publication and if a website the name of the website with thespecific website link which has been used.

## All the photographs \& sketchers should be well labelled

## f. Page- 10 Teacher's Evaluation Report

Note: Viva will also be taken on the project report prepared and presented by the student.
Make sure that it is prepared well, presented well and originality is maintained, as all these parameters will be assessed accordingly. The parameters for evaluation are the following: Content Accuracy, Presentation, Originality and Viva-Voce.

## TOPICS/THEMES FOR PROJECT WORK

Project No. 1: ‘Sikkim's population have been effected by many landslides and earthquakes in the past. Landslides-related impacts and human vulnerability in Sikkim, have become a welcome addition to the State's long-standing battle against nature's fury.'
Make a project highlighting the preparedness of the people of Sikkim to meet this natural disaster year after year, theirsearch and rescue skills, first aid, Community based disaster management and School based disaster management as well as the preparedness shown by the government of Sikkim.
(Roll no. 1 to 20)
Project No. 2: 'The world is experiencing one of the most destructive and profound economic shocks in recent history in the wake of the novel coronavirus disease (COVID-19) pandemic. The damage the virus is unleashing is only by way of human infection - it will not affect the infrastructure like other natural disasters such as floods or earthquakes do.'
Prepare a project, highlighting the causes for the disaster, loss of lives and its impact on human beings through case studies. Discuss how did Delhi responded to this pandemic, how did the people and the government; both at

## FRENCH

1. Comme un Cousinier- Présentez une vidéo décrire une recette. Mettez une affiche aussi d'une recette.

## SPANISH

Crea un 'word picture' sobre uno de estos temas:
(Make a word picture in any of the following topics)
-Las fiestas de España
-Las ciudades famosas de España

- Los pintores famosos de España
- La comida española


## PAINTING

Practical-prepare 5 sheets on still life drawing (pencil shading) on A-3size sheet.
Theory-Revise unit-1 (Elements and principles of art)

