Darul Huda Islamic School, Al-Ain

Summer Holiday Assignment, (2018-2019)

Grade: X

(Physics)

I) **Investigatory project:**
Magnetic therapy for healing has been around for centuries. Many ancient civilizations, such as the Greeks, Hebrews, Indians, Chinese and Egyptians, used magnets for medical purposes. It's only been recently that using magnets has come back into medical use. No one exactly knows how the magnets promote healing, but it's theorized that magnets attract metal elements in the body, such as iron in blood, to increase blood circulation and therefore instigate healing.

Magnetic Resonance Imaging (MRI)

Magnetic resonance imaging (MRI) is a noninvasive medical test that helps physicians diagnose and treat medical conditions.

Read more: http://www.ehow.com/facts_5202264_uses-magnets-medicine.html

http://www.wikipedia.com

www.radiologyinfo.org/en/info.cfm?pg=bodymr

and make a report on **"Magnetism in medicine"**

OR

II) The sum total of all the external conditions affects the environment and all the living beings which exist in it. If the environment is affected by some means then all the animals, plants and human beings are also affected by the stimuli which occur in their behavior and survival. This change occurs by population explosion or distinction, depletion of natural resources and pollution. So anything that affects ecosystem is indeed harmful and needs to be eradicated.

Masdar city project is one of the solution to it.
Touted as the 'City of the Future', this project was introduced as the world's first zero-carbon, zero-waste and car-free city where photovoltaic panels would generate electricity and concentrated solar power would provide the cooling. And that's not all. A solar-powered desalination plant would be responsible for providing water, while landscaping within and crops grown around the city would be irrigated with grey water and treated waste water produced by the city's water treatment plant......

Make a report on "Masdar city project"

III) Practical Record
- I) Ohm's law
- II) Resistance in series combination
- III) Resistance in parallel combination

Chemistry

1. Make a project on the story of the development and utilization of the materials humans have used to take us from the Stone Age to the present high-tech world.

2. Record work.

1. Different types of chemical reactions.

2. Studying the properties of acids and bases by their reactions with

a) Litmus solutions

b) Zinc metal

c) Solid sodium carbonate

3. Determine the pH of the solution by using pH paper/ universal indicator:

4. Displacement reactions: Observing the actions of zinc, iron, copper and aluminium metals on salt solutions.

5. Properties of acetic acid (ethanoic acid)

6. Comparative cleaning capacity of a sample of soap in soft and hard water.

BIOLOGY

1. Life style diseases are very common in the UAE. Make a report on it. Suggest the healthy ways to overcome it. (My Identity Project)
2. Refer the chapter Our Environment and write the answers of all NCERT questions.
3. Complete the following experiments in your Biology record.
a. Preparing a temporary mount of a leaf peel to show stomata.
b. Experimentally show that carbon dioxide is given out during respiration.
  c. Studying a) Binary fission in Amoeba and b) Budding in yeast
  d.To identify the different parts of an embryo of a dicot seed.

Social science

We studied the different types of soils and the mineral composition of each type. Explore the soils in AL AIN and find the types and mineral composition.

Collect at least two samples of soil types

Write the minerals contained in the soils

The composition of the soils

Compare the soil with any type discussed in your lesson

Mathematics

1. Use Euclid's Division Algorithm to find whether the pair of numbers are coprime or not?
   a) 847,2160
   b) 1305,1530

2. Find the HCF and LCM of each in prime factorization method
   a) 60,120,288
   b) 180,144,192

3. Find the largest number that will divide 699,572 and 445 leaving remainder 6,5 and 4
   respectively.

4. If x is rational and   is irrational ,then prove that $(x+)$ is irrational.

5. Sheila has to make gift hampers out of 40 bananas,24 oranges and 16 pine apples. The gift hampers have to be identical and contain at least one of each type of fruit. What is the maximum number of such gift hampers she can make without leaving any fruit?

6. Given that the zeroes of the cubic polynomial $x^3 - 6x^2 + 3x + 10$ are of the form

   $a, a + b, a + 2b$ for some real numbers a and b, find the values of a and b as well

   as the zeroes of the given polynomial.

7. Find the roots of the quadratic equation using completing the square method
   a) $x^2 +4x-5=0$
   b) $2x^2-7x+3=0$

8. For what value of k, the following pair of linear equations has infinitely many solutions?

     i) $kx + 4y - (k + 8) = 0$
       $4x + ky + 4 = 0$

     ii) $2x + 3y = 4$
       $(k + 2)x + 6y = 3k + 2$

9. Solve the following system of linear equations graphically:

     $x - y = 1$
     $2x + y = 8.$

     Shade the area bounded by these two lines and y axis. Also, determine this area.

10. What are the contributions of Arabs in Mathematics? Search and comment.

ISLAMIC STUDIES

Prepare a Booklet on 5 most influenced World Muslim Just rulers by highlighting the leadership of Sheikh Zayed

ENGLISH

Q1. Select and read a novel of any contemporary English writer and prepare a critical appreciation of the work.

A few steps to write a critical appreciation:

- In the introduction include a general description of the work
- Provide a short summary of the plot
- Evaluate how well the author accomplishes what seems to be the purpose of the work, examining literary techniques and style with supporting details.
- Summarize your opinion of the work.

Q2. Read the novel 'The diary of a Young Girl' as prescribed by CBSE. Write character sketch of the following characters.

Attempt any four (100 words each)

- Helen Keller
- Anne Sullivan
- Kate Adams
- Arthur H. Keller
- Mildred Keller