



# **IGCSE-1 HOLIDAY HOMEWORK**

—  
SESSION 2023-24

**KOTHARI INTERNATIONAL SCHOOL, NOIDA**

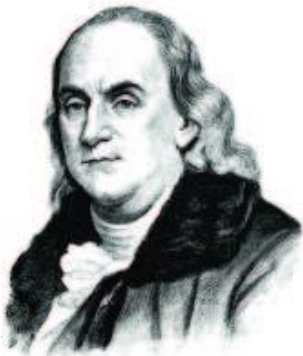
B-279, SECTOR-50, NOIDA UP 201301

English

Autobiographies, Biographies, Memoirs!

# BIOGRAPHY

*is the story of a  
real person's life  
that is told by  
another person.*



**You know it All!**

**Time to create something with a TWIST!**

**A BIO - VIDEO!**

- ❖ **Make a near and dear one - your celebrity! Why choose someone you don't know, If you are thinking what I am thinking - YESSS, You can make a BIO - VIDEO choosing YOURSELF - IT becomes A AUTOBIO - VIDEO!**
- ❖ **Make a PPT, to write the content in an autobiography/biography style:**
  - **Introduction, family, major achievements, childhood, current life, future plans ...traits and qualities**
- ❖ **Now add video/audio to the presentation and speak about the content - So we shift from a written text to a video presentation for a visual/auditory appeal!**
- ❖ **Time it to not more than 2-3mins**
- ❖ **Upload the video in the English Google Classroom, share in class.**

### **Optional Home Assignment**

**Select any book from the list below and pour your thoughts on it in a Journal!**

- **A Christmas Carol by Charles Dickens**
- **Great Expectations by Charles Dickens**
- **Frankenstein by Mary Shelley**
- **Jane Eyre by Charlotte Brontë**
- **Pride and Prejudice by Jane Austen**
- **The Sign of Four by Arthur Conan Doyle**
- **The Strange Case of Dr Jekyll and Mr Hyde by Robert Louis Stevens**

## Mathematics

### Career in Mathematics



#### Phase 1: The Research

Your first task is to research information on one of many different careers and how mathematics is used. You will be expected to organize the information in an outline. You can use web sources but they must be credible sites. Your information should not be identical to anyone else's. The outline must contain the following information:

# Why?

# Career Description

# Colleges/Training schools: Scholarships

# Personality Traits

# Interview at least 1 person in this field (if possible)

## Why

Think about why you chose this career. What makes it interesting? What is your favorite thing about this job? What challenges do you think you might face in pursuing this career?

## Career Description

Choose 1 from the 3 careers you may be interested in pursuing. Search Web sites on the Internet for ideas & responses of different careers.

As you compile information there are items that must be included within your Career description:

1. What education is necessary? High school Diploma? College Degree? Post Graduate Degree?
2. What do you do on a typical day in this career? (Specifically what math is used on the career?)
3. How is the math used in this career?

## Colleges: Scholarship

If the career requires higher education (post high school), include information on colleges (at least 3) that offer programs related to your career. Also include available scholarship information. (If possible, obtain brochures from the colleges for bonus!)

## Personality Traits Best Suited for the Career

There has been a tremendous amount of research done recently on personalities and careers. A person spends 8 to 10 hours, 5 to 6 days per week working. It might as well be at a career one enjoys. What personality traits are best suited for the career you are researching?

## **Phase 2: The Infographic**

Now that you have all your research available, you are now going to create an infographic of the information, using PowerPoint or any other presentation software. For the power point presentation include as much information as you collected from the research phase, but use more pictures than text. Use appropriate photos/graphics, appropriate text style and font.

