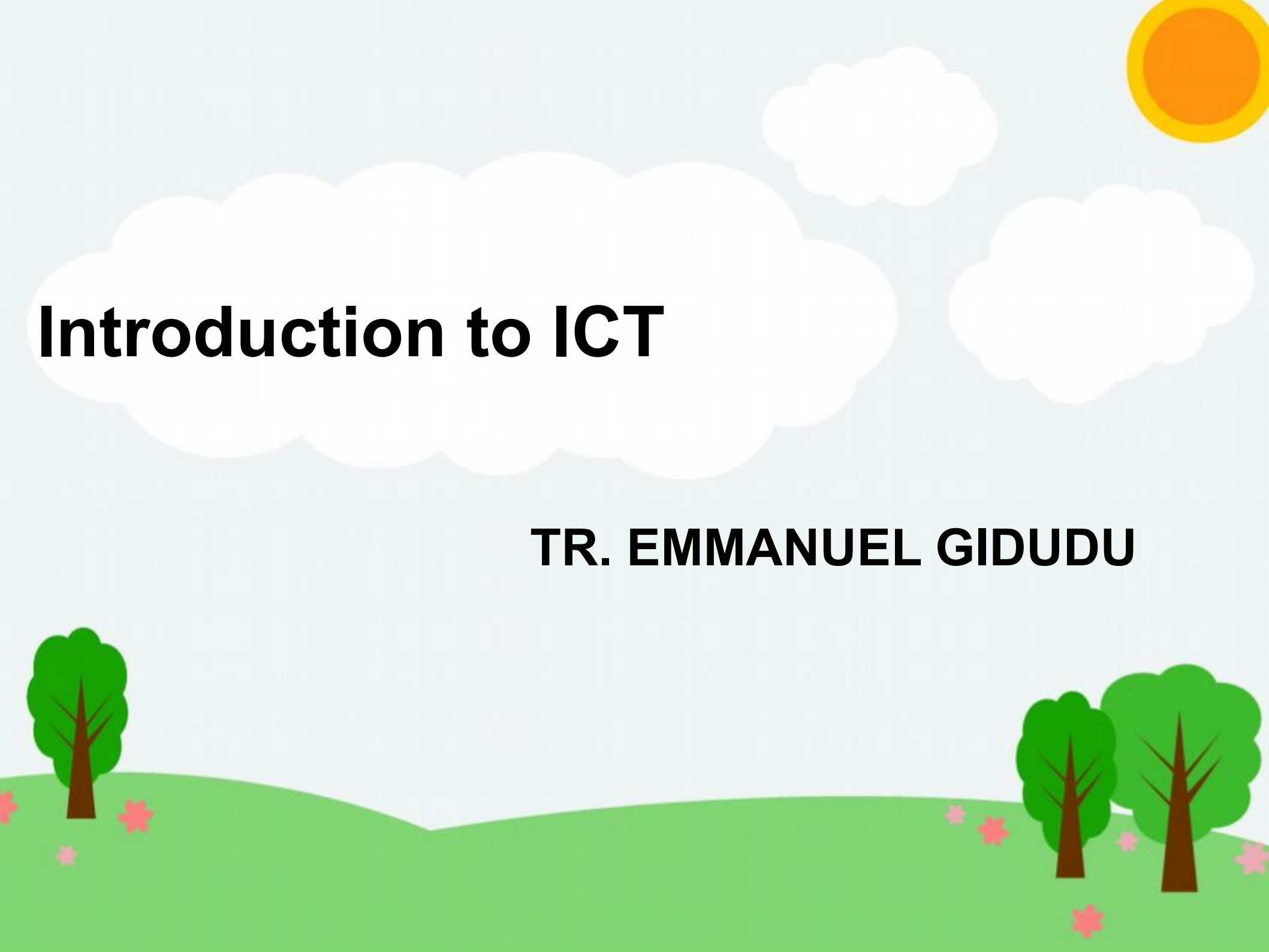
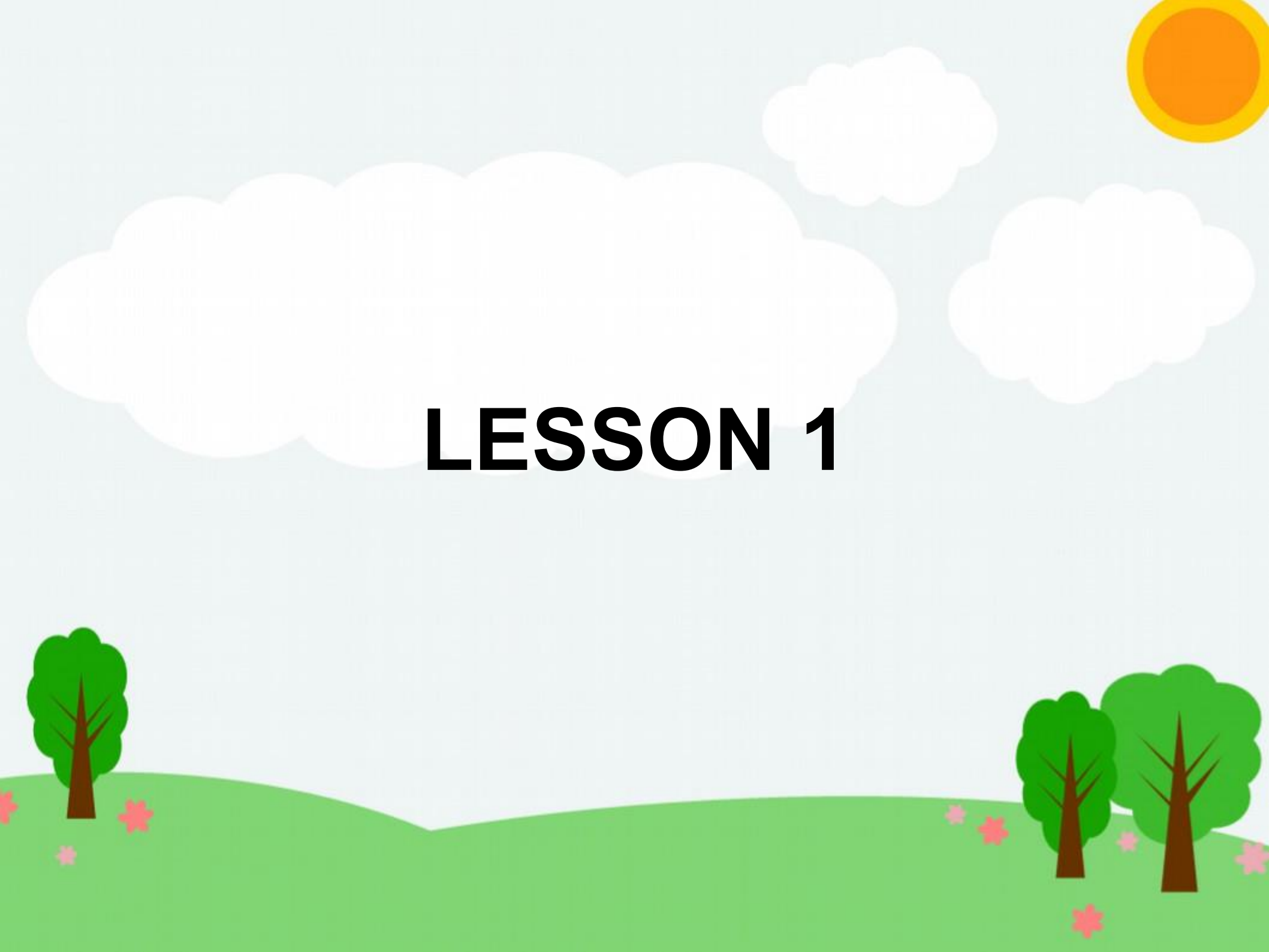


