



# Maheshwari Public School

A Prestigious Co-Educational English Medium School  
Governed by The Education Committee of The Maheshwari Samaj Society, Jaipur  
Affiliated to CBSE, Delhi , Affiliation No. 1730891



**Holiday Homework**

**Class XII**

**Science Stream**

**Session(2026-27)**

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**English**

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# English

## Assessment in Listening and Speaking Skills (ALS)

### i. Suggestions for Project Work:

- The Project can be inter-disciplinary in theme. The ideas/issues highlighted in the chapters/ poems/ drama given the prescribed books can also be developed in the form of a project. Students can also take up any relevant and age-appropriate theme.
- Such topics may be taken up that provide students with opportunities for listening and speaking. Some suggestions are as follows:

#### a) Interview-Based research:

##### Example:

- Students can choose a topic on which to do their research/ interview, e.g. a student can choose the topic: “Evolving food tastes in my neighbourhood” or “Corona pandemic and the fallout on families.” Read the available literature.
- The student then conducts interviews with a few neighbours on the topic. For an interview, with the help of the teacher, student will frame questions based on the preliminary research/background.
- The student will then write an essay/ write up / report etc. up to 1000 words on his/her research and submit it. He/ She will then take a viva on the research project. The project can be done in individually or in pairs/ groups

b) Students listen to podcasts/ interviews/radio or TV documentary on a topic and prepare a report countering or agreeing with the speakers. Write an 800 - 1000 words report and submit. Take a viva on the report.

c) Students create their own video/ Audio, after writing a script. Before they decide a format, the following elements can be taken into consideration:

- Theme/topic of the audio / video. Would the child like to pick a current issue or something artistic like theatre?
- What are the elements that need to be part of the script?
- Will the video/audio have an interview with one or more guests?
- Would they prefer to improvise while chatting with guests, or work from a script?
- What would be the duration?
- How would they present the script/report to the teacher? Can it be in the form of a narrative?

