SWARNPRASTHA PUBLIC SCHOOL, SONEPAT

विद्यायाः पथम् स्वर्णिम्
SPS
SWARNPRASTHA
PUBLIC SCHOOL
SONEPAT
SPARSH GROUP INITIATIVE

SESSION: 2024-25

HOLIDAY HOMEWORK

CLASS 11

STREAM: SCIENCE

"Learn while you explore, makes for a summer you'll adore!"

SUBJECT- ENGLISH

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, e.g. Can it be in the form of a narrative?
D. Students 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.
• The project will help assess the core language skills of the students and help them grow as 21st century critical thinkers.

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.
• Student's Action Plan for the completion of assigned tasks.
• Materials such as scripts for the theatre/role play, questionnaires for interviews, 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

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SUBJECT- HINDI

वैश्विक स्तर पर हिंदी का विस्तार विषय पर एक परियोजना (प्रोजेक्ट) कार्य तैयार कीजिए। परियोजना निर्माण निम्नलिखित बिंदुओं को ध्यान में रखकर किया जाएगा -

(क) हिंदी भाषा का संक्षिप्त परिचय

(ख) हिंदी साहित्य का संक्षिप्त इतिहास

(ग) बढ़ता दायरा

(घ) हमारे कर्तव्य

परियोजना कार्य का क्रम निम्नवत रखें -

मुख्य पृष्ठ, विद्यार्थी का घोषणा पत्र, प्रमाण पत्र, विषय सूची, अभारोक्ति, विषय परिचय, उद्देश्य, सीमांकन, विषय विस्तार, संदर्भ सूची

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SUBJECT- PHYSICS

Complete your practical notebook with the given set of Experiments and activities.
Prepare an investigatory project as discussed during class in a separate file.
It must include the following pages: index, acknowledgement, certificate, text matter with pictures at suitable places, bibliography

SECTION–A

Experiments

1. To measure the diameter of a small spherical/cylindrical body and to measure the internal diameter and depth of a given beaker/calorimeter using Vernier Callipers and hence find its volume.
2. To measure the diameter of a given wire and the thickness of a given sheet using a screw gauge.
3. To determine the volume of an irregular lamina using a screw gauge.
4. To determine the mass of two different objects using a beam balance.

Activities

1. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm.
2. To study the variation in the range of a projectile with the angle of projection.
3. To study the conservation of energy of a ball rolling down on an inclined plane (using a double inclined plane).
4. To study the dissipation of energy of a simple pendulum by plotting a graph between the square of amplitude and time.

SECTION-B

Experiments

1. To determine Young's modulus of elasticity of the material of a given wire.
2. To find the force constant of a helical spring by plotting a graph between load and extension.
3. To study the relationship between the temperature of a hot body and time by plotting a cooling curve.
9. To draw the I-V characteristic curve for a p-n junction diode in forward and reverse bias.

Activities

1. To note the change in the level of liquid in a container on heating and interpret the observations.
2. To observe the decrease in pressure with an increase in the velocity of a fluid.

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SUBJECT- CHEMISTRY

A. ICPE Project

Theme: The Government of India has taken the initiative for the use of recycled plastic in the final product as a part of the Extended Producer Responsibility (EPR) Policy.

➢ Highlight the important benefits of this initiative.

➢ Is there any limitation to the application of the final product?

You may present your findings in any one of the following formats:

- Audio Visual Clip (Duration 2 minutes, max size 10 MB)
- PowerPoint PresentationMaximum 5 + 2 Slides within 10 MB (Including title slide and last slide)
- Poster / ArtworkA3 size within max 10 MB size (For Hard Copy – A 3 Size Poster Paper)
- EssayLanguage: English OR Hindi (ONLY)

Font & Size: Times New Roman (English), 12 Kruti Dev -010 (Hindi),12 Handwritten: Clean handwriting Page Size: A4 (One Page Only)
Number of Words: Not more than 150

B. Write down the following experiments in your chemistry practical file (leaving the observations):

1. Crystallization of an impure sample of Alum.
2. Preparation of standard solution of Oxalic acid.
3. Determination of strength of a given solution of Sodium hydroxide by titrating it against a standard solution of Oxalic acid.
4. Preparation of standard solution of Sodium carbonate.
5. Determination of strength of a given solution of hydrochloric acid by titrating it against standard Sodium Carbonate solution.
6. Determination of the melting point of an organic compound.
7. Determination of the boiling point of an organic compound.
8. Detection of -Nitrogen, Sulphur, and Chlorine in organic compounds.

C. Prepare an investigatory project as discussed during class in a separate file.

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SUBJECT- COMPUTER SCIENCE

COMPUTER SYSTEM & ORGANIZATION

1. Explain the basic architecture of a computer.
2. What is the role of the CPU in a computer?
3. What is the function of memory in a computer?
4. What is the role of the input unit in a computer?
5. What is the role of the output unit in a computer?
6. Give some examples of input devices of the computer.
7. Give some examples of output devices of the computer.
8. What are the functions of the input and output units of a computer?
9. What are the functions performed by the control unit in the computer?
11. What are the functions performed by ALU?
12. Can you distinguish CPU and ALU?
13. Distinguish the internal and external memory of a computer.