The background of the slide is a light blue sky. In the top right corner is a bright yellow sun with a thick orange border. There are three white, fluffy clouds: one large one on the left, and two smaller ones on the right. The bottom of the slide features a green landscape with rolling hills. On the left hill is a single green tree with a brown trunk. On the right hill are two green trees with brown trunks. Small pink flowers are scattered across the green grass.

Introduction to ICT

TR. EMMANUEL GIDUDU

The background features a light blue sky with three white, fluffy clouds. A bright yellow sun with a thick orange border is in the top right corner. The ground is a green hill with a small valley. On the left, there is a single green tree with a brown trunk and several small pink flowers. On the right, there are two green trees with brown trunks and more small pink flowers.

LESSON 1

Learning Objectives

- By the end of this lesson, you should be able to;
- Define the term a computer.
- Define computer hardware and software.
- List areas where computers are used today.
- Explain the use of computers in our daily life.



Keywords

- Note down the following keywords:
- Computer
- Hardware
- Software
- Personal computer
- Applications



INTRODUCTION TO ICT

- **Exercise 1.1 (In pairs)**
- What is a computer?
- List three(3) places where you have seen computers in action (being used) and what they are used for.
- Electronic device used to manipulate data to information

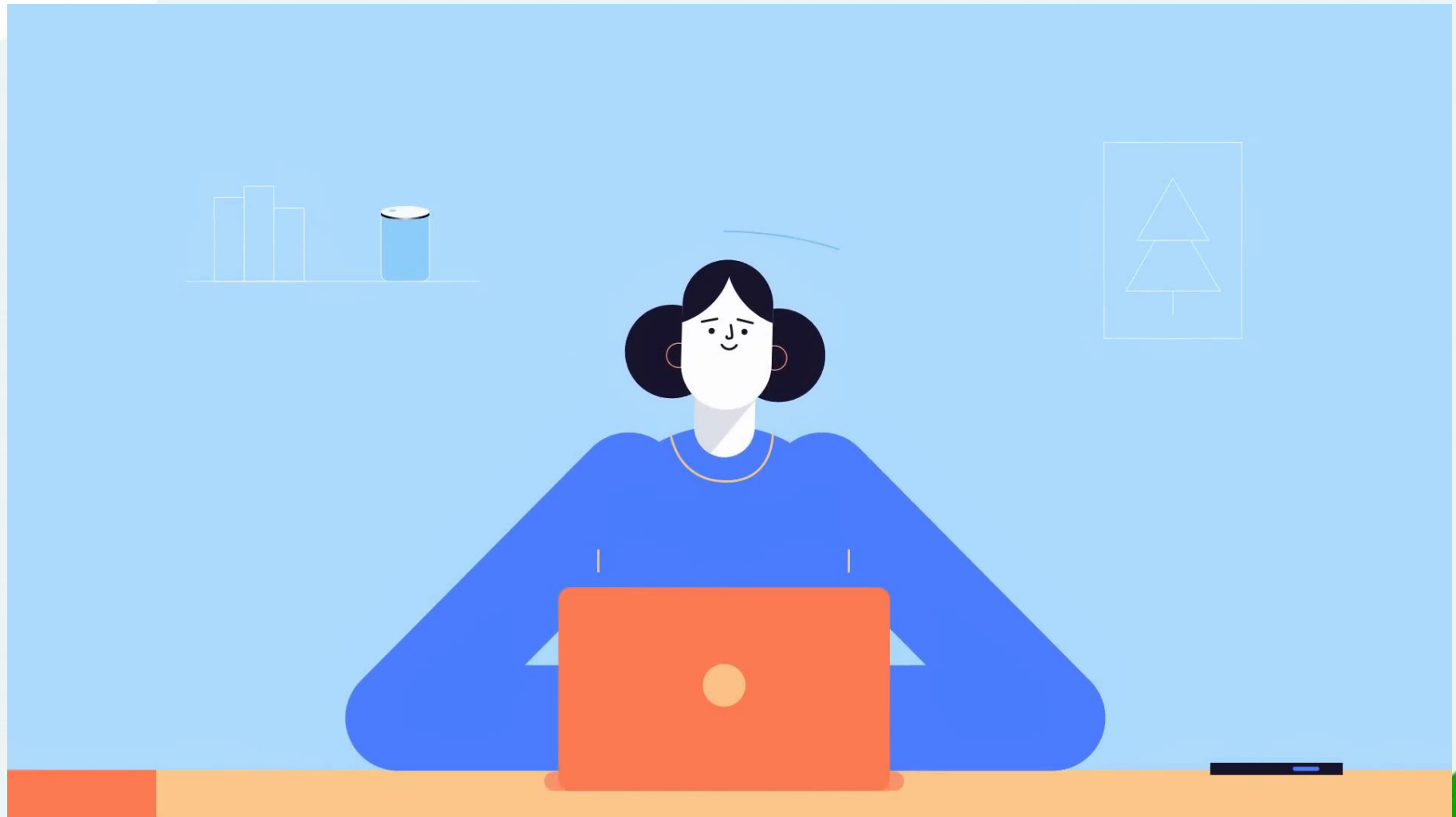


Video clip

- Watch the video clip attached on the next slide and note down the key point, ensure to respond to the first exercise 1.1.



