KĀSIGA SCHOOL

DEHRADUN

Holiday Homework Summer Break 2020

HOLIDAY HOMEWORK GRADE 10

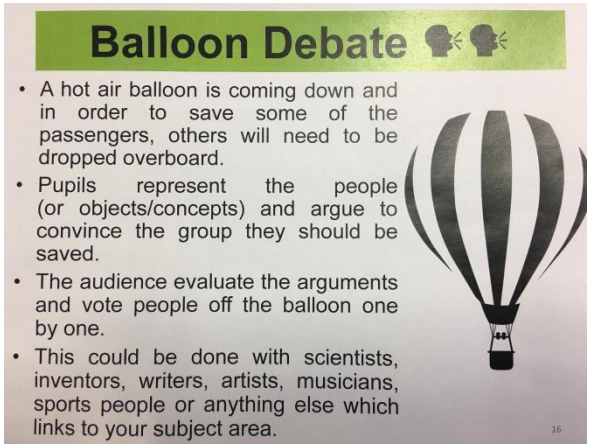
ENGLISH

English Week!

Brace yourself up for the upcoming English week after the school reopens.

General Instructions

1. Everyone has to participate. This is a mandatory activity.
2. Put your sincere efforts and awaken the creativity!
3. The marks will be added to your year-end assessment as a part of your speaking skills.

Activity	**Instructions**	**References**
Balloon Debate	1. The hot air balloon is coming down fast. There is only one spot and you need it badly! 2. Convince the listeners and judges why you should be saved! What are your contributions? How will you help mankind? 3. Select a character. For example, you are Mandela, Gandhiji etc. The question is why should you be given a safe spot on the balloon and not others? 4. Record your response. Why should you be allowed on the balloon, and why others must be asked to jump? After the prelims, the selected participants will move to the next stage. 5. Marks will be given for language, delivery, intelligent arguments and persuasiveness. 6. I should receive all recorded entries by 28.06.2020. 	A young boy presenting his arguments for survival as Bill Gates. https://www.youtube.com/watch?v=kwSr-Qjpbpc As Steve Jobs, https://www.youtube.com/watch?v=02_JYL7wkUc As Isaac Newton, https://www.youtube.com/watch?v=Frrle7L1big As, Mozart https://www.youtube.com/watch?v=Frrle7L1big As Nelson Mandela, https://www.youtube.com/watch?v=8IvLN-ggils As Leonardo Da Vinci, https://www.youtube.com/watch?v=IdyHwJ2bMik As , Mark Zukerberg https://www.youtube.com/watch?v=QRoWrFTzZ6w

Project	**Instructions**
E- magazine	1. Team work! 2. Team of 3 will work on one magazine. Please contact each other and get together. 3. The magazine will have a cover page, theme and follow a format so that your work is neat. The best magazines will be displayed for all to see! :) 4. Your team will be assigned a theme like technology, entertainment, music, Hollywood, Sports, Gadgets, Beauty, and Science etc. You can focus on one theme or combine both. 5. The magazine will have a cover page, content page and editorial. Focus on news, interviews, and facts for the related field. 6. As it is a group activity, it must have at least 12 slides/pages. Each student must contribute at least 4 pages with mention of their contributions. 7. Make it colorful and interesting. You can select between a ppt or pdf format, or something even better if it makes your magazine stand out. 8. Keep the format semi-formal. Avoid controversial or foul language. 9. Send me on your work on Teams or my mail-kpriyanka@kasigaschool.com 10. Very important!! This will be the project work for the board exams! 11. Full Marks- 20 12. Last date of submission- 28.06.2020 **Teams-** 1. Nishchit, Pavitr, Tejas (Sports/ Hollywood) 2. Dhama, Deepesh, Arnav Aryan (Politics/ Finance) 3. Saatvik, Garvit, Angad (Music/ Art/ Fun) 4. Sakshi, Jasmine, Laksyavir (Beauty and Fashion/ Entertainment) 5. Sanyam, Aryan Mukherjee, Kavya (Business/ Technology) 6. Rishiraj, Sanjog, Dev, Raghav (Gadgets/ Science) 7. Kushargh, Rudra, Aadi (Environmental/ Health) Yash, Aditya, AbhinavKatrawat (Nutrition/ Education)

HINDI
ग्रीष्मावकाश कार्य 2020-21

- मुंशी प्रेमचंद द्वारा लिखित ‘‘ठाकुर का कुआँ’’ कहानी पढ़कर तत्कालीन सामाजिक समस्याओं पर अपने विचार व्यक्त कीजिये | शरतचंद अथवा रवीन्द्रनाथ ठाकुर की एक ऐसी कहानी पढ़िए जो इन्ही सामाजिक घटनाक्रम पर आधारित है | कथा-सार की प्रस्तुति अनिवार्य है |
- स्वेच्छिक विषय पर पाँच सूचनाएँ तैयार कीजिये | समाचर-पत्रों की सूचनाओं को एकत्र कर उन्हें – संग्रह’ ‘चित्रकला द्वारा अभिव्यक्ति दीजिये|
- अन्तराष्ट्रीय स्तर पर हिंदी की स्वीकार्यता विषय पर अनुसंधान कीजिएऔर बताइये कि किन-किन देशों में हिंदी की लोकप्रियता बढ़ रही है। इसे लेख के रूप में प्रस्तुत कीजिए।