**d) Students can write, direct and present a theatrical production, /One act play**

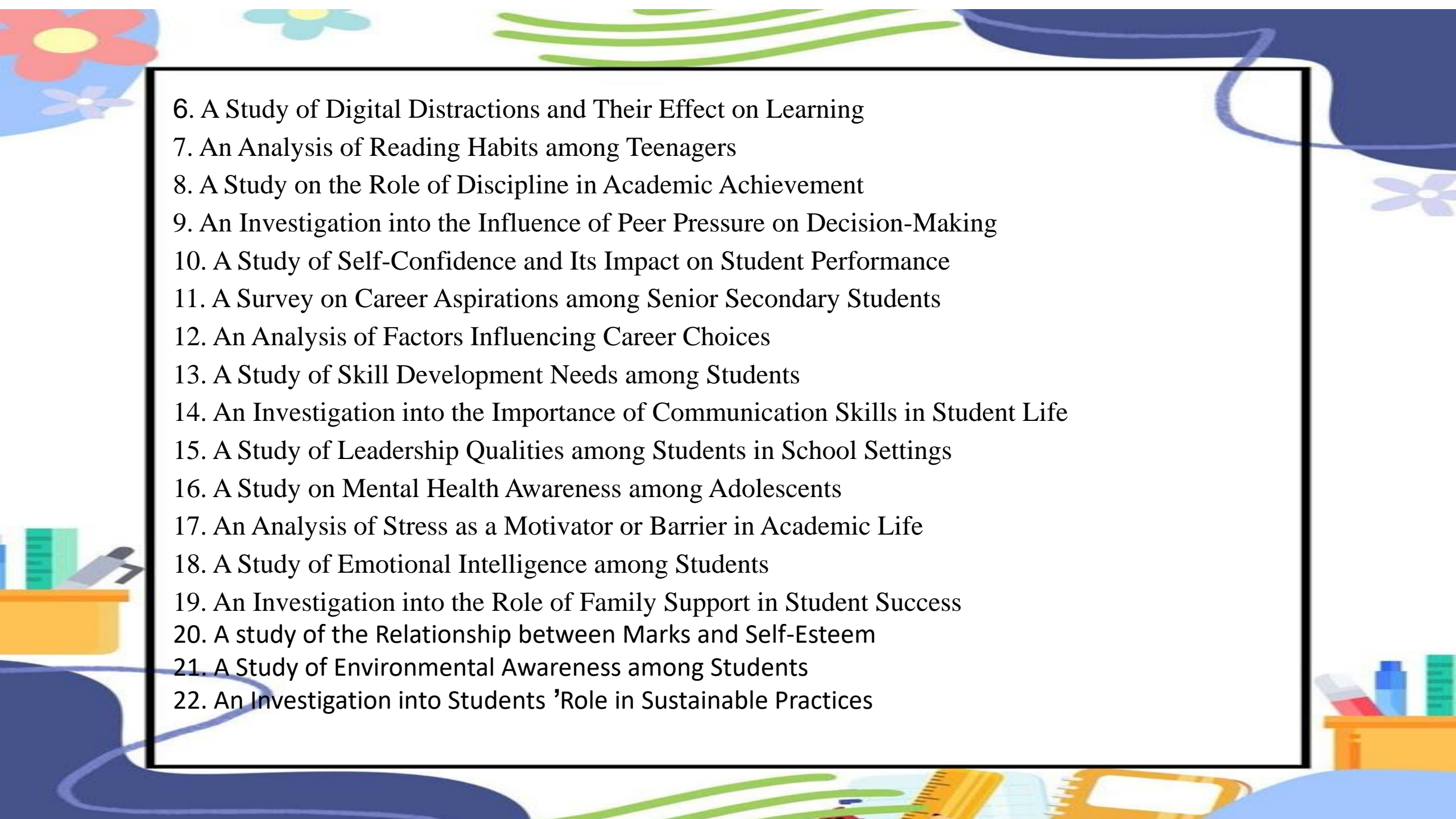
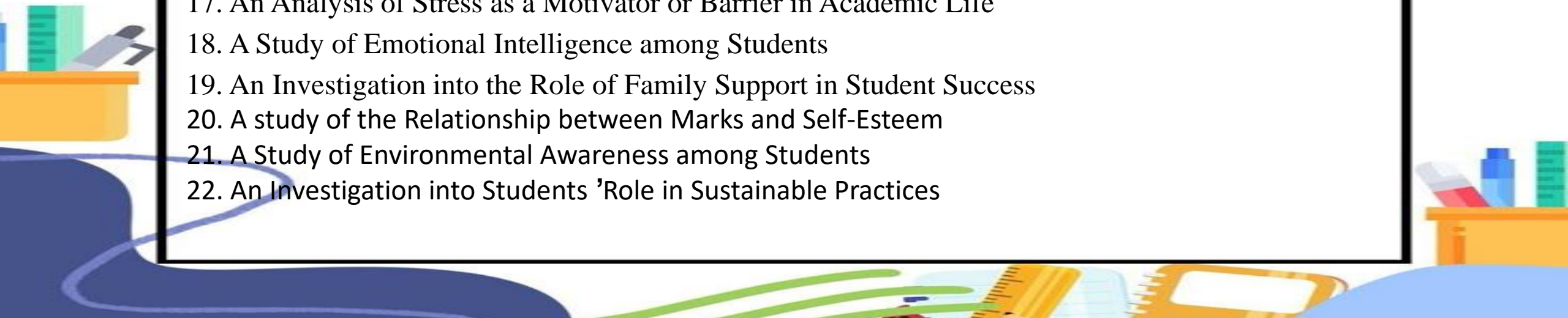
This will be a project which will be done as a team. It will involve planning, preparation and presentation. In short, various language skills will be utilised. There will be researching, discussion, writing the script, auditioning and ultimately producing the play. The project will end with a presentation and subsequently a viva. Teachers will be able to assess the core language skills of the students and help them grow as 21<sup>st</sup> century critical thinkers.

