

MT. COLUMBUS SCHOOL
Dakshinpuri, New Delhi – 62

HOLIDAY HOMEWORK (SUMMER VACATION)

SESSION: 2017-18

CLASS- X

Prepare an integrated project of different subjects on the topic given below:-

Topic :- India- On the road towards development

Note:-Assignment work of all the subjects to be done in one notebook & the project work of all the subjects to be done in the project file (Ring- binder)

ENGLISH

PROJECT

1. Research and Prepare a project on the following popular developmental areas:
 - (a) Health Care (Roll No.1-10)
 - (b) Education (Roll No.10-20)
 - (c) Infrastructure (Roll No.20-30)
 - (d) Rural Development (Roll No.30-40)
 - (e) Military Research and Development (Roll No.40- onwards)
2. Gadgets and Technology have invaded the life of every member of the family and helped in the development of the country. Create a comic strip depicting a typical scenario (use both sides of an A4 sheet). Create interesting illustrations and dialogues and give a suitable title to your comic strip.

ASSIGNMENT

1. Make a brochure for a city of travel interest in India following the instructions given below:
 - a) It should have beautiful cover page
 - b) It should contain pictures , maps and drawings
 - c) The write –up should be neat and attractive
 - d) It should give the following information:
 - i) Name of the place
 - ii) Type of the place
 - iii) Geographical location
 - iv) Noteworthy landmarks/sight seeing places/identity of the place
 - v) The significance of the place
 - vi) Its culture , food , festivals and so on
 - vii) The climate and weather conditions of the place
 - viii) When we should visit it
 - ix) Roads and air routes
 - x) Important hotels

2. Write your vision in about 500 words as a sensible, sensitive and optimistic young Indian. Also submit a collage or a Poster on how you envisage India today!

HINDI

PROJECT

1. “मेक इन इंडिया” के अंतर्गत भारत ने हथियारों के क्षेत्र में व अंतरिक्ष के क्षेत्र में जो महत्त्वपूर्ण उपलब्धियाँ प्राप्त की हैं और जो कार्य प्रगति पर है उन्हें चित्र के माध्यम से स्कैप-बुक पर प्रदर्शित करें।

ASSIGNMENT

1. भारत को विकसित राष्ट्रों की श्रेणी में खड़ा करने के लिए प्राकृतिक संसाधनों का दोहन अनुचित नहीं है। इस विषय पर पक्ष अथवा विपक्ष में 200 शब्दों में अपने विचार व्यक्त करें।
2. प्राकृतिक संसाधनों के अधिकतम दोहन से भविष्य में उत्पन्न होने वाली परिस्थितियों को कासद (Poster) के माध्यम से दर्शाएँ।

MATHS

PROJECT

Development in education system

- Q1. Collect and compare the data of the students enrolled in school before and after the “Mid-day meal scheme” from 2004 to 2008 on an A4 size sheet.

Development in transport system

- Q1. Collect the data on number of people travelling by metro and by other means of transport from 2006 to 2016 on an A4 size sheet.
- a) Represent this data using frequency distribution table.
- b) Prepare a double bar graph showing the comparisons.

ASSIGNMENT

- Q1. During Earth Hour, data obtained from various Vasundhara Enclave societies is as follows: 12 flats from Hindon Apartment, 20 flats from City End Apartment, 16 flats from Anikant Apartment and 2 flats from Lahor Apartment switched off their lights.

a) Find H.C.F and L.C.M of 20 , 12 , 16

b) All the apartment dwellers of Vasundhara Enclave decided that next year they all will observe Earth Hour more seriously. What value is shown by them?

- Q2. Complete the given worksheet in notebook.

WORKSHEET

1. Use Euclid’s division algorithm to find HCF of 1290 and 228.
2. The HCF of two number is 23 and their LCM is 1449. If one of the number is 161, find

the other.

3. Prove that following number are irrational :

a) $\sqrt{7}$

b) $5 - \frac{2}{7}\sqrt{3}$

c) $\frac{1}{2-\sqrt{5}}$

d) $1 + \frac{1}{\sqrt{2}}$

4. Find the zeroes of the polynomial $2x^2 + \frac{7}{2}x + \frac{3}{2}$ and verify the relations between the zeroes and coefficients of the polynomial.

5. If one zero of $4x^2 - 9 - 8Kx$ is negative of the other, find K.

6. Find all zeroes of the polynomial $P(x) = 2x^3 + 3x^2 - 11x - 6$, if one of its zero is -3.

7. If the polynomial $x^4 - 10x^3 + 35x^2 - 48x + 25$ is divided by $x^2 - 4x + k$, the remainder comes out to be $(2x + a)$, find the value of k and a.