Video Clip



HOW TO DO RESEARCH

- In library books
- On the computers



Take Home Assignment

- Research about types of computers and their use in society today.
- Research and document about computer lab safety rules and regulations.
- **(To be checked in the next lesson)**





LESSON 2

Learning Objectives

By the end of the lesson, you should be able to;

- Define the term ICT.
- List some of the ICT tools in our surrounding.
- Explain the use of those ICT tools in our daily activities.



Keywords

- Information
- Communication
- Technology



Exercise 1.2

What is ICT in full?



Exercise 1.3

Define each of these in details;

- Information
- Communication
- Technology



Definition of Key Terms

ICT stands for Information and Communication Technology. Let us break it down:

Information: Data that has been processed and given meaning. For example, knowing that 'it will rain today' is information derived from weather data.

Communication: The process of exchanging or sharing information between two or more parties.

Technology: The application of scientific knowledge using tools, machines, and systems to solve problems and make tasks easier.



ICT

Information and Communication Technology (ICT) is one of the most exciting and rapidly growing fields in the modern world. This topic introduces learners to the broad world of ICT — what it means, the tools it encompasses, how it is used across different sectors, and the safety measures that should be observed when using ICT tools.



Exercise attached

Watch the video and respond to these questions:

1. List at-least three ICT tools mentioned in the video.
2. What is the function of the ICT tools you mentioned above.



ICT tools



List of ICT tools

Smartphone



Radio



Computer / Laptop



Wi-Fi



Television



ATM Machine



Digital Camera



GPS



Scanner



Projector



Printer



Server



Smartwatch



Headphones



Drone



USB Flash Drive & Memory Card



Tablet



Bluetooth Speakers



Take Home assignment

Exercise 1.4

- Move around the school and identify ICT devices and what they are used for around the school.
- Research about the use of computers in schools.



Lesson key terms Identified

Wi-Fi- Wireless Fidelity

ATM- Automated Teller Machine

GPS – Global Positioning System

USB – Universal Serial Bus

HDMI cable – High Definition Multi-media Interface

VGA cable – Video Graphics



The background features a light blue sky with three white, fluffy clouds. A bright yellow sun with a thick orange border is in the top right corner. The ground is a green hill with a small valley. On the left, there is a single green tree with a brown trunk and a few small pink flowers. On the right, there are two green trees with brown trunks and several small pink flowers scattered around them.

LESSON 3

Lesson Objectives

By the end of the lesson, learners should be able to;

- Explain the use of ICT in education.
- Explain the use of ICT in banks.
- Explain the use of ICT in health sector.



Keywords

The following are the keywords;

- technology
- communication
- information
- integration

etc

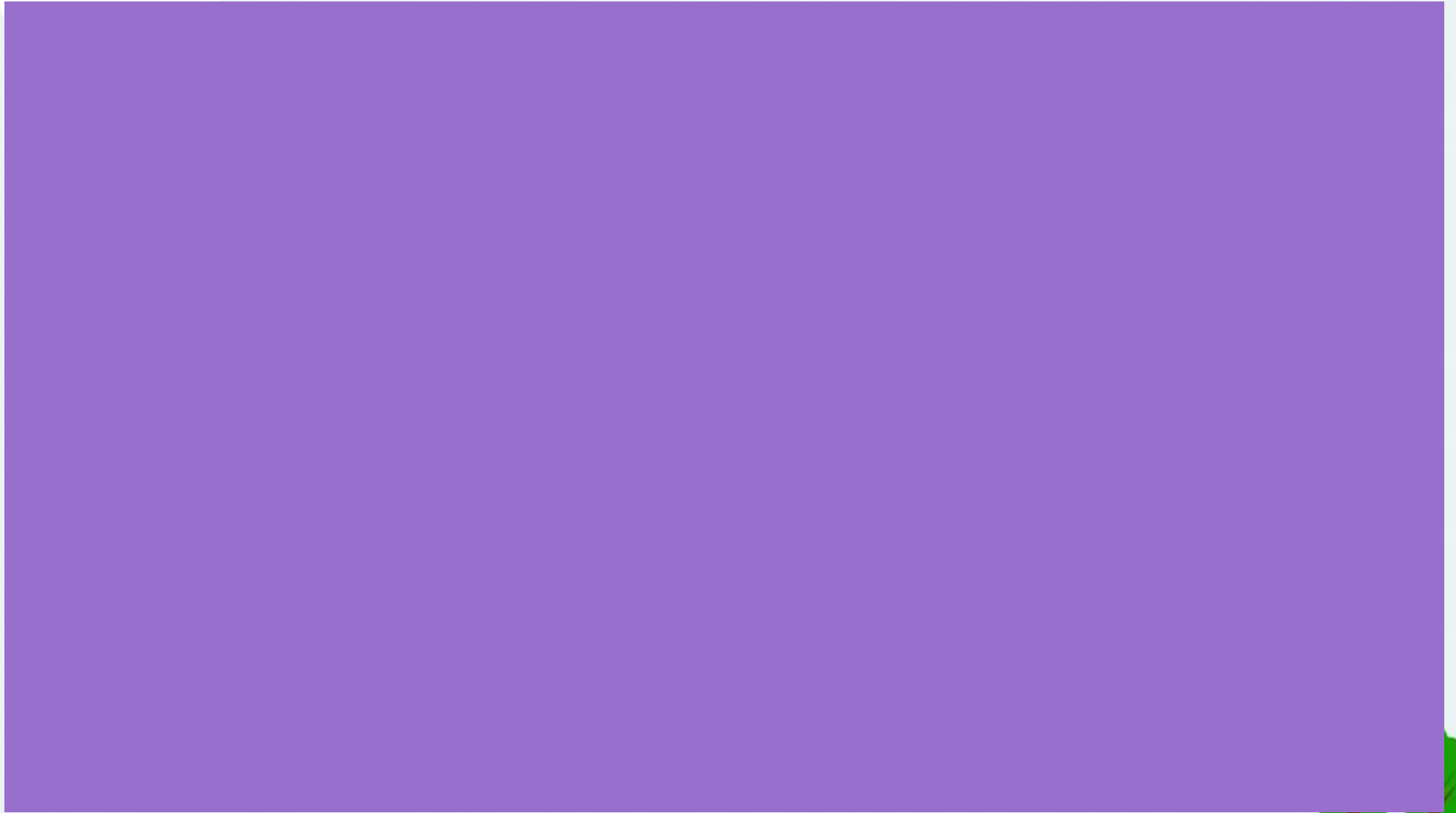


Video attached

Watch the video attached and listen to it carefully;
Use it to respond to the exercise that follows;



Video 1 attached



Video 2 attached



Exercise 1.5

Explain the use ICT in the following areas;

- Banking
- Education
- Health
- Industry
- security



ICT in banking

ICT has transformed banking by making services faster and more convenient:

Online & mobile banking allow customers to transfer money, pay bills, and check balances anytime.