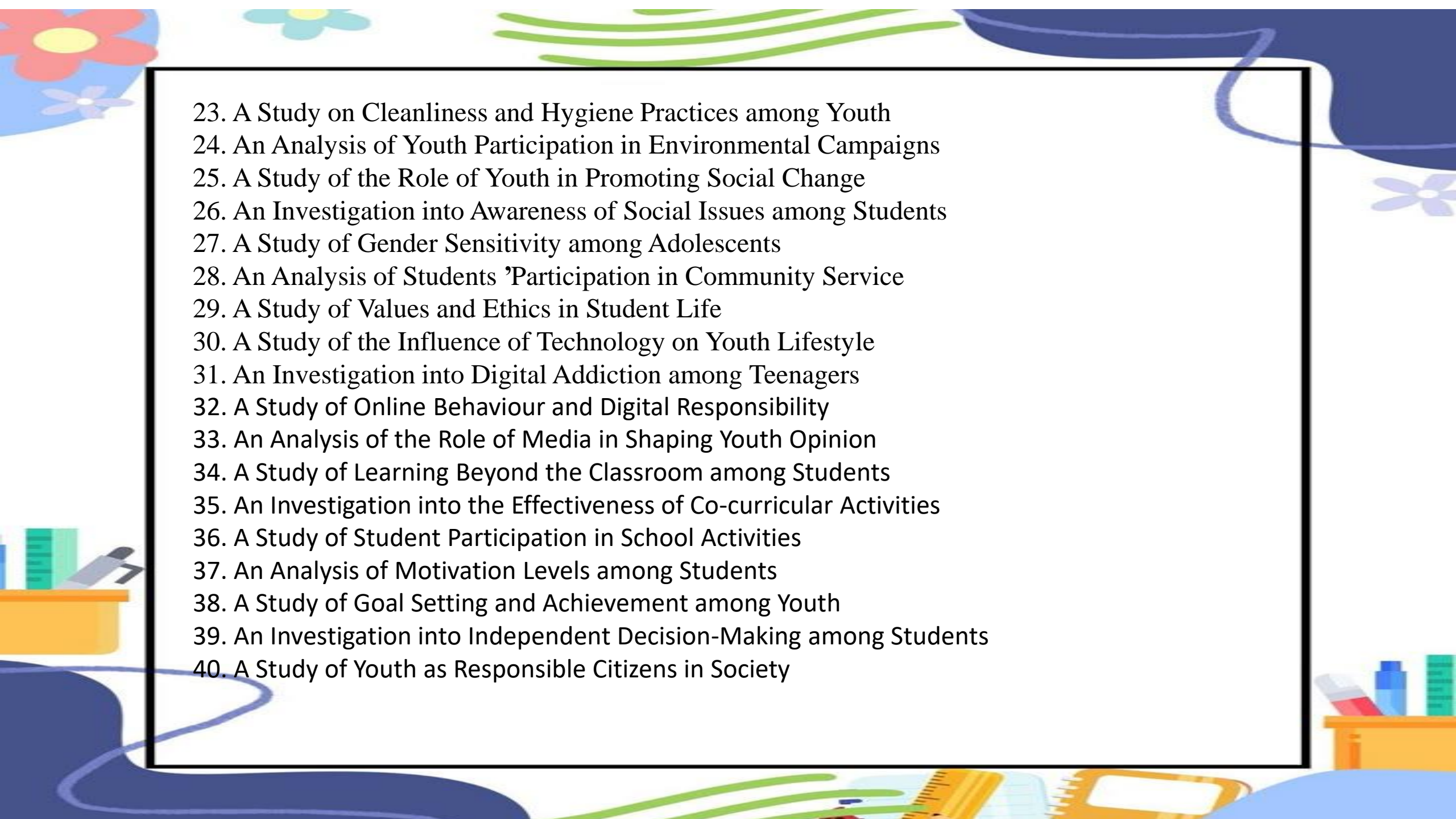
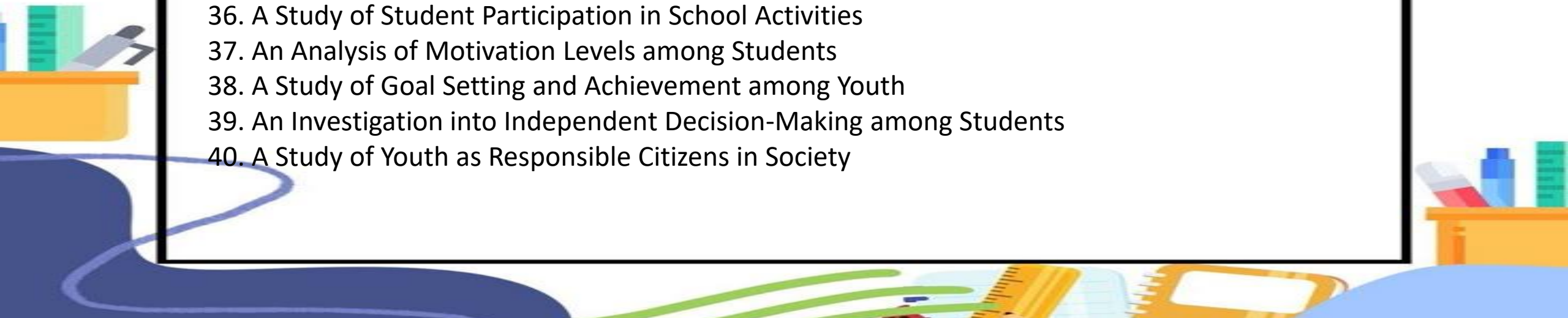
The **Project-Portfolios** is a compilation of the work that the students produce during the process of working on their ALS Project. The Project-Portfolio may include the following:

- Cover page, with title of project, school details/details of students.
- Statement of purpose/objectives/goals
- Certificate of completion under the guidance of the teacher.
- Action plan for the completion of assigned tasks.
- Materials such as scripts for the theatre/role play, questionnaires for interview, written assignments, essays, survey-reports and other material evidence of learning progress and academic accomplishment.
- The 800-1000 words essay/Script/Report.
- Student/group reflections.
- If possible, Photographs that capture the positive learning experiences of the student(s).
- List of resources/bibliography.