### **Rubric:**

- Research Information
- Infographic
- Bonus

**Mode of Submission: Online (Google Classroom)**

**Date of Submission: 7.7.23**

# Kindly complete the assignments uploaded on Google classroom in your revision notebook.



# HOMEWORK

## Physics

Holiday Home Work For Physics

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IGCSE 9  
Session (2023 – 24)

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# Holiday Homework Plan 1

Homework Title	<b>Transfer of Energy Science Activity</b>		
Class & Schedule	IGCSE 9	Teacher	Vipin Kumar
Start Date	1 June 2023	Deadline	3 July 2023

## Details

**Grab some marbles! This simple science experiment is such an easy and fascinating way to demonstrate how energy is transferred from one object to another.**

Energy is defined as the ability to do work. We learned about the difference between potential energy (stored energy), and kinetic energy (the energy of moving things). Our **ping pong ball shooters** were the perfect thing to learn about potential and kinetic energy! When you stretch the balloons, they have potential energy, and when you release them, they have kinetic energy which they transfer to the ping pong balls, thus shooting it across the room.

### GUIDELINES:



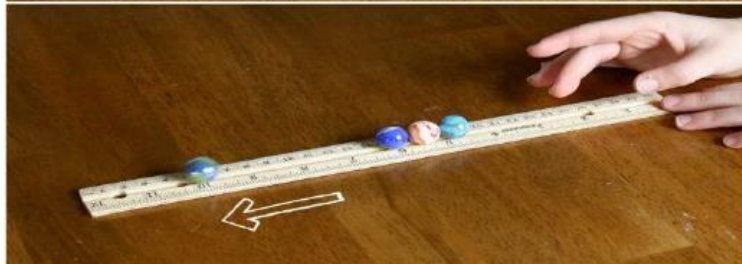
### PHYSICS FOR KIDS

Transfer of Energy  
Science Experiment



- For this experiment, all you need is a ruler with a groove in the middle and some marbles. First, we lined up three marbles in the middle and one marble at the edge. I asked the boys what they thought would happen when I flicked the marble. They thought that the marbles in the middle would roll away.

- Surprise! Only one of the marbles rolled away! We repeated the experiment with different configurations of marbles (like shooting 2 at 3), and pretty soon the pattern emerged: the number of marbles that you flick equals the number of marbles that roll away. In other words, the rolling marble can only transfer its energy to the marble it collides with, which transfers the energy to the next marble, and so



on.

- In order to get the best results with this experiment, you'll want to make sure that the surface you are working on is level. Marbles roll away when you don't want them to if there is any slant to your table! Also, kids will need to give the marble a good, solid flick. Not too wild – you





don't want marbles all over the place! But too weak of a flick will not give you great results.

- Write down whole activity in a proper format prepare a brief report what concept you learn from this activity which concepts are involved in this. Write down all the necessary definitions.

Format of the report should be written in form of the following points:

- Aim of the activity
  - Things required for the activity
  - Concept involved in the activity
  - Procedure of the activity
  - Observation
  - Result
  - How it is helping you to understand the particular concept
-

# Chemistry

## Aim :

Classifying the elements into groups by drawing the correct atomic structure of elements and thereby predicting the elements having similar behaviour

A good power point presentation is to be made as per the following steps

## Step 1.

Write name , symbol, atomic number and electronic configuration of each element Starting from atomic number 1-20 following the  $2n^2$  rule where  $n$ = shell no starting from 1 onwards and also following the rule that the outermost shell cannot have more than 8 electrons

## Step 2.

From step 1 , arrange elements into groups as per the outer electronic configuration. All elements with the same outer electronic configuration should be in 1 group. You should be getting a total of 8 different groups

## Step 3

In each group starting from group 1 to group 8 arrange the elements writing column wise in increasing order of the shells. The element with the smallest no of shells that is  $n=1$  in the group is to be written at the top of the group. Thus we get a total of 8 tabular columns

## Step 4

Its the ultimate aim of every element to attain 8 electrons in the outermost shell which is what the noble gases have, except Helium. In this process an atom of every element will tend to lose electrons and become a positive ion , or gain electrons and become a negative ion.