Holiday Homework

Subject : Mathematics

GRADE 10

1. Find the zeroes of the quadratic polynomial x^2+5x+6.

2. The product of two consecutive positive integers is 306. Find the integers.

3. Find the roots of the following equation:

$$X+\frac{1}{X} = 3.$$

4. Find the zeroes of the quadratic polynomial $x^2 + 7x + 10$, and verify the relationship between the zeroes and the coefficients.

5. Product of two numbers is 1080 and their HCF is 30, then find the LCM.

6. Solve the following quadratic equations:

(i) $4x^2 - 2(a^2 + b^2)x + a^2b^2 = 0$

(ii) $\frac{2}{X^2} - \frac{5}{X} + 2 = 0.$

(iii) $\frac{1}{X-2} + \frac{2}{X-1} = \frac{6}{X}$

7. The sum of two numbers is 15. If the sum of their reciprocals is 3/10, find the numbers.

8. If two zeroes of the polynomial $x^4 - 6x^3 - 26x^2 + 138x - 35$ are $2\pm\sqrt{3}$. Find the other two zeroes.

9. If the polynomial $x^4 - 6x^3 + 16x^2 + 25x + 10$ is divided by another polynomial $x^2 - 2x + k$, the remainder comes out to be x+a, find k and a.

10. Find the HCF of 34, 68 and 102 by Euclid division algorithm.

11. Express each as product of its prime factors:

(i) 3825 (ii) 5005 (iii) 7429 (iv) 1331

12. Check whether 6^n can end with the digit zero for any natural number n.

SCIENCE

PHYSICS

1. List four characteristics of the images formed by plane mirrors.
2. What is the magnification of a plane mirror?
3. Why a convex mirror is used as the rear view mirror of a vehicle and not a plane mirror?
4. What is lateral inversion?
5. What is the radius of curvature of plane mirror?
6. Draw the ray diagram and also state the position, the relative size and the nature of image formed by a concave mirror when the object is placed at the centre of curvature of the mirror.
7. What kind of mirrors are used in big shopping stores to watch activities of customers?
8. Where an object should be placed in front of a concave mirror so as to get unit magnification?
9. Name the type of spherical mirror used by a dentist to see the teeth of a patient clearly.
10. A beam of light parallel to the principal axis of a concave mirror converges to a point. What is the point called? Draw a diagram to illustrate it.
11. Draw and explain the ray diagram formed by a convex mirror when
    a. Object is at infinity
    b. Object is at finite distance from the mirror
12. Name the mirror which can show the size of the object to be double of its original.
13. A student has three concave mirrors A, B and C of focal lengths 20 cm, 15 cm and 10 cm respectively. For each concave mirror he performs the experiment of mage formation for three values of object distance of 30 cm, 10 cm and 20 cm. Giving reason answer the following:
    (a) For the three object distances, identify the mirror which will form an image equal in size to that of object. Find at least one value of object distance.
    (b) Out of the three mirrors, identify the mirror which would be preferred to be used for shaving purpose.
    (c) For the mirror B, draw ray diagram for image formation for any two given values of object distance.
14. Draw a ray diagram to show the path of the reflected ray corresponding to an incident ray which is directed parallel to the principal axis of a convex mirror. Mark on it the angle of incident and the angle of reflection.
15. A spherical mirror produces an image of magnification -1 on a screen placed at a distance of 50 cm from the mirror.
    (a) Write the type of mirror.
    (b) Find the distance of the image from the object.
    (c) What is the focal length of the mirror?

(d) Draw the ray diagram to show the image formation in this case.

CHEMISTRY

Q1. Balance the following chemical equations.

1. ____ Na +____ $I_2 \rightarrow$ ____ NaI
2. ____ $KClO_3 \rightarrow$ ____ KCl + ____ O_2
3. ____ K_3PO_4 + ____ $HCl \rightarrow$ ____ KCl + ____ H_3PO_4
4. ____ C_3H_8 + ____ $O_2 \rightarrow$ ____ CO_2 + ____ H_2O
5. ____ N_2 +____ $O_2 \rightarrow$ ____ N_2
6. ____ KI + ____ $Cl_2 \rightarrow$ ____ KCl + ____ I_2
7. ____ C_2H_6 + ____ $O_2 \rightarrow$ ____ CO_2 + ____ H_2O
8. ____ $Mg(NO_3)_2$ + ____ $K_3PO_4 \rightarrow$ ____ $Mg_3(PO_4)_2$ + ____ KNO_3

Q2. Write balanced chemical equations-

a) Nitrogen plus hydrogen produce ammonia.
b) Sodium oxide combines with water to form sodium hydroxide.
c) Sodium sulfate reacts with calcium nitrate to produce sodium nitrate and calcium sulfate.
d) Zinc reacts with iron (III) chloride yielding zinc chloride plus iron.
e) Hydrogen plus oxygen produce water.
f) Sodium reacts with magnesium chloride yielding sodium chloride plus magnesium.
g) Aluminium bromide plus chlorine yield aluminium chloride and bromine.
h) Aluminium nitrate and sodium sulfide react to form aluminium sulfide and sodium nitrate.