**Topic Allotment (Roll Number-wise)**

1. A Study of the Impact of Social Media on Student's Academic Performance
2. An Analysis of Time Management Practices among Senior Secondary Students
3. A Comparative Study of Online and Offline Learning Outcomes
4. A Study on Exam Stress and Coping Strategies among Students
5. An Investigation into Sleep Patterns and Academic Efficiency

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6. A Study of Digital Distractions and Their Effect on Learning
  7. An Analysis of Reading Habits among Teenagers
  8. A Study on the Role of Discipline in Academic Achievement
  9. An Investigation into the Influence of Peer Pressure on Decision-Making
  10. A Study of Self-Confidence and Its Impact on Student Performance
  11. A Survey on Career Aspirations among Senior Secondary Students
  12. An Analysis of Factors Influencing Career Choices
  13. A Study of Skill Development Needs among Students
  14. An Investigation into the Importance of Communication Skills in Student Life
  15. A Study of Leadership Qualities among Students in School Settings
  16. A Study on Mental Health Awareness among Adolescents
  17. An Analysis of Stress as a Motivator or Barrier in Academic Life
  18. A Study of Emotional Intelligence among Students
  19. An Investigation into the Role of Family Support in Student Success
  20. A study of the Relationship between Marks and Self-Esteem
  21. A Study of Environmental Awareness among Students
  22. An Investigation into Students' Role in Sustainable Practices
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23. A Study on Cleanliness and Hygiene Practices among Youth
  24. An Analysis of Youth Participation in Environmental Campaigns
  25. A Study of the Role of Youth in Promoting Social Change
  26. An Investigation into Awareness of Social Issues among Students
  27. A Study of Gender Sensitivity among Adolescents
  28. An Analysis of Students 'Participation in Community Service
  29. A Study of Values and Ethics in Student Life
  30. A Study of the Influence of Technology on Youth Lifestyle
  31. An Investigation into Digital Addiction among Teenagers
  32. A Study of Online Behaviour and Digital Responsibility
  33. An Analysis of the Role of Media in Shaping Youth Opinion
  34. A Study of Learning Beyond the Classroom among Students
  35. An Investigation into the Effectiveness of Co-curricular Activities
  36. A Study of Student Participation in School Activities
  37. An Analysis of Motivation Levels among Students
  38. A Study of Goal Setting and Achievement among Youth
  39. An Investigation into Independent Decision-Making among Students
  40. A Study of Youth as Responsible Citizens in Society
- 

## Experiential Learning Project (Roll Number-wise)

**Roll No. 1 – 8** • Author Study – Critical Profile

Choose a renowned author such as William Shakespeare, Rabindranath Tagore, or George Orwell

Prepare a research-based analytical chart including:

- Literary movement associated with the author
- Writing style and themes • Impact on society and literature
- Critical reception of their works • Personal evaluation of their contribution

**Roll No. 9-16** • Literary Scene Reconstruction (3D Model + Oral Explanation)

Design a 3D model representing a symbolic or climactic scene from any chapter/poem.

Extend beyond basics:

- Highlight symbolism and themes visually • Add dialogue tags or narration snippets
- Attach a written explanation (200 words)

**Roll No. 17- 24** • Morphology Project – Word Formation Lab

Create an interactive model/chart explaining:

- Common Errors, Tenses, Heteronyms, Homophones Homonyms
- Word transformation with meaning shifts
- Real-life application (advertisements, posters, headlines, etc.)

Challenge Element:

Analyse how word formation affects tone and meaning in texts

**Roll No. 25-32** • Grammar in Context Model

Select ONE topic:

- Tenses in narrative writing • Common errors and corrections • Voice transformation in journalism
- Reported speech in conversations

Your model must show:

- Rules + examples • Real-life usage (news, speeches, dialogues)

**Roll No. 33 -40** • Philosophy & Language Project “ –Wisdom Through Words”

Select 10 powerful quotations/proverbs and present:

- Literal meaning vs deeper interpretation • Contextual relevance in modern life
- Short real-life scenario for each • Visual symbolism/artistic representation Roll no 40 +

Thinking beyond the box

- Create a podcast / video (3–5 mins) explaining a recent contemporary national issue.
- Prepare a reading journal during holidays • Attempt a creative piece (poem, short story, blog)

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# Chemistry

# Chemistry

\*DO PROJECT FILE AND LAB WORK. TOPIC AND LAB WORK DETAILS WILL BE SHARED IN COMMUNITY GROUP SEPARATELY.