The ppt presentation should explain the information having at least one slide each for steps 1 and 2 and then 8 more slides , one slide for each group mentioning the following aspects

(i) A suitable title for the presentation

(ii) The slide for each groups should include

(a) Group no ( which is equal to the no of outer shell electrons)

- (b) Correct sequence of elements in the group
- (c) Trend of size of the elements as we go down the group- (whether size increases or decreases)
- (d) Tendency of the elements in each group to form ions ( whether positive ion or negative ion)
- (e) Reactivity of elements down a group
  - whether tendency to form ions increases or decreases
  - Hence, whether reactivity increases or decreases

## Biology

### TASK-1 DEVELOPING PRACTICAL SKILLS

#### CONCEPT: DIFFUSION

Coloured plant tissue, such as beetroot can be used to demonstrate diffusion. The beetroot is cut into small cubes (approx. 1 cm<sup>3</sup>) which are first thoroughly washed in water. A cube is then placed in clean water in a beaker/container.



The water turns pink as the red pigment diffuses out of the cube. The time taken for the water to turn a certain shade of pink is measured. This indicates the rate of diffusion.

**This apparatus can be modified to investigate the effect of different factors on the rate of diffusion**

#### **DEVISE AND PLAN INVESTIGATIONS:**

- 1) Why it is important to thoroughly wash the freshly cut cubes of beetroot before starting the investigations?
- 2) Outline how could you use and modify the apparatus to investigate the effect of the following factors on the rate of diffusion
  - a) Surface area
  - b) temperature

c) concentration gradient

**EVALUATE DATA AND METHODS:**

3) As far as possible, all the cubes in an investigation should be taken from the same beetroot. Why?

4) Describe one way of ensuring that the same shade of pink is reached each time.

**TASK-2 EXPLORE AND RESEARCH**

**ARTIFICIAL CELLS – SYNTHETIC COMPARTMENTS WITH LIFE-LIKE FUNCTIONALITY**

Scientists have discovered so much about how the structures of cells are formed and work together that they are starting to create artificial cells. This has great potential for medicine, because these cells could be used, for example, to deliver drugs(medicines) inside the body directly to the cells that need them.

Explore the following links:

<https://www.youtube.com/watch?v=7er7saHVFw0>

<https://www.youtube.com/watch?v=aRzrYNVXF28>

<https://www.youtube.com/watch?v=MIAIOZIkM2M>

Ø Is it possible to create a cell from scratch?

Ø Suggest an advantage of using artificial cells rather than naturally occurring ones. The work related to the above tasks can be done in any **ONE** form out of the following:

- Power point Slides
- Jam-Board Slides
- Word Document
- Science notebook

**HAPPY LEARNING!!!**

## Accounting

1.

An illustration depicting the accounting process. On the left, a woman with dark hair, wearing a teal shirt, sits at a desk with a calculator and a notebook. Above her, a thought bubble shows a green money bag with a dollar sign, with three gold coins falling from it. To the right, a man in a purple shirt sits at a desk with a laptop. Above him, a thought bubble shows a computer monitor displaying various charts and graphs. In the top left corner, there is a large icon of a calculator and a document with a dollar sign. The word 'ACCOUNTING' is written in large, bold, black letters in the top right corner. Below the title, there are three paragraphs of text.

**ACCOUNTING**

Research on the Business documents which are required to record various transactions.

Collect few of the business documents [can be pictures if originals are not possible]

Segregate them as per need/usage and make a project on it.

2.

**Read the chapter containing the principles and rules of Accounting and make notes.**

## **Business Studies**

### **Work Specification:**

Activity and Paper for chapter 6 and 7,  
IGCSE - Business Studies 0450

### **Materials / Resources Required:**

Business Studies 0450 Textbook

### **Instructions / Guideline:**



### **GENERAL INSTRUCTIONS**

The students are expected to copy the downloaded PDF file using the URL given in the attached sheet. The students should aim to do activity while keeping the time limit into account and avoid all possible distractions while attempting them. The student should strictly avoid copying the answers from the books for their own benefit and well-being.

### **WORK TO BE DONE**

They are expected to take a print of all the papers given, get them spiral-bind and solve them in the space provided in the paper itself. They should try to write in the spaces provided and if needed can take an extra sheet.