ATMs enable cash withdrawals and deposits without visiting the bank.

Electronic transactions (e.g. debit cards) reduce the need for cash.

Data management systems store customer records securely and accurately.



ICT in education

ICT improves teaching and learning in many ways:

E-learning platforms support online classes and distance learning.

Digital resources like e-books, videos, and simulations make learning interactive.

Communication tools (email, chat, video calls) connect teachers and students easily.

School management systems handle exams, results, and student records.



ICT in health

ICT helps deliver better and faster healthcare:

Electronic Health Records (EHRs) store patient information safely.

Telemedicine allows doctors to consult patients remotely.

Diagnostic tools (scanners, lab systems) improve accuracy in treatment.

Hospital systems manage appointments, billing, and inventory.



ICT in industry

ICT increases efficiency and productivity in industries:

Automation and robotics speed up manufacturing processes.

Computer-Aided Design (CAD) helps in designing products.

Management information systems track production, sales, and stock.

Communication technologies connect suppliers, workers, and customers.



ICT in Security

ICT plays a key role in protecting people and information:

Cybersecurity tools protect data from hackers and viruses.

Surveillance systems (CCTV) monitor public and private spaces.

Biometric systems use fingerprints or facial recognition for access control.

Encryption keeps sensitive information confidential.



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LESSON 4

Lesson objectives

By the end of this lesson, learners should be able to;

- Identify ICT tools in their surrounding (school)
- Explain the safety precautions while handling and working with ICT tools.



Keywords

Safety

Precautions

ICT

Etc..



Exercise

Briefly write about;

- safety
- precautions



Safety precautions

Watch the video attached and present your work to your peers.

Ensure to list down key points.



Safety precautions



LESSON 44:

*Health and Safety
in Using ICT Tools*

Safety Precautions When Working with ICT Tools

General Safety Precautions

Always follow instructions when using ICT equipment.

Do not eat or drink near computers to avoid spills.

Handle devices gently to prevent damage.

Keep the work area clean and organized.



Cont

Electrical Safety

Ensure hands are dry before touching electrical devices.

Do not use damaged cables or plugs.

Switch off and unplug devices after use.

Use surge protectors to prevent damage from power fluctuations.



Cont

Health and Ergonomic Safety

Sit with correct posture to avoid back and neck pain.

Keep the screen at eye level and at a safe distance.

Take regular breaks to reduce eye strain and fatigue.

Adjust chair and keyboard for comfortable use.



Cont

Data and Information Safety

Use strong passwords and keep them private.

Install and update antivirus software.

Always log out after using shared computers.

Back up important data regularly.



Cont

Equipment and Environmental Safety

Ensure proper ventilation to prevent overheating.

Keep computers away from dust and moisture.

Do not block air vents.

Report faulty equipment immediately.



Computer Lab rules

No food or drinks are allowed in the computer lab.

Handle all equipment carefully—do not bang keyboards or screens.

Follow the teacher's instructions at all times.

Do not install or delete software without permission.

Use computers for learning only, not for games or unauthorized websites.

Log out and shut down properly after using the computer.

Report any faulty equipment immediately to the teacher or lab assistant.



Exercise 1.6

Exercise 1.6

- a) Define ICT safety.
- b) State three general safety precautions to observe when working with ICT tools.
- c) Explain one danger of eating or drinking in a computer lab.



Exercise 1.7

Exercise 1.7

- a) List four electrical safety rules in a computer laboratory.
- b) Why is it important to switch off and unplug computers after use?
- c) Mention two devices used to protect computers from power problems.



Exercise 1.8

Exercise 1.8

- a) State seven computer lab rules.
- b) Give three reasons why computer lab rules are important.
- c) What should a student do if they notice faulty equipment in the lab?





LESSON 5

Lesson Objectives

By the end of the lesson, learners should be able to;

- Attempt ICT scenario questions the right way.
- Structure responses to items the professional way



Keywords

- Exam
- Responses
- Scenario question
- Problem
- Introduction
- Conclusion



Exam Approach

The exam is made of scenario questions.

Scenario questions it is a question that helps us to evaluate your problem solving skills, decision making and behavioural responses.



Example of an exam question

The exam is made-up of scenario questions.

Scenario question: it is a question that helps the teacher to evaluate your problem solving skills, decision making and behavioural responses.



Response style

Your response should have;

- Introduction
- Body explaining everything
- Conclusion
- A word document has been attached to support this section



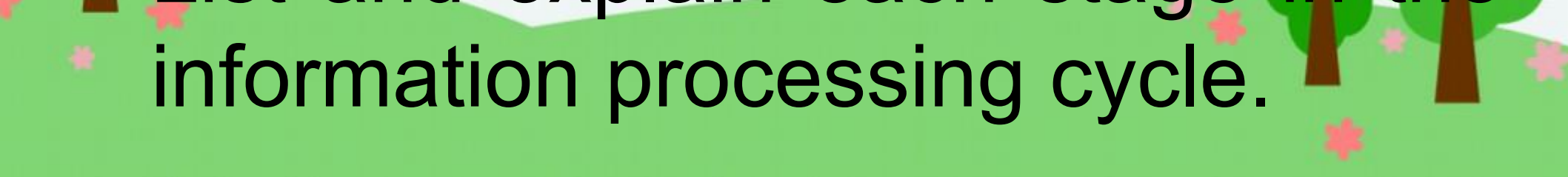
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LESSON 6



LESSON OBJECTIVES

By the end of this lesson learners should be able to;

- Define the word data and information.**
 - Define the term information processing cycle.**
 - List and explain each stage in the information processing cycle.**
- 
- 
- 



Exercise 1.9

What is the information processing cycle?

List the stages of the information processing cycle.