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# Physics

# Physics

DO PROJECT FILE AND LAB WORK. TOPIC AND LAB WORK DETAILS WILL BE SHARED IN COMMUNITY GROUP SEPARATELY.

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# Biology

# Biology

Please complete the following Summer Holiday Homework for Biology and submit it on the first day after the break:

1. Project Work: Prepare an investigatory project file on any one topic from the CBSE prescribed list.

Suggested topics:

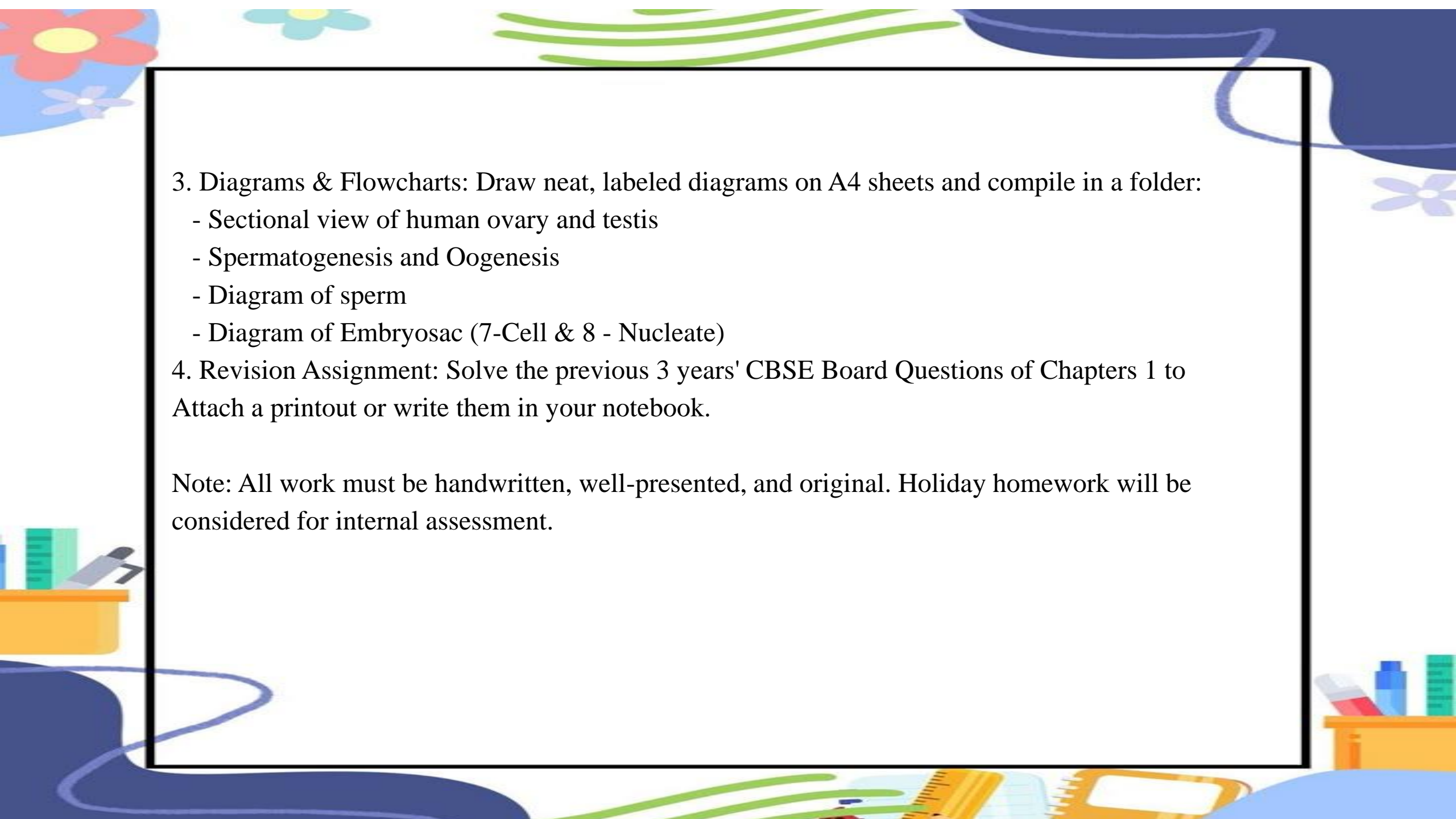
- Reproductive Health
- Human Genome Project
- Cancer Biology
- DNA Fingerprinting
- Drug Addiction and Its Impact

Follow CBSE guidelines: Aim, Introduction, Theory, Observations, Conclusion, Bibliography.

