



FEDERAL DIRECTORATE OF EDUCATION

Summer Vacation Task

Computer-----Class-VIII

**SESSION
2023-24**



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FEDERAL DIRECTORATE OF EDUCATION

SUMMER VACATION HOMEWORK

CLASS: 8

Note: Summer Vacation Homework must be completed in full. Attempt the questions on loose sheets. File containing all loose sheets must be submitted on the first day after vacation.

1. SUBJECT: COMPUTER SCIENCE

- **VACATION TASKS**
- **Unit # 1**
- **ICT FUNDAMENTALS**

No.	Student Learning Objective	Task
1	Knowledge of computer networks	What is computer networking and why is it important?
2	Understanding of computer networks	What is a network protocol and what are some examples?
3	Analysis of computer networks	What is the difference between a LAN and a WAN?
4	Understanding of flow of data	How does data travel across the internet?
5	Identify core networking components	What is a router and what is its role in a network?
6	Analysis of different types of networks	What is the difference between a wired and a wireless network?
7	Analysis of wireless networks	What are the advantages and disadvantages of using Wi-Fi?
8	Identify network security	What is a firewall and why is it important in network security?
9	Application of network	How does a VPN (Virtual Private Network) work and what is it used for?
10	Analysis of basics of networking	What are the basic steps involved in setting up a home network?

11	Knowing about techniques	What are some common network troubleshooting techniques?
12	Identify the working of components	What is the difference between a hub, a switch, and a router?
13	Application of knowledge	What is a DNS (Domain Name System) and how does it work?
14	Understanding of ISP	What is the role of an ISP (Internet Service Provider) in networking?
15	Analysis of the usage of emerging technologies	What are some emerging trends in computer networking?

VACATION PROJECT

Students have to complete one project to practice the practical application of knowledge. Following is the detail of project.

Student Learning Objective	Project Details	Project Deliverables
Develop and demonstrate understanding of computer wireless networking	Title: Exploring Wireless Networking: Connecting the World Wirelessly	<p>Following items should be emailed to teacher in an email titled with Student Name:</p> <p>A screen recording of the connectivity to any source of Wi-Fi</p> <p>Screenshots of activities performed by using wireless networks</p> <p>3 screenshots of other wireless network connectivity</p>

- Unit # 2
- DIGITAL SKILLS

No.	Students learning objective	Task
1	Develop and demonstrate data handling	<p>Questions:</p> <p>1. What is a spreadsheet, and how is it used in various industries and fields?</p>

	<p>skills by using various software tools e.g MS Excel, Google sheets etc.</p>	<ol style="list-style-type: none"> 2. How do you create a new spreadsheet in popular software like Microsoft Excel or Google Sheets? 3. Explain the difference between rows and columns in a spreadsheet. 4. What are cells in a spreadsheet, and how are they identified? 5. How can you enter data into a cell in a spreadsheet? 6. What are formulas in spreadsheets, and how are they used to perform calculations? 7. Provide examples of basic mathematical operations that can be performed using formulas in a spreadsheet. 8. How do you format cells in a spreadsheet to change the appearance of the data? 9. What is conditional formatting in a spreadsheet, and how can it be used to highlight specific data? 10. How can you sort and filter data in a spreadsheet to organize information more effectively? 11. Explain the concept of charts and graphs in a spreadsheet, and how they can represent data visually. 12. What are functions in a spreadsheet, and how do they differ from formulas? 13. Provide examples of common functions used in spreadsheets, such as SUM, AVERAGE, and MAX. 14. How can you create a basic budget or expense tracker using a spreadsheet? 15. What are the advantages of using spreadsheets in problem-solving and data analysis tasks? 16. How can you collaborate with others on a spreadsheet, allowing multiple
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		<p>people to work on it simultaneously?</p> <p>17. What are some potential errors or mistakes that can occur in a spreadsheet, and how can they be avoided or fixed?</p> <p>18. How can you print a spreadsheet or generate PDF versions of the data?</p> <p>19. Explain the concept of data validation in a spreadsheet and how it can help ensure data accuracy.</p> <p>20. Provide tips for organizing and managing large sets of data in a spreadsheet.</p>

Students have to complete one project to practice the practical application of knowledge. Following is the detail of project.

Student Learning Objective	Project Details	Project Deliverables component
<p>The objective of this project is to introduce grade 8 students to spreadsheets as a tool for organizing data and analyzing information. Students will learn basic spreadsheet functions, explore data entry techniques, and apply their knowledge to solve real-life problems</p>	<p>Title: Exploring Spreadsheets: Organizing Data and Analyzing Information</p> <p>Introduce students to common formulas and functions, such as SUM, AVERAGE, MAX, and MIN</p>	<p>Following items should be emailed to teacher in an email titled with Student Name:</p> <ol style="list-style-type: none"> 1. A screen shot of the spreadsheet used 2. Screenshots of activities performed by using data and functions 3. Final results of application of formula