



**TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT**

GRADE- IX- ACADEMIC YEAR - 2016-17

Dear Parents,

Winter vacation has begun and it's time to have a new learning experience. We have compiled a set of assignments to keep our child engaged during these holidays. Creativity is a part of our makeup, as we all agree that without it the purpose of work seems to go nowhere. Children must buckle and exhibit their potential to uplift the academic performance. We expect from you to encourage your child in doing these assignments.

Students must take note of the following points before starting the work:

- Holiday homework is to be done in strip files or in separate notebook subject wise as instructed by the subject teachers.
- Homework has to be submitted on the first day of school after vacation.
- Make sure you complete the home work before coming back to school and submit the same to the subject teacher.
- Please take care of the neatness of the work.

Have a very happy and fruitful vacation!!!



'Creativity is when sights that everyone sees arouse thinking that nobody else has thought.'

-anonymous

Senior Section Educator



**TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT**

GRADE- IX- (PHYSICS) ACADEMIC YEAR - 2016-17

NAME OF THE STUDENT: **GRADE**..... **SEC**

Chapter- Work and Energy

1. When work done by a force is positive, negative and zero? Give one example of each case.

.....

.....

.....

.....

2. When work done by a force is negative? Give an example.

.....

.....

.....

.....

3. When work done by a force is zero? Give an example.

.....

.....

.....

.....

4. Define 1 joule.

.....

.....

.....

.....

5. Convert 1 KWh into joule.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....



**TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT**

6. Derive an expression to calculate the kinetic energy of a body.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

7. Certain force acting on 20 kg mass changes its velocity from 5m/s to 2m/s. Calculate the work done by the force.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

8. A body of mass 'm' and velocity 'v' has kinetic energy 'K'. What will be its kinetic energy if the velocity is made triple of its initial value?

.....

.....

.....

.....

.....

.....

.....

.....

.....