2. NCERT Practice: Solve all Intext and Exercise Questions of Chapters 1 to 2 in your fair notebook:

Ch 1: Sexual Reproduction in Flowering Plants

Ch 2: Human Reproduction



3. Diagrams & Flowcharts: Draw neat, labeled diagrams on A4 sheets and compile in a folder:

- Sectional view of human ovary and testis
- Spermatogenesis and Oogenesis
- Diagram of sperm
- Diagram of Embryosac (7-Cell & 8 - Nucleate)

4. Revision Assignment: Solve the previous 3 years' CBSE Board Questions of Chapters 1 to Attach a printout or write them in your notebook.

Note: All work must be handwritten, well-presented, and original. Holiday homework will be considered for internal assessment.



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# Core Maths

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# Maths

## PROJECT WORK :-

Activity 1. To verify that the relation  $R$  in the set of lines  $L$  of all lines in a plane defined by  $R = \{(l, m) : l \text{ is perpendicular to } m\}$  is an equivalence relation.

Activity 2. To demonstrate a function which is not one one but onto.

Activity 3. To demonstrate a function which is one one but not onto.

## WORKSHEET

1. The minors of  $-4$  and  $9$  and the cofactors of  $-4$  and  $9$  in matrix  $\begin{bmatrix} -1 & -2 & 3 \\ -4 & -5 & -6 \\ -7 & 8 & 9 \end{bmatrix}$  are respectively

- a)  $42, 3, -42, 3$       b)  $-42, -3, 42, -3$       c)  $42, 3, -42, -3$       d)  $42, 3, 42, 3$

2. If  $A$  and  $B$  are square matrices of order 3 such that  $|A| = -1, |B| = 3$  then  $|3AB|$  is equal to  
a)  $-9$       b)  $-81$       c)  $-27$       d)  $81$

3. Let the determinant of a  $3 \times 3$  matrix  $A$  be 6, then  $B$  is a matrix defined by  $B = 5A^2$ . Then, determinant of  $B$  is  
a) 180      b) 100      c) 80      d) None of These

4. If  $A$  is a  $3 \times 3$  non-singular matrix, then  $\det(A^{-1} \text{adj } A)$  is equal to  
a)  $\det A$       b) 1      c)  $(\det A)^2$       d)  $(\det A)^{-1}$

5. If matrix  $\begin{bmatrix} 0 & 1 & -2 \\ -1 & 0 & 3 \\ \lambda & -3 & 0 \end{bmatrix}$  is singular, then find  $\lambda$ ? □

6. Let  $A = \begin{bmatrix} 1 & 2 \\ -5 & 1 \end{bmatrix}$  and  $A^{-1} = xA + yI$ , then the values of  $x$  and  $y$  are

7. If  $\Delta_1 = \begin{vmatrix} 10 & 4 & 3 \\ 17 & 7 & 4 \\ 4 & -5 & 7 \end{vmatrix}, \Delta_2 = \begin{vmatrix} 4 & x+5 & 3 \\ 7 & x+12 & 4 \\ -5 & x-1 & 7 \end{vmatrix}$  such that  $\Delta_1 + \Delta_2 = 0$ , then find  $x$ ?

8. If  $A = \begin{bmatrix} 3 & 5 \\ 2 & 0 \end{bmatrix}$  and  $B = \begin{bmatrix} 1 & 17 \\ 0 & -10 \end{bmatrix}$ , then show that  $(AB)^{-1} = B^{-1}A^{-1}$

OR

If  $A = \begin{bmatrix} 1 & -1 & 1 \\ 0 & 2 & -3 \\ 2 & 1 & 0 \end{bmatrix}$ ,  $B = (\text{adj } A)$  and  $C = 5A$ , then  $\frac{|\text{adj } B|}{|C|}$  is equal to

9. If  $|A|=5$  and order of matrices is 3 then find the following

- $|\text{adj } A|$
- $|2 \text{ adj } A|$
- $|\text{adj}(\text{adj } A)|$
- $|5A|$
- $|A^{-1}|$

f.  $A(\text{adj } A)$

g.  $|A^{-1}A^T|$

10. if the system of equation  $-2x+y+z=a$ ,  $x-2y+z=b$  and  $x+y-2z=c$  is consistent then find the values of  $a+b+c$ .