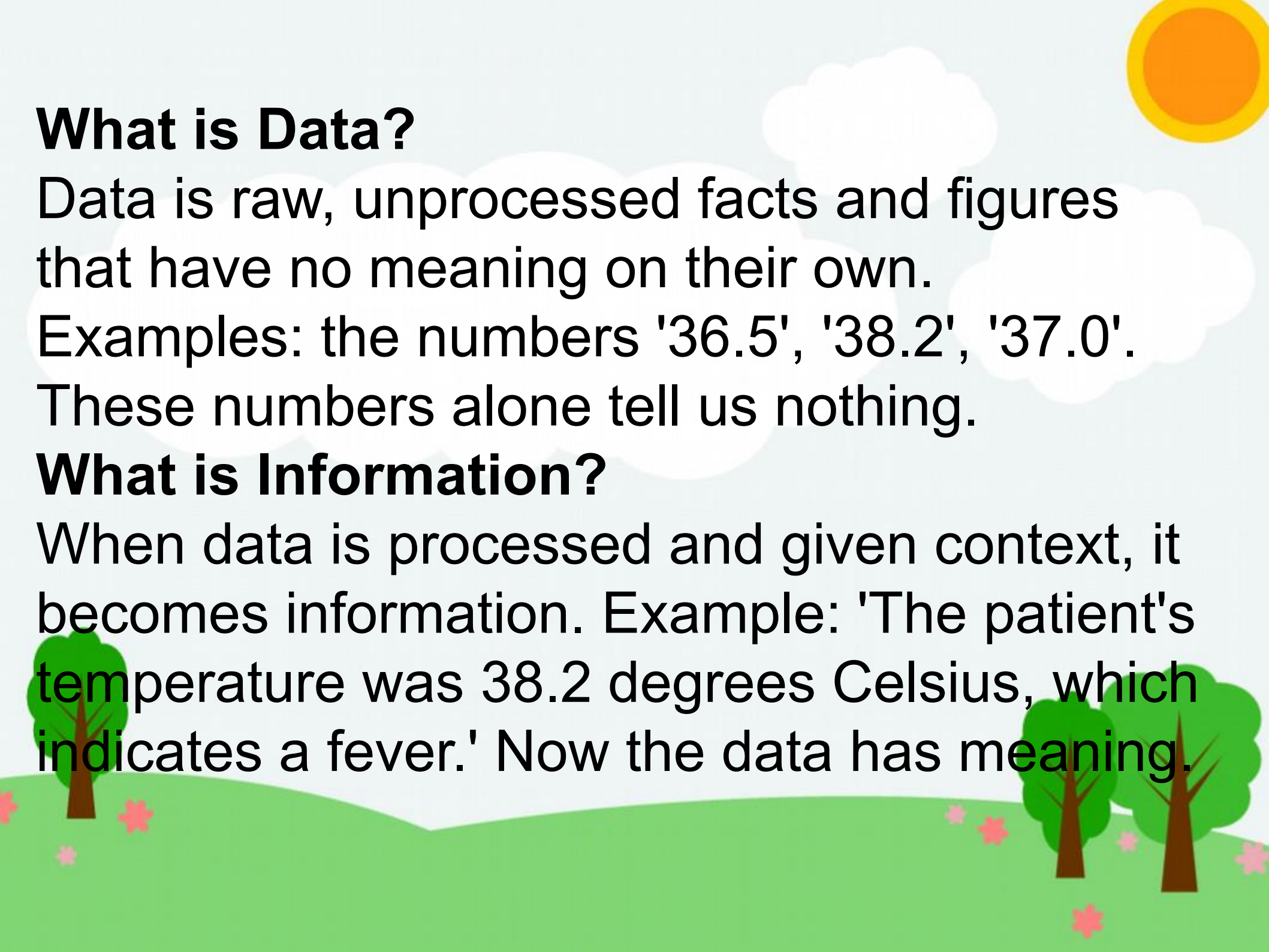




INFORMATION PROCESSING CYCLE

Computers process data to produce useful information. This is called the Information Processing Cycle. Understanding this cycle is fundamental to understanding how computers work.





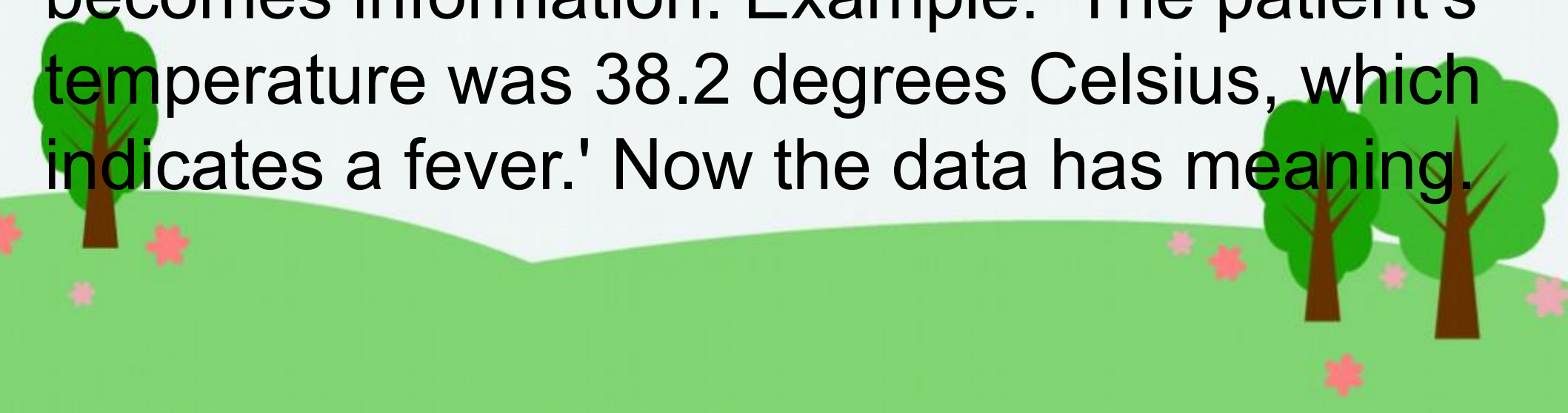
What is Data?

Data is raw, unprocessed facts and figures that have no meaning on their own.

Examples: the numbers '36.5', '38.2', '37.0'.
These numbers alone tell us nothing.

What is Information?

