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**BIRLA PUBLIC SCHOOL, PILANI(RAJ.)**  
**SUMMER VACATION ASSIGNMENT**  
**SESSION 2019-20**  
**CLASS IX**

**ENGLISH**

- 1- Read any English Newspaper daily and write two words and their meanings in the summer assignment notebook.
- 2- Find an interesting picture from any English Newspaper , cut it and paste in the note book mentioning date on it.
- 3- Read three short stories from your book '**Moments**'. Make an animated module on each story( mentioned below) with dialogues and appropriate facial expressions. You may send it to your email or upload it on your YOUTUBE channel and write the link in the note book.

Story- 1- Iswaran the story teller

2- In the Kingdom of Fools

3- The Happy Prince

**SCIENCE(PHYSICS)**

1. An object has moved through a distance. Can it have zero displacement? If yes, support your answer with an example.
2. A farmer moves along the boundary of a square field of side 10 m in 40 s. What will be the magnitude of displacement of the farmer at the end of 2 minutes 20 seconds from his initial position?
3. Which of the following is true for displacement? (a) It cannot be zero. (b) Its magnitude is greater than the distance travelled by the object.
4. Distinguish between speed and velocity.
5. Under what condition(s) is the magnitude of average velocity of an object equal to its average speed?
6. What does the odometer of an automobile measure?
7. What does the path of an object look like when it is in uniform motion?
8. During an experiment, a signal from a spaceship reached the ground station in five minutes. What was the distance of the spaceship from the ground station? The signal travels at the speed of light, that is,  
 $3 \times 10^8 \text{ m s}^{-1}$ .
9. A farmer moves along the boundary of a square field of side 10 m in 40 s. What will be the magnitude of displacement of the farmer at the end of 2 minutes 20 seconds from his initial position?

10. During an experiment, a signal from a spaceship reached the ground station in five minutes. What was the distance of the spaceship from the ground station? The signal travels at the speed of light, that is,  $3 \times 10^8 \text{ m s}^{-1}$
11. A bus decreases its speed from  $80 \text{ km h}^{-1}$  to  $60 \text{ km h}^{-1}$  in 5 s. Find the acceleration of the bus.
12. A train starting from a railway station and moving with uniform acceleration attains a speed  $40 \text{ km h}^{-1}$  in 10 minutes. Find its acceleration.
13. An athlete completes one round of a circular track of diameter 200 m in 40 s. What will be the distance covered and the displacement at the end of 2 minutes 20 s?
14. Joseph jogs from one end A to the other end B of a straight 300 m road in 2 minutes 30 seconds and then turns around and jogs 100 m back to point C in another 1 minute. What are Joseph's average speeds and velocities in jogging (a) from A to B and (b) from A to C?
15. Abdul, while driving to school, computes the average speed for his trip to be  $20 \text{ km h}^{-1}$ . On his return trip along the same route, there is less traffic and the average speed is  $30 \text{ km h}^{-1}$ . What is the average speed for Abdul's trip.

### **SCIENCE(CHEMISTRY)**

1. Collect information about any 10 elements( like atomic number, atomic mass symbol, valency , metal/nonmetal) and make 10 small cards for each element.
2. Prepare a 4minute activity on any one topic from your Chemistry syllabus (Reference can be NCERT textbook, any reference book or internet etc.)

OR

Collect the names of 10 chemical compounds from the day to day life and write their chemical composition(elements present in it)

3. Read the following topics thoroughly and highlight the main points and pen down in your notebook :
  - a. Diffusion, Evaporation and Sublimation (Ch- Matter in our Surrounding)
  - b. Elements, Compounds , Solutions and Colloids (Ch- Is matter around us pure)
4. Prepare a list of 10 common medicines.

### **SCIENCE(BIOLOGY)**

1. 5<sup>th</sup> June is World Environment Day. Participate in plantation drive in your area and prepare a report on it (soft copy or hard copy)

OR

Plant sapling of a tree ( Neem, Mango etc) and water everyday and observe the changes and pen down those observations.

2. Visit at least 10 houses in your locality and find the total amount of water consumed in a day by each house. Find the number of taps leaking in each house. Find the source of water of your locality.

OR

Take images of the trees (with you) of your locality and find their Scientific names and make a power point presentation.

# MATHEMATICS

## PROJECT WORK

Each student is required to make a handwritten project report according to the project allotted.

Please note down your project number according to your roll number.

1. Project has specific objectives.
2. List the sources of the information collected.
3. General layout of the project report has the following format.

Page number	Content
Cover page	Your name, class, roll no., title of the project
1	Brief description of the project
2-4 (may change)	Procedure ( with pictures if required)
5-6	Mathematics involved
7	Conclusion / result
8	List of resources from where the information is collected.

4. The weightage of marks for the project work :
  - i. Identification :1 mark
  - ii. Procedure/ presentation: 3 marks
  - iii. Result: 2marks
  - iv. Viva: 4 marks

Project number/ roll number	Project name/ objective	Description/ instruction
1.(roll no. 1-6)	Exploring pascal's triangle	(take 10 rows) <ol style="list-style-type: none"><li>1. Definition, history, how to construct?</li><li>2. Properties:<ol style="list-style-type: none"><li>a) Related to prime numbers.</li><li>b) Hockey stick pattern</li><li>c) Model on pascal triangle</li></ol></li></ol>
2.(roll no. 7-12)	Making 3D snow flakes	<ol style="list-style-type: none"><li>1. What is 3D snowflake</li><li>2. Its application</li><li>3. Mathematics involved</li><li>4. Model</li></ol>
3.(roll no. 13-18)	Making platonic solids	<ol style="list-style-type: none"><li>1. Mention about 5</li></ol>

		platonic solids 2. History 3. Verify euler's formula for each
4. (roll no. 19-24)	Exploring mathematics around us.	1. Look around yourself: house garden, market, bank, nature.... 2. Click photographs and find the hidden mathematics. 3. Click minimum 20 photographs from your surroundings.
5.( roll no. 24-30)	Circles	1. Write the theorems of circle with diagram 2. The importance of circle in mathematics 3. Make an architectural design of a building with circle.
6.( roll no. 31-36)	Mensuration	1. Relation between Volume of cylinder and cone 2. Make a floor plan for 2 room and find the estimated cost of doing its interior. 3. Explore the mathematics involved.

## **SOCIAL SCIENCE**

Visit the BPL(Below Poverty Line )families and Interview on Following points.

A) Number of family Members

B) Monthly income.

C)Education of each member in the family.

D)Condition of Basic facilities e.g. safe drinking water, electricity,Sanitation.

Note--- Bring photocopy of Adhar Card and record the interview electronically and manually.

## **INFORMATION TECHNOLOGY**

(a) Make a Power Point Presentation on the topics given below and mail at ([midbps@gmail.com](mailto:midbps@gmail.com)) :

- Cyber Crime and Security
- Computer Memory

(b) Make an attractive Chart (any one) :

- Founders name and his invention (Related ICT )
- Cyber Crime and Security
- Input And Output Devices