11. Determine the product  $\begin{bmatrix} -4 & 4 & 4 \\ -7 & 1 & 3 \\ 5 & -3 & -1 \end{bmatrix} \begin{bmatrix} 1 & -1 & 1 \\ 1 & -2 & -2 \\ 2 & 1 & 3 \end{bmatrix}$  and use to solve the system of equations  $x-y+z=4$ ,  $x-2y-2z=9$  and  $2x+y+3z=1$ .

12. If  $A = \begin{bmatrix} 1 & -1 & 1 \\ 2 & 1 & -3 \\ 1 & 1 & 1 \end{bmatrix}$  then find  $A^{-1}$ . And hence solve the system of linear equations

$x+2y+z=4$ ,  $-x+y+z=0$  and  $x-3y+z=2$ .

13.. If  $A = \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & -2 \\ a & 2 & b \end{bmatrix}$  is a matrix satisfying  $AA^T = 9I_3$  then find the values of  $a$  and  $b$ .

14. If  $R$  and  $S$  are equivalence relation then show that  $R \cap S$  is also an equivalence relation.

15. Find the number of one-one functions defined from  $A = \{a, b, c, d\}$  to  $B = \{e, f, g, h\}$  and find the number of onto functions defined from  $A$  to  $A$ .

16.  $F(x) = 3x^2 + 2$  is defined from  $R$  to  $R$  then show that the function is neither one-one nor onto.

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# **Informatics Practices**



## Informatics Practices

Instructions-

All the Questions to be done in Copy / Practical file-

Q1. How is Series data structure different from a DataFrame data structure?(3 points)

Q2. Given are the two objects, a list object namely lst1 and a series object namely ser1, both are having similar values i.e. 2,4,6,8. Find the output produced by the following statements-

i) `print(lst1*2)`

ii) `print(ser1*2)`

Q3. Consider the given series ,M1-

	Marks
Term1	45
Term2	65
Term3	24
Term4	89

Write a program in Python to create the series.

Q4. What will be the output of the following program-

```
import pandas as pd
```

```
Fst= [9,10,11]
```

```
Scd=pd.Series(fst)
```

```
Ob1=pd.Series(data=Fst*2)
```

```
Ob2=pd.Series(data=Scd*2)
```

```
print("Ob1")
```

```
print(Ob1)
```

```
print("ob2")
```

```
print(Ob2)
```

Q5. What will be the output of the following code-

```
import pandas as pd
```

```
import numpy as np
```

```
Data=np.array(['a1','b1','c1','d1','e1','f1'])
```

```
s=pd.Series(Data)
```

```
print("I.")
```

```
print(s[:3])
```

```
print("ll.")
```

```
print(s[-3 :])
```

Q6. What will be the output of the following:-

```
data=np.data(["a1","b1","c1","d1","e1"])
```

```
s=pd.Series(data,index=[1001,1002,1003,1004,1005])
```

```
print(s[[1002,1003,1004]])
```

Q7. Given a DataFrame `mdf` as shown below:

	A	B	C
0	1	2	3
1	4	5	6

a. Create the dataframe as shown above.

b. Add a new column named `D` having the value- 8,10

c. Add a new row with values- 6,3,2.

Q8. Explain briefly the CSV format.

Q9. Complete the given Python code to get the required output (ignore the dtype attribute) as Output:

Tamil Nadu	Chennai
Uttar Pradesh	Lucknow
Manipur	Imphal

Code:

```
import _____ as pd  
data = ['Chennai','_____', 'Imphal']  
indx = ['Tamil Nadu','Uttar Pradesh','Manipur']  
s = pd.Series(_____, indx)  
print(_____)
```

Q10. Project Work-( Project related work on the topic assigned is to be completed by using DataFrame, Series , CSV files and Matplotlib Library).

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# PSYCHOLOGY

# PSYCHOLOGY

**# Prepare a file.** (practical A4)

Write about the given topics according to the instructions given in class.

1. Intelligence
2. Personality
3. Aptitude
4. Attitude
5. Adjustment

## **# Revise**

Chapter –1 ,Variations in Psychological Attributes.