8. What should be subtracted from the polynomial $P(x) = x^4 + 2x^3 - 13x^2 + 12x + 21$, so that the resulting polynomial is exactly divisible by $x^2 - 4x + 3$?

9. Solve the following pair of linear equations graphically:

$$3x - 2y - 1 = 0 \text{ and } 2x - 3y + 6 = 0$$

Shade the region bounded by the lines and x-axis

10. Find the value of k for which the following pair of equation has unique solution:

$$kx + 3y = (k - 3); 12x + ky = k.$$

11. Solve 5 problems on each method:

a) Substitution Method

b) Elimination Method

c) Cross-multiplication Method.

SCIENCE

PROJECT

1. Make a project using related pictures on Development of India in the field of Nuclear weapons covering the following topics:

a) History of nuclear weapons

b) Types of reactions involved

c) Environmental consequences

ASSIGNMENT

BIOLOGY

Cultivation of hybrid varieties of our food and vegetable crops has increased due to their higher productivity still many of our farmers are not cultivating such varieties because of some problems

a) Write the names of two hybrid crops.

b) Mention any two problems associated with sowing of seeds of hybrid varieties.

c) How we can overcome such problems?

PHYSICS

2. Draw the pattern of line of force due to a magnetic field through and around a current carrying loop of wire. How the strength of magnetic field produced at the center of loop does be affected if:

- a) Strength of the current passing through it is doubled?
- b) The radius of the loop is reduced to half the original value?
- c) The radius of the loop is doubled its original value and at the same time current passing through is also doubled?

CHEMISTRY

3. a) Farmers are using a large number of pesticides and fertilizers in their fields to increase crop production and to enhance their profits. But by doing so they are causing damage to soil as well as to the environment. Discuss the effects of using excessive pesticides and fertilizers including the following topics:

- Chemical components
- Eutrophication
- Salinity of the Soil
- Crop health

4. Write the following experiments in your science lab manual.

BIOLOGY

a. To prepare temporary mount of leaf peel to show stomata

CHEMISTRY

b. To perform and observe the following reactions and classify them into

1. Combination reaction
2. Decomposition reaction
3. Displacement reaction
4. Double displacement reaction

PHYSICS

c. To study the dependence of potential difference (V) across a resistor on the current (I) passing through it.

SOCIAL SCIENCE

PROJECT

Prepare a project report on the role of ISRO in the field of space research including the following topics:

- a) Weather forecasting
- b) Tele-communication
- c) List of satellite launching centers in India
- d) Pictures related to it.

ASSIGNMENT

Project 1: Indian Farmers

India as an agricultural country. In the last 10 years many cases of farmer's suicides have been reported from several states of India. Find out the reasons with the help of:

- 1) Newspaper cuttings regarding farmer suicides.
- 2) Policy of the government.
- 3) Implementation of policies related to agriculture.
- 4) Role of moneylenders and society.

Project 2: Communication facilities for Disaster Management

Choose any one method of communication from various means of communication like Radio/Satellite/Television/Ham radio which are used by government departments such as the Meteorological department to disseminate information. Find out how the information is disseminated by them at various levels during disasters. Prepare a project report.

INFORMATION TECHNOLOGY

PROJECT

Make a PowerPoint presentation in a CD on "Last five years of Development in India" along with pictures & details covering the following sectors:-

Education	Roll no. 1 to 16
Transport	Roll no. 16 to 32
Medical Science	Roll no. 33 to 47

ASSIGNMENT

1. Collect the information on digital attacks in the field of IT with help of search engine.

Ransomware	Roll no. 1 to 12
Chernobyl virus	Roll no. 13 to 24
Trojan horse	Roll no. 25 to 36
Malware	Roll no. 36 to 47

HEALTH & PHYSICAL EDUCATION

PROJECT

Prepare a project report showing the development in the following games at International Level including its any two famous players, rules, achievements etc. Paste the related pictures also.

1. Chess (Roll no. 1-10)
2. Kabaddi (Roll no. 11-20)
3. Archery (Roll no. 21-30)
4. Wrestling (Roll no. 31-40)
5. Kho-Kho (Roll no. 41-47)

WORK EDUCATION

PROJECT

With the help of the plastic spoons make a show piece - Flower Pot with original plant.

1. Take a plastic bowl / small plastic flower pot for base
2. Any type of money plant to be planted



VISUAL & PERFORMING ARTS

PROJECT

1. In the emerging and developing India, how has the scenario of 'Visual and performing arts' changed? Make a PowerPoint presentation on it.

NOTE: Revise whole syllabus done in the class and prepare yourself for the exam to be held after the vacation.