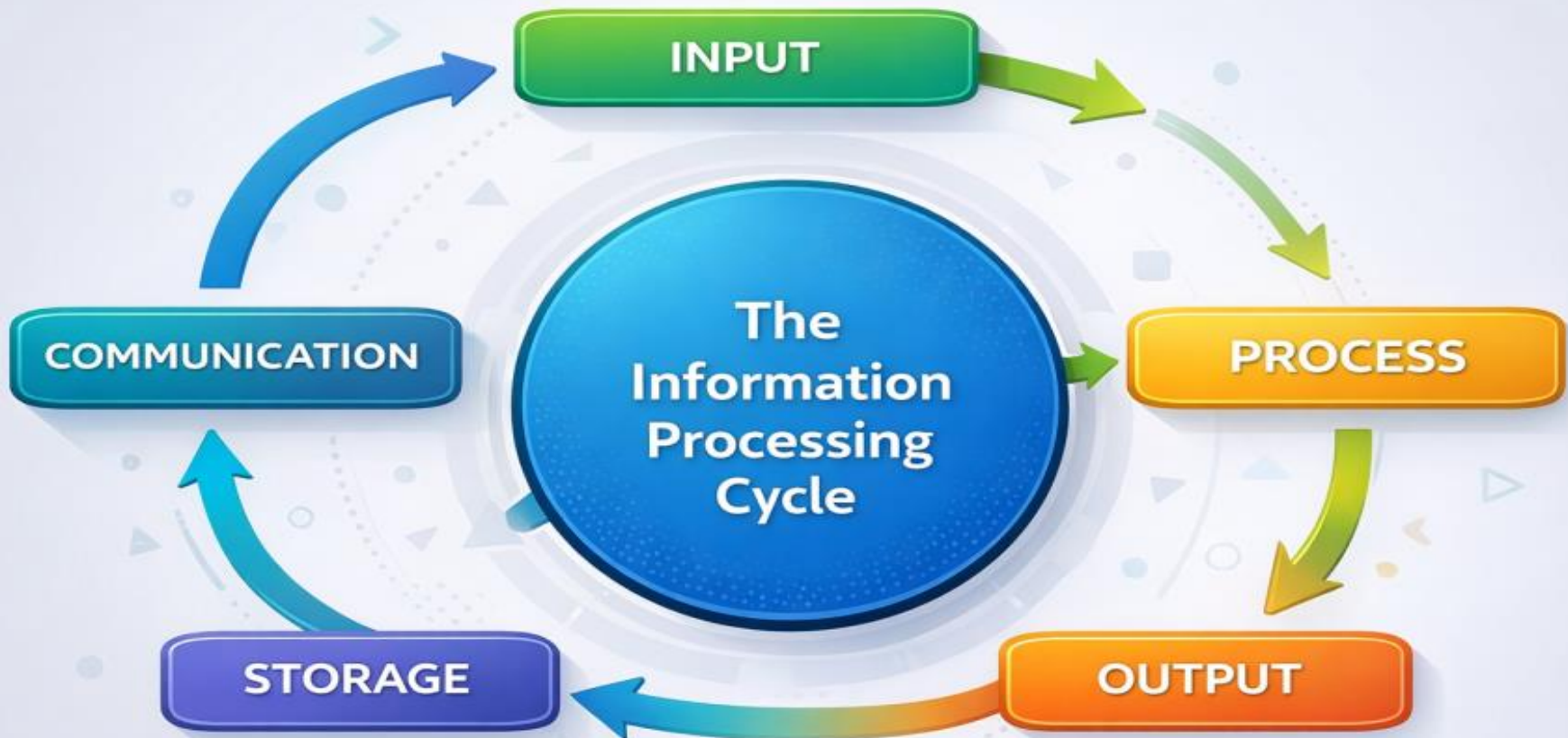
When data is processed and given context, it becomes information. Example: 'The patient's temperature was 38.2 degrees Celsius, which indicates a fever.' Now the data has meaning.



The Four Stages of the Information Processing Cycle

Stage	What Happens	Example
1. INPUT	Raw data is entered into the computer system	A nurse types a patient's temperature into the computer
2. PROCESSING	The computer performs operations on the data	The computer compares the temperature to normal ranges
3. OUTPUT	The processed data (information) is presented to the user	The screen displays: 'Temperature: 38.2 - HIGH FEVER'
4. STORAGE	Information is saved for future use	The patient's record is saved in the hospital database

Diagram of the Information Processing Cycle:





TAKE HOME ASSIGNMENT

Mugisha types his name and exam marks into a school computer programme. The programme calculates his total score, determines his grade (A, B, C, D, or F), and displays his result on screen. The teacher then saves the results in the school database.

- (a) What is the INPUT in this scenario?
 - (b) What is the PROCESSING?
 - (c) What is the OUTPUT?
 - (d) What is the STORAGE?
 - (e) What would happen if the STORAGE stage was skipped?
- 
- 



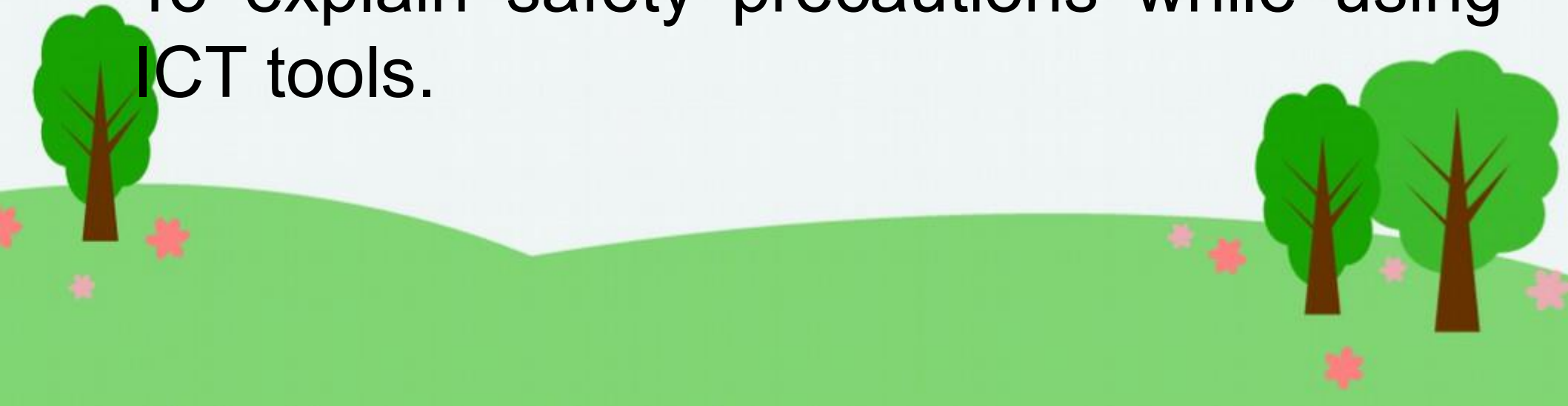
LESSON 7

ERGONOMICS SAFETY(Protecting your body)

Lesson objectives:

By the end of this lesson, you should be able to;

- To define the term ergonomics.
- To define the term safety.
- To explain safety precautions while using ICT tools.