Chapter -2 ,Self and Personality

## **# Project Work**

1.Case Study ( A4 Size File)

Choose one person (friend/family member) and study:

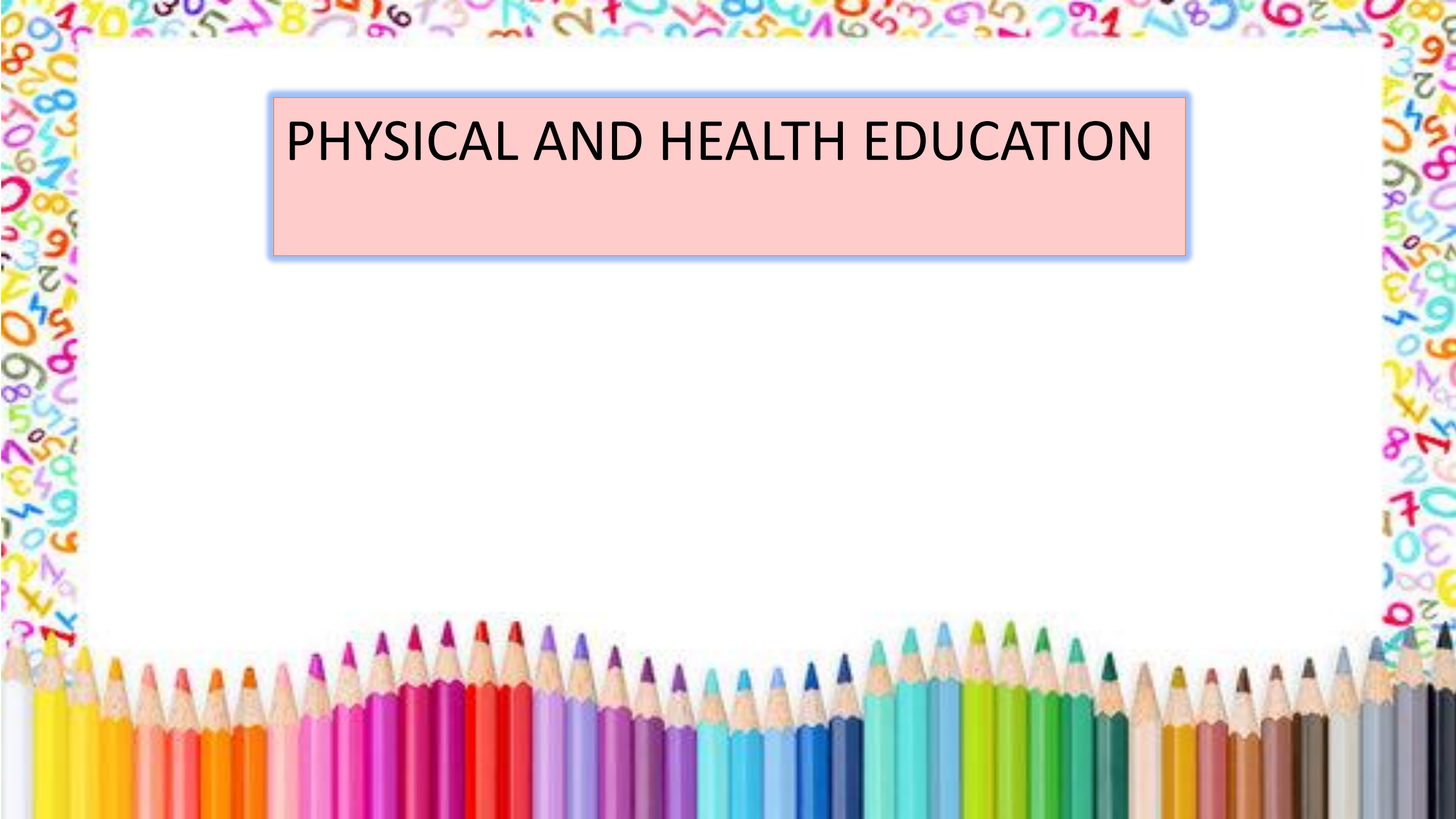
Habits

Interests

Strengths

Personality traits

# PHYSICAL AND HEALTH EDUCATION



**Practical 1 :-** Details of Athletics

1. History of Athletics
2. Latest rules and regulations
3. Important terminologies
4. Fundamental skills
5. Award winners name
6. Play Field specifications and
7. Tournaments.

**Practical 2 :-** Details of any major game

1. History of the game
2. Latest rules and regulations
3. Important terminologies
4. Fundamental skills
5. Award winners name
6. Play Field specifications and
7. Tournaments.

**Practical 3 :-**

Any 6 ASANAS-  
Details And Procedure

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# Yoga- Skill Subject

## **YOGA SKILL EDUCATION**

1. What is surya Namaskar ?
2. What is the health benefit of this ?
3. Explain the every step of surya Namaskar in detail like How to Perform Posture and Their Benefits and Who Should Avoid Them.
4. How to help in yoga sadhana ?
5. Explain any 4 pranayam in detail ?

**NOTE :- Students taking Yoga are required to complete this assignment in their practical file; it is not to be done in a register, nor in the Yoga lab manual.**