Q3. Define and give one example of each-

a) Combination reaction
b) Thermal decomposition
c) Electrolytic decomposition
d) Double displacement reaction
e) Exothermic reaction

Q4. Explain the electrolytic decomposition of water with diagram and equation.

Q5. What happens when?

a) Quick lime is added to water.
b) Magnesium ribbon is burnt in air.
c) Iron nail is kept in copper sulphate solution.
d) Methane burns in presence of oxygen.
e) Silver chloride is exposed to sunlight.

BIOLOGY

SECTION A

Q1. Why do herbivores have longer, small intestine than carnivores? **(1 marks)**

Q2. Write the balanced chemical equation for the process of photosynthesis. How photosynthesis occurs in desert plants? **(1 mark)**

Q3. In single celled organisms diffusion is sufficient to meet all their requirements of food, exchange of gases or removal of wastes but it is not in case of multicellular organisms. Explain the reason for this difference. **(2 marks)**

Q4. Explain the process of nutrition in Amoeba. **(2 marks)**

Q5. How do guard cells regulate the opening and closing of the stomata? **(2 marks)**

Q6. Explain transport and exchange of gases in humans. **(3 marks)**

Q7. State the role of the following in human digestive system: **(3 marks)**
(a) Digestive enzymes
(b) Hydrochloric acid
(c) Villi

Q8. List three kinds of blood vessels of human circulatory system and write their functions in tabular form. **(3 marks)**

Q9. Draw a diagram of human respiratory system and label the following: **(3marks)**
(a) Part where air is filtered by fine hairs and mucus
(b) Part which terminates in balloon like structures
(c) Part which separates chest cavity from abdominal cavity
(d) Part where exchange of gases takes place.

SECTION B

Prepare a **project** on any disease related to any organ involve in:

- Digestive system
- Circulatory system
- Respiratory system
- Excretory system

➢ **How to do** the project should include the following

  - Cover page
  - Acknowledgement
  - Index
  - Introduction
  - Details of disease like causes, effects and cure.
  - Glossary
  - Bibliography

- Paste relevant pictures

ASSESSMENT CRITERIA

- RESEARCH
- PRESENTATION
- **TIMELY SUBMISSION**

THE MORE THAT YOU READ

THE MORE THINGS YOU WILL KNOW.

THE MORE THAT YOU LEARN,

THE MORE PLACES YOU'LL GO.

HAVE A HAPPY SUMMER VACATIONS

SOCIAL STUDIES

SUMMER HOLIDAY HOMEWORK - CLASS X

SOCIAL SCIENCE PROJECT- SOCIAL ISSUES

"POVERTY, SUBSTANCE ABUSE; OBESITY; HOMELESSNESS; UNEMPLOYMENT & GENDER EQUALITY ALL RAISE DEMAND FOR HUMAN CONSIDERATION & CONCERN."

A **SOCIAL ISSUE** is a large scale problem that is affecting our Indian Society in a negative way.

Keeping the above statement in mind, prepare a project on **SOCIAL ISSUES** as per the following guidelines:

1. Highlight the following:

a. Main Social Issues affecting India today.
b. Which one according to you is the most crucial and needs immediate handling?

2. Complete the following table with the relevant information:

ISSUE	**EXAMPLES**
Social	
Economic	
Environmental	
Political	

3. **RESEARCH WORK**:

a) You need to read about **POVERTY or GENDER INEQUALITY** in India. Select one of the two issues mentioned here. You can show the affected areas on a political map of India.

b) Answer the following questions:

- What are the CAUSES of the chosen issue? – give at least 5

- Describe and explain 5 severe EFFECTS of the issue chosen.

- What measures did Government of India take to reduce the effect of the issue chosen on people of India

- Describe 4 ways in which you can help the people suffering from the issue that you have chosen

c) Design an A4 size poster to raise awareness about the social issue that you have chosen (you can use computers to design this poster)

4. Are there any social issues that you have noticed in your locality? List them and suggest ways to deal with these issues

GENERAL INSTRUCTIONS:

1. The project should be hand written, well presented, researched and pictorial with neat map-work

3. Cover page, table of contents, acknowledgements, headings and sub—headings are a must.

4. Each section should be done on a white/coloured A4 size sheets.

5. The project should be presented in a file.

6. The project should be less than 10 pages.

7. Do not exceed 650-700 words.

8. The distribution of marks over different aspects relating to Project work is as a follows:
a. content accuracy, originality and analysis; Presentation and creativity and Viva.