ERGONOMICS SAFETY(Protecting your body)

Ergonomics is the science of designing workplaces and equipment to fit the user. Poor ergonomics can lead to back pain, eye strain, and repetitive strain injuries.



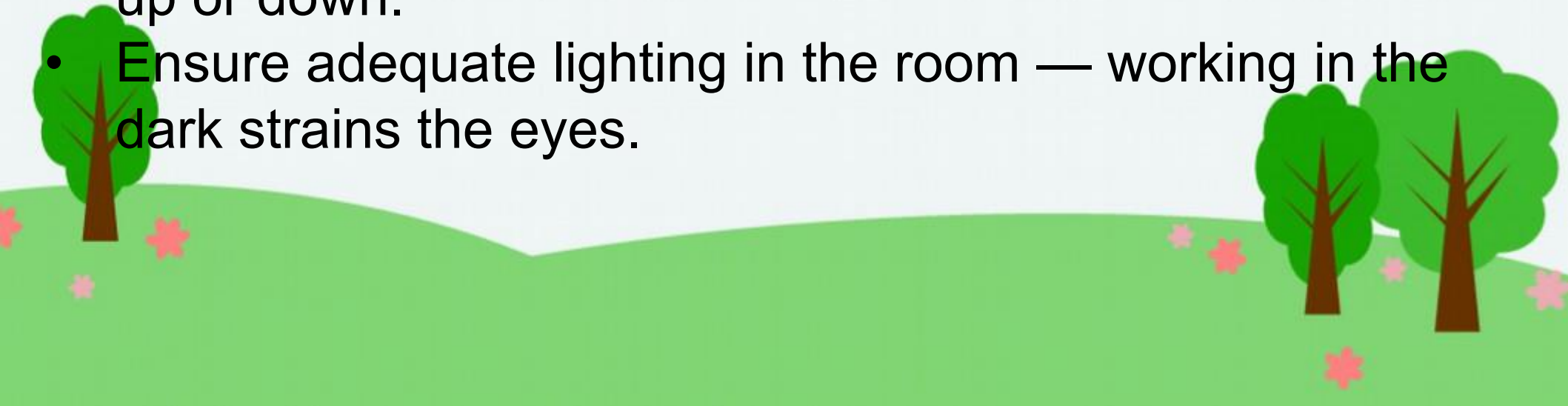
To ensure safety, perform the following;





To ensure safety, perform the following;

- Sit upright with your back supported — use a chair with a backrest.
- Position the monitor at eye level, about 50-70 cm away from your eyes.
- Take regular breaks — look away from the screen every 20 minutes (the 20-20-20 rule: every 20 minutes, look at something 20 feet away for 20 seconds).
- Keep wrists straight while typing — avoid bending them up or down.
- Ensure adequate lighting in the room — working in the dark strains the eyes.





Data safety

- Always create backups of important files — save copies on external drives or cloud storage.
- Use strong passwords (at least 8 characters, mixing letters, numbers, and symbols) to protect your accounts and devices.
- Do not share your passwords with anyone.
- Log out of accounts when using shared computers.
- Be careful about the websites you visit and the files you download, they may contain viruses.





Take Home Assignment

- i. In every ICT tools we buy, the manufacturer always include a user manual that details the safety precautions of handling that tool. Such tools include printers, calculators, computers, televisions, batteries etc.

Task:

Find at-least two devices around your school, summarize the safety precautions listed for that device.



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LESSON 8

THREATS TO COMPUTERS

Lesson objectives;

By the end of the lesson, learners should be able to;

- List some of the common attacks to computers.
- Explain how some of these attacks are performed.





THREATS TO COMPUTERS

Computers face various threats that can damage, steal, or destroy data and hardware. As a student of ICT, you should be aware of these threats and how to protect against them.

Threat	Description	Prevention
Computer Virus	Malicious software that spreads and damages files or programs	Install and regularly update antivirus software
Malware	Software designed to disrupt or gain unauthorized access to a computer	Avoid downloading files from unknown sources
Hacking	Unauthorized access to a computer or network by a cybercriminal	Use strong passwords and firewalls
Phishing	Fraudulent emails or websites that trick users into revealing personal info	Never click suspicious links; verify email senders



Continuation

Power Surge	Sudden spike in electrical voltage that can damage hardware	Use surge protectors and UPS systems
Theft	Physical stealing of computers or storage devices	Keep devices in secure locations; use cable locks
Data Loss	Accidental deletion or corruption of files	Regularly back up data to external or cloud storage
Spyware	Software that secretly monitors and collects user information	Use anti-spyware software and avoid suspicious websites
Ransomware	Malware that locks a user's files and demands payment to restore them	Regular backups and keeping software updated



TAKE HOME ASSIGNMENT

Musiime opened an email that said:

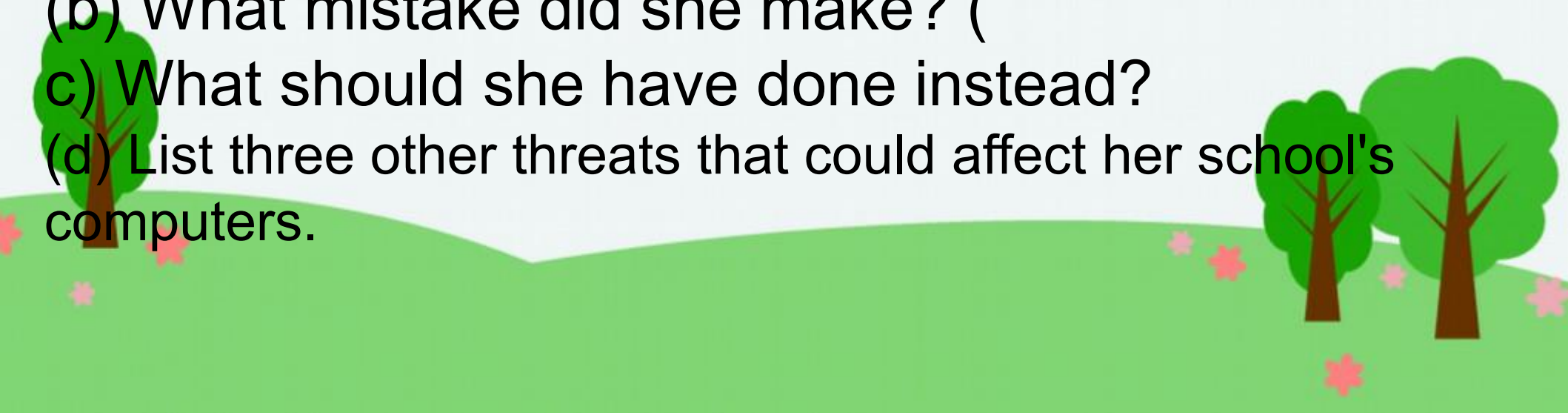
'Congratulations! You have won UGX 5,000,000. Click here to claim your prize.' When she clicked the link and entered her mobile money PIN, someone immediately withdrew all money from her account.

(a) What type of cyber threat did Musiime fall victim to?

(b) What mistake did she make? (

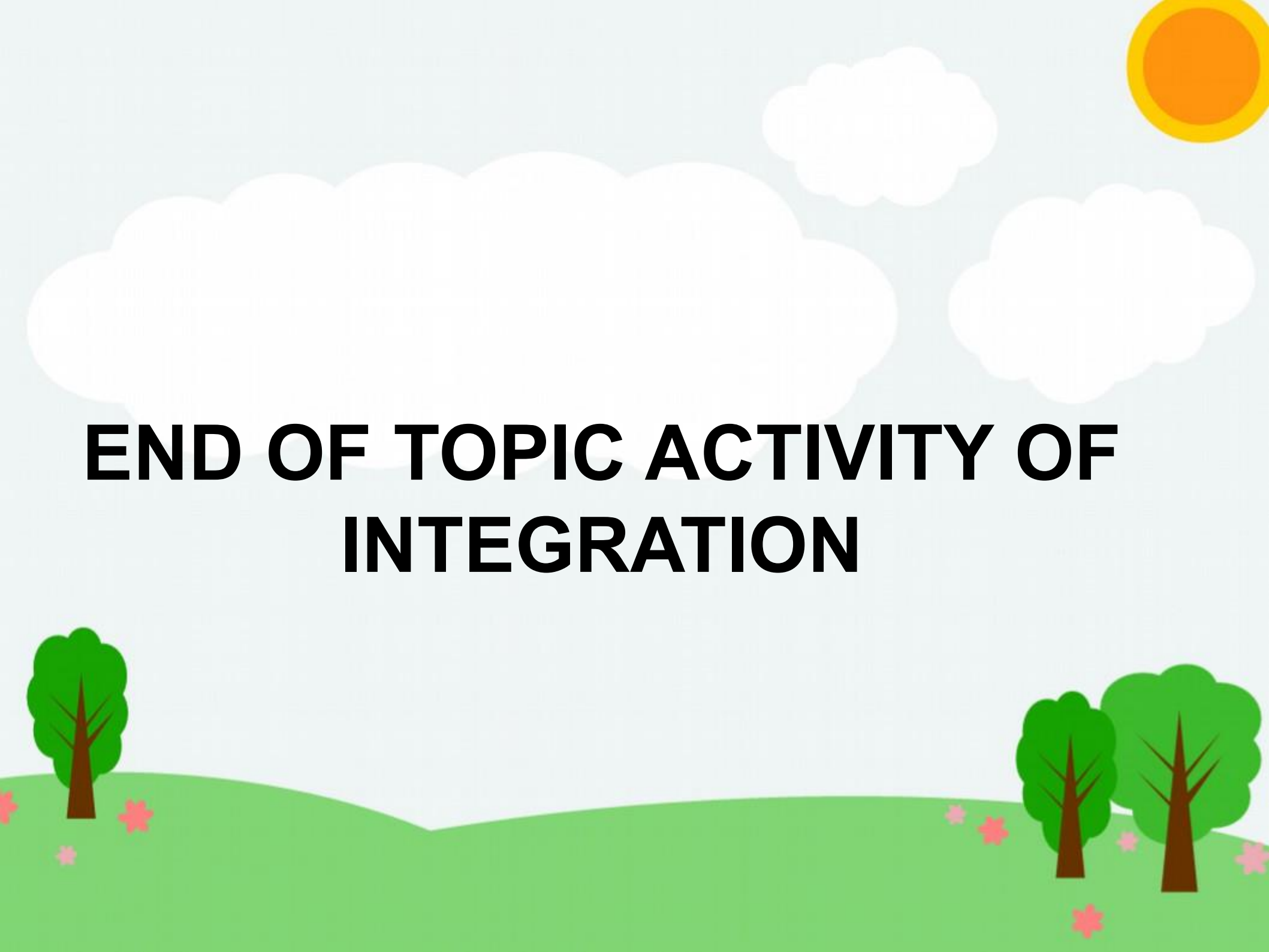
c) What should she have done instead?

(d) List three other threats that could affect her school's computers.





LESSON 10

The background of the slide is a stylized landscape. The sky is light blue and contains three white, fluffy clouds of different sizes. In the top right corner, there is a bright yellow sun with a thick orange border. The ground is represented by green rolling hills. On the left hill, there is a single green tree with a brown trunk. On the right hill, there are two green trees with brown trunks. Small pink flowers are scattered across the green hills. The text "END OF TOPIC ACTIVITY OF INTEGRATION" is centered in the middle of the slide in a bold, black, sans-serif font.

END OF TOPIC ACTIVITY OF INTEGRATION



ITEMS (20 scores)

In the recent meeting held between the head-teacher and the teachers in your school, they discovered that learners in all classes are not getting the best from the lessons taught by the teachers. A teacher in the department of English suggested that your school needs to improve the quality of teaching and learning through the use of ICT. Unfortunately, the ICT teacher was not available for consultation that day. The head teacher went to class at random and picked you to give some guidance on how the school can improve teaching and learning using ICT.



Task:

Help the school and teachers to solve this problem.