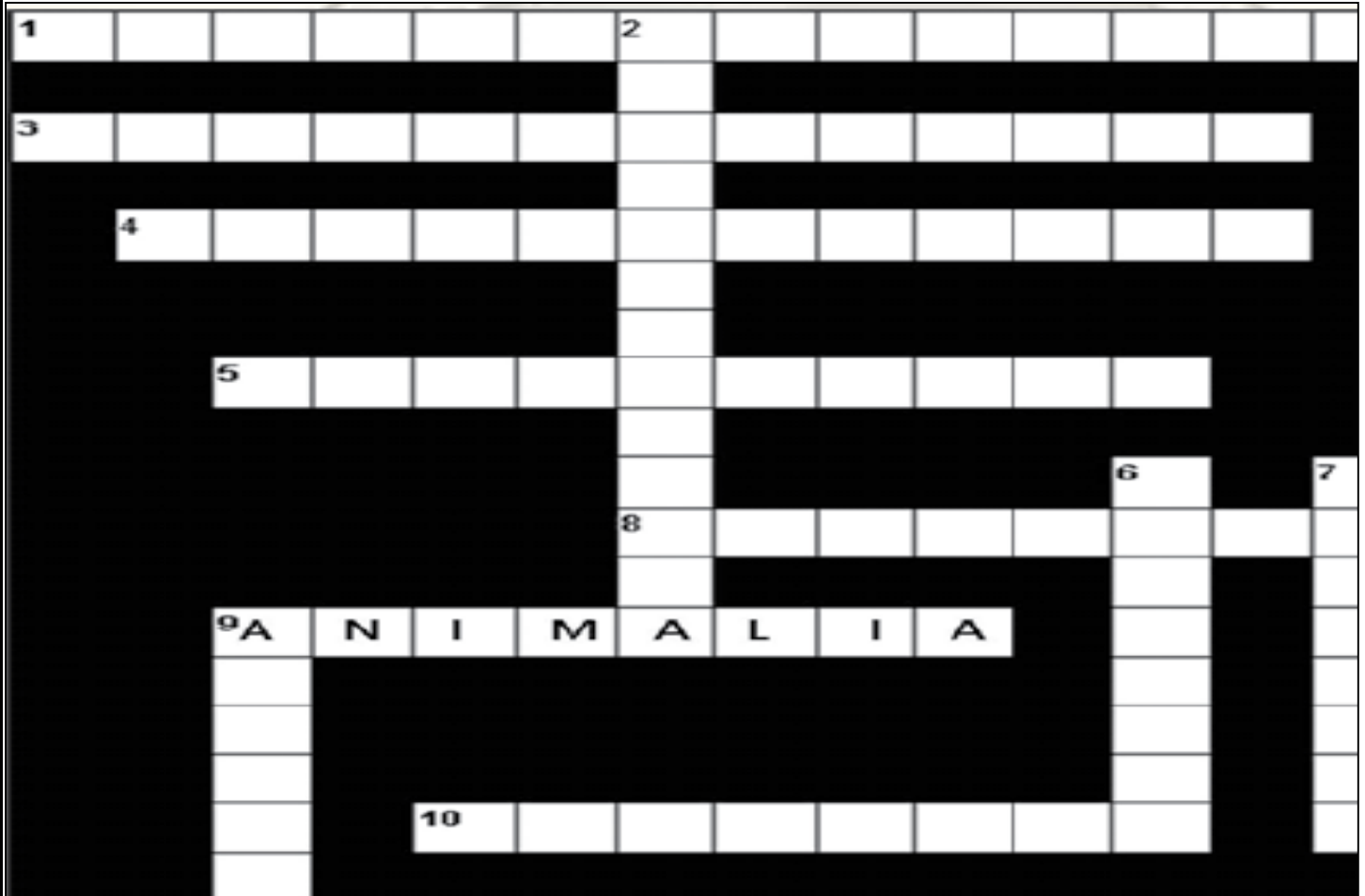


TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT

GRADE- IX- (BIOLOGY) ACADEMIC YEAR - 2016-17

NAME OF THE STUDENT: **GRADE**..... **SEC**

Q1. Read the given clues carefully and fill up the blocks with appropriate word / term to complete the crossword puzzle given below. (10)



The Clues Across:

1. The group of flatworms
3. The term for triploblastic marine animals with notochord at some stage of life.
4. Corals belong to this group.
5. A true vertebral column and internal skeleton are the main features of this group.
8. This common word for certain organisms means 'jointed legs'.
9. A kingdom of eukaryotic, heterotrophic, multicellular organisms without cell walls.
10. Filarial worm belongs to this group.

Down:

2. Spiny skinned animals with peculiar water-driven tube system
6. Open circulatory system, movement by a foot, kidney-like organs for excretion are the features of this group.
7. This group includes animals with holes pores on their body wall.
9. The animals belonging to this group have segments lined up one after the other from head to tail.



**TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT**

Q.2. Name the term which is used for the following:

- a) The left and right halves of the body have the same design.
- b) The animal tissue consisting of three embryonic germ layers. (1)

Q.3. In which kingdom would you like to put an organism which is single celled, eukaryotic and photosynthetic? (1)

Q.4. Name the phylum in which the animals have water vascular system. (1)

Q.5. What are the four main characteristics of chordates? (2)

Q.6. Characters of some organisms are given. Identify their group and give an example of each.

- a) Single celled, eukaryotic and photosynthetic
- b) The body is divided into segments, may be unisexual or hermaphrodite. (2)

**Q.7. (a) Name the phylum to which each of the following animals belong-
Silver Fish, Starfish, Tapeworm and Leech.**

- (b) List two features of vertebrates. (3)



TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT

GRADE- IX- (BIOLOGY) ACADEMIC YEAR - 2016-17

PRACTICAL BASED QUESTIONS

NAME OF THE STUDENT: GRADE..... SEC

1. Which of the following is not an aquatic adaptation? [1]
a) Streamlined body b) Hollow bones
c) Presence of Gills d) Presence of fins
2. If a flower has 3 petals or trimerous, which type of a plant would it be? [1]
a) Dicot b) Monocot
c) Both (a) and (b) d) None of these
3. Which of the following is not an aerial adaptation of a bird? [1]
a) Presence of strong flight muscles.
b) Presence of vertebral column
c) Streamlined body
d) Forelimbs modified into wings.
4. Choose the option which includes the feature that helps the fish to change its direction [1]
a)caudal fin and pelvic fin b) Dorsal fin and anal fin
c) Dorsal fin only d) Caudal fin only
5. The first segment in the body of earthworm is called : [1]
a) prostomium b) clitellum
c) peristomium d) annuli
6. Chloroplast in spirogyra is: [1]
a) Spirally arranged without pyrenoids
b) Spirally arranged in ribbon shape with pyrenoids
c) circular
d) Cup shaped
7. Mosquito belongs to phylum – [1]
a) Mollusca b) arthropoda
c) Coelenterata d) Annelida
8. Thallophyta are a group of plants which [1]
a) Bear flowers
b) Have well developed roots, stems and leaves
c) Do not have well differentiated body design
d) Have naked seeds
9. The phylum in which animals have soft bodies covered with hard shell is: [1]
a) Mollusca b) Arthropoda
a) Nematoda d) Annelida
10. Spirogyra, mosses and Ferns belong to subkingdom [1]
a) Cryptogamae
b) Phanerogamae
c) Angiospermae
d) Gymnospermae
11. Some developmental stages of mosquito are given below. Which stage is not present in life cycle of [1]
mosquito?
a) Larva b) Pupa c) Egg d) Cyst



TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT

12. Which one of the following belongs to phylum annelida? [1]
a) Earthworm
b) Leech
c) Earthworm and Leech
d) Ascaris
13. The plants with well differentiated reproductive tissues that ultimately produce fruits are called [1]
a) Bryophyta
b) Pteridophyta
c) Gymnospermae
d) Angiospermae
14. In which plant gills are present: [1]
a) Spirogyra
b) Agaricus
c) Moss
d) Fern
15. Funaria is [1]
a) Angiosperm
b) Green algae
c) A moss
d) Grass
16. A seed of a plant could be split into two parts. The type of leaves and roots this plant will have [1]
a) Fibrous roots and reticulate venation in leaves
b) Tap roots and parallel venation in leaves
c) Fibrous roots and parallel venation in leaves
d) Tap roots and reticulate venation in leaves
17. Which phylum is known as largest phylum of kingdom animalia? [1]
a) Annelida
b) Arthropoda
c) Mollusca
d) Porifera
18. There is a small pond in a village near the crop fields. The farmer uses various manures and fertilizers [3]
in the field to enhance crop production. Recently, people observed large scale dying of fishes in the pond. Unable to find any solution, the farmers meet your father for his advice. Your father takes an appointment with the Fishery Officer of the area and discusses the issue with him.
(a) What may be the reasons for dying of fishes in the pond?
(b) What suggestion will your father give to the farmers?
(c) What value is shown by your father?

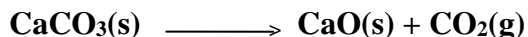


TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT

GRADE- IX- (CHEMISTRY) ACADEMIC YEAR - 2016-17 (WORKSHEET-1)

Instructions: Do the given Assignment in the strip file.

1. CaCO_3 decomposes according to the reaction



10.4g of CaCO_3 is heated in a test tube and after the reaction residue (CaO) is found to weigh 8.2g. The law of conservation of mass holds good, what will be the mass of CO_2 released into the atmosphere.

- (i) 8.2g (ii) 10.4g (iii) 44g (iv) 2.2g

2. Composition of two nuclei of two atomic species A and B are given below:

	A	B
Protons	6	6
Neutrons	6	8

(i) State the mass numbers of A and B

(ii) State the relationship between A and B

3. Atomicity of chlorine and argon is

- (i) diatomic and monoatomic (iii) monoatomic and monoatomic
(ii) monoatomic and diatomic (iv) diatomic and diatomic

4. What is the molecular formula of Aluminium oxide and Calcium hydroxide?

5. One mole of a compound contains how many atoms?

6. Find out the ratio by mass of nitrogen and hydrogen in ammonia (NH_3)?

7. One u (amu) stands for

- (i) an atom of C-12 (iii) $1/12^{\text{th}}$ of mass of hydrogen atom
(ii) $1/12^{\text{th}}$ of mass of C-12 (iv) none of these

8. Calculate the molar mass of nitric acid (HNO_3).

9. Write down the chemical name of the following compounds from their chemical formula

- (i) H_2S (ii) Na_2CO_3

10. Give two examples of polyatomic ions.

11. (i) If 10g of barium chloride solution is mixed with 15g of sodium sulphate solution, what will be the total mass of products formed?



TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT

- (ii) In a chemical reaction, 31.9g of copper sulphate solution completely reacts with 21.2g of sodium carbonate solution. The products obtained were some amount of copper carbonate and 28.4g of sodium sulphate. If the reaction is carried in agreement with law of conservation of mass, then give the mass of copper carbonate formed.
12. Hydrogen and Oxygen gas combine in the ratio of 1:8 by mass to form water. What mass of Oxygen gas would be required to react completely with 3g of hydrogen gas? Which law of chemical combination is followed in above case?
13. Calculate the formula unit mass of ZnO, CaO, Na₂O, MgCl₂.
14. Calculate the number of particles in each of the following:
- (i) 46g of sodium atoms (number from mass)
 - (ii) 8g of O₂ molecules (number of molecules from mass)
15. What is the mass of:
- (i) 0.2 mole of oxygen atom?
 - (ii) 0.5 mole of water molecule?



TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT

GRADE- IX- (MATHEMATICS) ACADEMIC YEAR - 2016-17

[Each question carries 1 marks]

1. 1500 families with 2 children were selected randomly, and the following data were recorded.