**Any Other Information:** Preferably attempt the papers in pencil.

### **URL FOR ACTIVITY**

- [https://www.igcsebusiness.co.uk/uploads/2/6/7/8/26787454/leadership\\_situations\\_activity\\_.pdf](https://www.igcsebusiness.co.uk/uploads/2/6/7/8/26787454/leadership_situations_activity_.pdf)
- [https://www.igcsebusiness.co.uk/uploads/2/6/7/8/26787454/maslow\\_heirarchy\\_of\\_needs\\_activity.pdf](https://www.igcsebusiness.co.uk/uploads/2/6/7/8/26787454/maslow_heirarchy_of_needs_activity.pdf)
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- [https://www.igcsebusiness.co.uk/uploads/2/6/7/8/26787454/strategic\\_decision\\_making\\_quiz.pdf](https://www.igcsebusiness.co.uk/uploads/2/6/7/8/26787454/strategic_decision_making_quiz.pdf)

**Submission Date:** 5th July, 2023

HAPPY  
*holidays*



## **Economics**

“Nature is inexhaustibly sustainable if we care for it. It is our universal responsibility to pass a healthy earth on to future generations.” — Sylvia Dolson”



The dire need of the hour is to look for Alternative sources of energy, so that the future generations will enjoy all the privileges of nature. **OBJECTIVE** The objective of this project is student research. It enables students to demonstrate the application of their skills and knowledge, and to pursue their personal interests, without the time limitations and other constraints that are associated with written examinations.

**The total length of the Project should not be more than 15 pages of A-4 size paper.**

The project will be handwritten and credit will be awarded to original drawings, illustrations and creative use of materials.

Page- 1 Cover Page showing project title, student information, school and year.

Page-2 Contents: List of contents with page numbers.

Page- 3 Acknowledgements: Acknowledging the institution, offices and libraries visited and persons who have helped.

Page- 4 Project Overview: Purpose, Aim, Methodology and experiences while doing the project.

Page- 5 to Page- 12 Subject Matter: Chapters with relevant headings and illustrations.

Page- 13 Conclusions: Based on findings. (Summary and Suggestions)

Page- 14 New findings

Page -15 Suggestions and recommendations

Page-16 Bibliography: It should have the title, pages referred, author, publisher, year of publication and if a website, the name of the website with the specific website link which has been used.

1. Importance of the alternation source of energy from an economic point of view.
2. What is the opportunity cost of buying the current primary source of energy
3. How can the resources saved (capital) from switching to alternative resources be used for the betterment of the society

Art & Design



LETS BE



THINK CREATIVELY

**Work Specification:** Create a 3D structure (bird ,animal , etc ..) using different medium of waste material



**Materials / Resources Required:** whatever is easily available .

**Instructions / Guideline:** Be creative the presentation of the work , should be original not referred from the google .be creative .



**Creative**  
Holidays

**KidsSubmission Date:** 5th July 2023

Computer Science

Create a presentation in MS PowerPoint on the topic “**Sustainable Development Goal-Zero Hunger**”. Presentation should have 8-10 slides. Use text, images, audio and video to make your presentation presentable. Add transitions and animations where ever required.

**Parameters:** Creativity, Originality, Overall presentation

**Submission Date:** 5th July

**Submission:** Google Classroom

## **Spanish**

Create a PowerPoint Presentation on the topic “Las culturas indígenas de América Latina (maya, inca y azteca). Use text, images, audio and video to make your presentation presentable. Add transitions and animations where ever required.

**Parameters:** Creativity, Originality, Overall presentation

**Submission Date:** 5th July

**Submission:** Google Classroom

## **French**

Create a PowerPoint Presentation on any francophone country in French Language.

### **Sections and Elements**

Geography (e.g., continent, major cities, rivers/lakes, borders, maps), history, current events, imports/exports, population, languages, regional expressions, food, literature, famous people, weather, traditions, fashion, sports, technology, religion, education...

**Parameters :** Creativity in PPT and Class presentation

**Submission Date :** 5th July

**Submission :** Google Classroom