14. Differentiate RAM and ROM.
15. Write short notes on different types of ROMs.
16. Write any four memory units
17. What are the basic components of any typical mobile system?
18. What are the various categories of software?
19. What is application software?
20. What is system software?
21. What is an operating system and how it is important for any computer?
22. Draw the basic building block of any typical mobile system
23. Do you feel mobile phones are replacing computers, if yes then why?
24. Differentiate compiler and interpreter
25. What is Boolean algebra?
26. What are the basic logic elements/gates?
27. What is a truth table?
28. What are the universal logic gates?
29. Define Logic Gates.
30. Define the following gates and draw a logic circuit diagram
    (a) OR Gate (b) AND Gate (c) NOT Gate (d) NAND Gate (e) NOR Gate
31. Prove by Boolean Algebra rules X (X + Y) = X
32. Prove by Boolean Algebra Rules X +X' Y = X + Y
33. Prove that by Boolean Algebra Rule for AB +AC + ABC= AB+AC
34. Construct a logic diagram for expression A. B + C
35. Construct a logic diagram for expression A. B + B.C
36. Construct a logic diagram for expression B. (A +C)
37. Find truth table of X + Y = Y + X
38. Prepare a truth table of XY= YX
39. Prepare a truth table X (X +Y) = X
40. Prepare a truth table of X + X Z' = X

INFORMATION REPRESENTATION

1. Convert 1111 0110 from base 2 to base 10
2. Convert 27 from base 10 to base 2
3. Convert 62cd from hexadecimal to base 2
4. Convert 0111 1000 1111 1100 from binary to base 16
5. Convert 223 from base 10 to binary
6. Convert 10 from octal to binary
7. Convert d214 from base 16 to binary
8. Convert 77 from base 8 to base 10
9. Convert 11101010 from base 2 to base 16
10. Convert 41 from base 16 to base 2
11. Convert FF from base 16 to base 2
12. Convert (1011.101)2 into decimal.
13. Convert (F4C)16 into decimal.
14. Convert 011012 to octal
15. Convert 0011001102 to octal
16. Convert 10112 to octal
17. Convert 111100012 to octal
18. What is ASCII CODE and where it is used and why?
19. What is Unicode?

PROGRAM EXECUTION

1. What is program execution?
2. What is the basic flow of execution of a program?
3. Differentiate the linker and loader parts of the compiler
4. How do you think that operating system works as a resource manager?
5. Differentiate compiler and interpreter
6. What are the steps of program compilation of a compiler
7. What are the phases of the compilation move of a program execution?
8. What are the major operating system functions?
9. What are the major activities of an operating system in respect of program management?
10. Describe the process state diagram.

GETTING STARTED WITH PYTHON

1. Who is the developer of Python Programming Language?
2. How Python was named for Python Programming language?
3. Is Python a cross-platform language, how?
4. What are the advantages of Python Programming Language? **PYTHON FUNDAMENTALS**
5. What are literals in Python? How many types of literals are there in Python?
6. How string literal is represented in Python?
7. What is a statement and expression?
8. What is the role of indention in Python?
9. What are variables?
10. What is dynamic typing in Python?
11. Differentiate keywords and identifiers.
12. What are tokens in Python?
13. Write a Python program to find out the simple interest.

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SUBJECT- MATHEMATICS

- Project: Do any one project (In form of PPT, 3D model, Chart, album etc)
  # Sacred Geometry: The language of universe
  #Fractal Geometry soul of monuments and temples
  # Wall of Indian mathematician
  #Mathematics and career opportunities
- Maths lab Activities:(Do in math's lab manual)
  Ref. Full marks Lab Manual
  1. To find the number of subsets of a given set and verify that if a set has n elements, then the total number of subsets is 2 n.
  2. To represent set-theoretic operations using a Venn – diagram.
  3. To verify that two sets A and B , n(AxB) = pxq and the total number of relations from set A to set B is 2 pq, where n(A) = p and n(B) = q
  4. To demonstrate that the arithmetic mean of two different positive numbers is always greater than the Geometric mean.
  5. Graphical solutions of linear inequalities in two variables.

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SUBJECT- PSYCHOLOGY

Part-1
Movie / story/ novel / TV series Analysis
Pick up any story/ novel/ movie or any famous personality which you like/has impacted you or is close to your heart. Analyze it in your way using a 'what if' situation
Write about a different climax /ending or an anti-climax to the scenario according to your point of view

PART-2
Prepare a detailed project file about any one topic in Psychology you like the most or which led you to take this
subject matter. (For instance, you can choose topics like personality, dreams, any particular branch of psychology, etc.)

Points to remember: -
The project comprises 25 marks.
Illustrate your project with colours, photographs, beautiful quotes, dialogues,
conversations, and self-made quotes.
A self-made title to the project is a must.
Avoid copying from internet sources, firsthand information will be appreciated.

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SUBJECT- BIOLOGY

1. Write down the following experiments in your biology practical file (leaving the observations):
List of practical's to be done:
- Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials.
- Study of osmosis by potato osmometer.
- Comparative study of the rates of transpiration in the upper and lower surfaces of leaves.
- Test for the presence of sugar in urine.
- Test for the presence of bile salts in urine.
- Study of plasmolysis in flashy scale leaves of onion bulb.
- Study of distribution of stomata on the upper and lower surfaces of leaves.

Spotting
- Parts of a compound microscope
- Specimens/slides/models and identification with reasons
    a. Any wind/insect pollinated flower
    b. Lichen
    c. Yeast
    d. Liverwort
    e. Hydra
    f. Ascaris
    g. Leech
    h. Lizard
    i. Rabbit
    j. Camel

2. Prepare an investigatory project as discussed during class in a separate file.
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SUBJECT- PHYSICAL EDUCATION

1)Physical Fitness Test: SAI Khelo India test.

2)Proficiency in any games and sports.

(Skill of any one IOA-recognized sports/Game of choice)

3)Yogic Practice: Any two Asanas, contraindications and Benefits

4)Maintain all records in the Record file.

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SUBJECT- ENTREPRENEURSHIP

- Prepare a project report on the business plan of any of the business organisations.
- Prepare a case history on any one of the Entrepreneurs in his life history and his achievements and his business organisations.

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"Art is the silent expression of thoughts, feelings, and experiences."

- Marilyn O

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