Number of girls in a family	2	1	0
Number of family	475	814	211

compute the probability of a family chosen at random having (i) 2 girls (ii) 1 girl (iii) no girl

2. Three coins are tossed simultaneously 200 times with the following frequencies of different outcomes.

outcomes	3 head	2 head	1 head	No head
Frequency	23	72	77	28

if this coins are simultaneously tossed again, compute the probability of 2 heads coming

3. To know the opinions of the students about the subject statistics, a survey of 200 students was conducted. The data is recorded in the following table.

Opinion	Number of students
Like,	135
dislike	65

4. Note the frequency of two-wheelers, three-wheelers and four-wheelers going past during a time interval, in front of your school gate. Find the probability that any one vehicle out of the total vehicles you have observed is a two-wheeler?
5. The capacity of a closed cylindrical vessel of height 1 m is 15.4 litres. How many square meters of metal sheet would be needed to make it?
6. Bulbs are packed in cartoons each containing 40 bulbs, seven hundred cartoons were examined for defective bulbs and the results are given in the following table

Number of defective bulbs	0	1	2	3	4	5	6	More than 6
Frequency	400	180	48	41	18	8	3	2



TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT

one cartoon was selected at random. What is the probability that it has

- (i) no defective bulbs? (ii) Defective bulbs from 2 to 6 (iii) Defective bulb less than 4.
7. In a cricket match , a batswomen hits a boundary 6 times out of 30 balls she plays. Find the probability that she did not hit a boundary.
8. Find the volume of the right circular cone with : (i) radius 6 cm, height 7 cm (ii) radius 3.5 cm, height 12 cm.
9. The height of a cone is 15 cm. If its volume is 1570 cm^3 , find the radius of the base. ($\pi = 3.14$)
10. A conical pit of top diameter 3.5 m is 12 m deep. What is its capacity in kilolitres?
11. A right triangle ABC with sides 5cm, 12 cm and 13 cm is revolved
12. The diameter of a metallic ball is 4.2 cm. what is the mass of the ball, if the density of the metal is 8.9 g per cm^3 .
13. The diameter of the Moon is approximately one-fourth of the diameter of the earth. What fraction of the volume of the Earth is the volume of the Moon?
14. How many litres of milk can a hemispherical bowl of diameter 10.5 cm hold?
15. A hemispherical tank is made up of an iron sheet 1 cm thick. If the inner radius is 1 m, then find the volume of the iron used to make the tank.
16. Find the volume of the sphere whose surface area is 154 cm^2 .
17. A dome of a building is in the form of a hemisphere. From inside, it was white washed at the cost of Rs. 498.96. if the cost of white washing is Rs 2.00 per square meter, find the inside surface area of the dome.
18. A capsule of medicine is in the shape of a sphere of diameter 3.5 mm. How much medicine is needed to fill this capsule?
19. The length of the longest pole that can be put in a room of dimensions (10 m x 10 m x 5 m) is 15 m. find the longest pole.
20. The total surface area of a cube is 96 cm^2 . Find the volume of the cube?



TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT

GRADE- IX- (FIT) ACADEMIC YEAR - 2016-17

- 1 What do you mean by Cell Referencing? Explain its types.
- 2 What are the basic data types in MS-Excel?
- 3 Ms. Meeramani has recently joined a construction company as Marketing Executive. She saw a presentation about the company. She however is not satisfied with it and wants to make some changes in it. Using your presentation skills, suggest the features to accomplish the following changes:
 - i) Add the company's logo (stored as a file on her computer) on the first slide.
 - ii) Add audio to each slide to explain the content of the slide.
 - iii) Add an effect while shifting from one slide to another during a slide show.
 - iv) Connect Slide 4 to Slide 9 directly.
 - v) Add slide numbers automatically at the bottom of each page. 5
- 4 Give the following answers with respect to spreadsheet:
 - (i) Cell A1 contains the number 20 and B1 contains 3. What will be the contents of cell C1, if the formula =A1+B1*2^3 is entered in cell C1?
 - (ii) The contents of Cell A1, B1, C1 and D1 are 10, -20, 30 & -40 respectively. What will be the value displayed in cell E1 which contains the formula =MIN(A1:D1)
 - (iii) Cell D3 contains the formula =B3+C3 and this formula is copied to cell E3, what will be the copied formula in cell E3?
 - (iv) Cell D3 contains the formula =B3 + C3 and this formula is copied to cell E3, what will be the copied formula in cell E3? 4
- 5 Tariq Fashions maintain their employee salary details in a spreadsheet as shown below. A sample data of 7 employees is shown below. Write formulas for the operations (i) to (v) and answer the questions (vi) to (viii) based on the spreadsheet given below along with the relevant cell address:

	A	B	C	D	E	F
1	NAME	BASIC	HRA	DA	PF	NET SALARY
2	Surinder	50000	20000	___	600	___
3	Kanika	56000	20000	___	600	___
4	Aashish	35000	15000	___	400	___
5	Harjit	45000	15000	___	500	___
6	Abhijit	60000	25000	___	700	___
7	Jyoti	75000	30000	___	700	___
8	Amita	25000	10000	___	300	___
9	Maximum					___
10	No. of Emp					___



TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT

- (i) To calculate the DA as 10 % of BASIC+HRA for each employee and display in column D.
 - (ii) To calculate the NETSALARY as BASIC+HRA+DA-PF for each employee and display in column F.
 - (iii) To find the maximum NETSALARY and display in cell F9.
 - (iv) To count the number of employees and display in cell B10.
 - (v) The Manager wants to know how many employees from the above data are eligible for bonus. The criteria being that the employees having a salary greater than 45000 are not eligible for bonus. Write the formula the Manager should use for achieving the same and display the number of employees in cell F10.
 - (vi) The manager realizes that he has forgotten to add the S.No. Column in the above spreadsheet. Which feature will help him automate the typing of sequential numbers?
 - (vii) The manager wants to graphically represent a comparative analysis of the salaries of employees. Suggest the most suitable chart type for achieving the same.
 - (viii) If the Basic salary of an employee changes, will the manager have to redo all the calculations for that particular employee? Explain.
6. Prepare a multimedia presentation on “Internet” having at least five slides. The slides should contain topology, communication media, devices, network types etc. You should e- mail your presentation to akashakash0609@gmail.com before school gets reopened.



**TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT**

GRADE- IX- (ENGLISH) ACADEMIC YEAR - 2016-17

1. Read the novel 'Gulliver's Travel' and write the summary of all the Chapters as per the following guidelines:
 - a) Summary should be written chapter wise.
 - b) Use A-4 size sheet for writing the summary.
 - c) Use separate sheets for writing the summary of each chapter.
 - d) Handwriting should be neat and clean.
 - e) Word limit is 80-120 for each chapter's summary.
2. Do solve any two sample papers from prescribed book (Communicative Oxford Book) in a separate notebook

GRADE- IX- (HINDI) ACADEMIC YEAR - 2016-17

- 1। किसी पालतू पशु के रहन सहन के आधार पर एक चित्रात्मक विवरण तैयार कीजिए।
- 2। पठित अलंकारों के तीन - तीन उदाहरण सहित चित्रात्मक विवरण तैयार कीजिए।
- 3। 'खानदान' फिल्म देखिए और उसकी समीक्षा लिखिए। इस फिल्म से आपको क्या शिक्षा मिलती है लिखिए।

GRADE- IX- (FRENCH) ACADEMIC YEAR - 2016-17

1. Make a twelve page colourful and decorative year calendar for 2017 including the following details in french: [10marks]
 - a) Days & month
 - b) Dates in numeric and words
 - c) Important days & festivals [France/India]Paste a colourful image of one monument or important place of France on each month page and also give some information about the image in few (3 to 4) lines, below each image.
- 2) Describe your favourite personality (celebrity) including the following: [10marks]
 1. Name, nationality, works, tall/short, fat/slim, eye colour
 2. Hair (colour, straight/curly, long/short), face (round/oval, serious/smiling)
 3. Nature (kind & friendly)



TEMPLETON ACADEMY INTERNATIONAL
NAUKUCHIYATAL
WINTER ACADEMIC ENRICHMENT ASSIGNMENT

GRADE- IX- (SOCIAL STUDIES) ACADEMIC YEAR - 2016-17

1. Choose anyone from each- man-made disaster and natural disaster which is likely to affect your school.

Prepare a poster of instructions to create awareness among students in your school.

(**Man-made disaster**- Train, air and road accidents, fire accidents, gas leaks , stampede etc)

(**Natural disaster**- Floods, landslides, earthquakes, tsunami,etc)

2. Interview a boy or a girl of the age group between 18 to 20 years. Prepare a questionnaire of 10 questions which covers the aspects like-

- Freedom at home and school
- Views about consuming alcohol, drugs, smoking and the ways to prevent them
- About rash driving
- Freedom to earn and spend
- Views on present political situation
- About eating habits and concern for nutritional values
- Views on Opposite gender
- What they think about parents orders and demands
- Views on economic and social disparities in the society
- Views on Independence and freedom of the country.

Prepare a record of the answers which will be used for the group activity in the class room after the break.