INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

Primary 4
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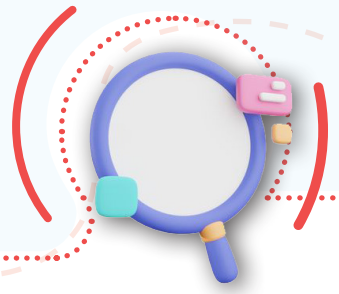

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The Digital Citizen in the World of the Internet

Lesson 1:

The Use of Digital Applications in Daily Life

Lesson 1

The Use of *Digital Applications in Daily Life*

Lesson Objectives:

By the end of the lesson, the student will be able to:

1-mention three examples of the role of digital tools in facilitating daily tasks.

2-explain two types of digital tools that they can use in their daily life.

3-list the largest possible number of ideas for using digital applications to support their learning.

Think:

Do you know how technology makes our life easier in shopping, learning, and communication?

We will learn together how these tools can be useful to us and to our community.

How do digital tools help us?

There are creative people who use different digital tools to make practical solutions that help people in their daily lives.
They design useful applications and websites.

Examples of this help include:

1 Facilitating access to services:

Applications can be designed to help people obtain the services they need easily.

Example: If a person has difficulty paying their bills, they can use an application to receive assistance from the appropriate authority.

2 Facilitating travel and entertainment:

Digital tools have made many things easier than we ever imagined:

- We can book airline and train tickets online.
- We can book tickets to visit museums and historical sites with just one click.
- Information has become easily accessible to everyone.

3 Improving communication:

Technology helps people communicate more effectively, which supports building strong relationships and solving problems.

When we use technology in a positive way, it helps us be more successful in our life and helps communities grow and develop.

Practical Activity :

Dear student, with the help of your teacher, explore the websites and digital services provided by the Egyptian government for citizens on the internet, such as booking train tickets, the Bibliotheca Alexandrina, the website of the Grand Egyptian Museum, etc.

General Exercises

First. Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1. Digital tools can be used to find solutions to everyday problems. ( )
2. Technology makes paying bills more difficult. ( )
3. Through applications, it is possible to receive assistance from the relevant institutions. ( )
4. Booking airline tickets cannot be done online. ( )
5. Digital tools have made the process of booking tickets to visit museums easier. ( )
6. Technology always harms people and never benefits them. ( )
7. Good communication between people helps build strong relationships. ( )
8. Information has become more difficult to access because of the internet. ( )
9. Communities can benefit from digital solutions. ( )
10. Digital tools make it easier for us to accomplish daily tasks. ( )

Second. Choose the correct answer from a, b, c. or d:

1. What is the main purpose of using digital tools in the text?

A) To make life more difficult
B) To facilitate tasks and help people
C) To prevent communication between people
D) To waste time

2. How can a digital application help a person?

A) By singing to them
B) Booking airline tickets online
C) Playing in the park
D) Drawing on paper

3. One of the benefits of websites is:

A) They have made information easily accessible to everyone
B) They prevent people from talking to each other
C) They make the weather hot
D) They make shopping more difficult

4. One of the benefits of websites is:

A) They have made information easily accessible to everyone
B) They prevent people from talking to each other
C) They make the weather hot
D) They make shopping more difficult

5. What do we achieve when we use technology in a positive way?

A) We cause problems for others
B) We help achieve success and development
C) We prevent people from learning
D) We make life more difficult

6 Which of the following is considered a digital tool?

A) A book

B) A pencil

C) An application on a smartphone

D) A paper magazine.

7 Which financial problem can be solved using digital applications?

A) Difficulty in cooking

B) Difficulty in paying bills

C) Difficulty in riding a bicycle

D) Difficulty in sleeping

8 We book online tickets for

A) Visiting museums and historical sites

B) Buying vegetables from the grocer

C) Playing football

D) Swimming in the sea

9 How does technology help improve communication between people?

A) It prevents people from talking.

B) It facilitates building good relationships and solving problems

C) It makes communication more difficult.

D) It increases misunderstanding between people.

Lesson 2:

Digital Citizenship – My Rights and Responsibilities Online

Lesson 2

Digital Citizenship – My Rights and Responsibilities Online

Lesson Objectives:

By the end of the lesson, the student will be able to:

1-define the concept of digital citizenship.

2-explain the rights and responsibilities required of every digital citizen.

3-apply safe and responsible internet-use practices, (e.g. creating strong, secure passwords, verifying and citing digital sources,….).

Are you ready to be a good digital citizen?

Now you are using technology and the internet for your learning and entertainment, you are no longer just a regular user—you are a digital citizen.

Digital Citizenship:

It refers to your ability to use technology in an ethical, responsible, and secure way. This means understanding both your rights and obligations online, and adhering to them.

Your Digital Footprint...

Your Activity Log!

Do you know that everything you do online leaves a trace behind?

This trace is known as your digital footprint.

Digital Footprint:

It refers to all the actions you perform online, as well as the content you share or that others share about you. This includes the websites you visit, the images you upload, and the comments or interactions you post across digital platforms.

Remember...

that it is critically important to maintain a positive digital footprint. Therefore, you must never share your personal information—or others' information —in an unsafe or irresponsible way.

Your Digital Rights and Responsibilities:

Just as you have rights and responsibilities at school and at home, you also have rights and obligations on the internet.

Your Rights (What You Are Entitled To)	Your Responsibilities (What You Must Do)
Right to Protection: No one is allowed to copy your digital footprint or share videos or images of you without your permission	**Respect for Intellectual Property:** You must not copy scrap someone else's content (such as a story, song, or digital media) for sharing or commercial use. **Avoid digital piracy**
Right to Positive Expression: You have the right to express your opinions and ideas—supported by your family and teachers—in a respectful way that does not harm others	**Positive Online Interaction:** Always communicate politely and respectfully online, and express your thoughts in a positive way
Right to Safe Access: You have the right to use the internet securely whenever needed, and you must adhere to the laws and digital-safety guidelines	**Wise and Responsible Use:** Ensure that the content you access is beneficial, and maintain a healthy balance between your online activities and your time with friends and family

Secure Usage Guidelines:

1) Use strong, complex passwords.

2) Do not trust every piece of information you encounter online; always verify and cite your sources.

3) Monitor and manage the time you spend online.

Practical Activity:

Write a short essay on "How can I keep my digital footprint clean and positive?".

General Exercises

First, Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1) A digital footprint includes everything you do online, and it is important for that footprint to remain positive. ( )
2) Digital citizenship is only knowing how to use a computer. ( )
3) If you upload a video you created, you have the right to request protection against digital piracy. ( )
4) It is doesn't matter if you use a weak password as you do not share it with others. ( )
5) Piracy refers to copying someone else's content with the intent to sell it. ( )
6) There is no need to verify and cite the sources you find online; everything on the internet is accurate. ( )
7) It is your responsibility to ensure that the content you consume does not cause stress or harm to your well-being. ( )
8) You may express your opinions online in ways that harm or offend others. ( )
9) You have the right to access the internet when needed, adhering to legal and safety guidelines. ( )
10) You must choose the websites you visit carefully and ensure you use updated software and applications. ( )

Second, Choose the correct answer from a, b, c. or d:

1) What is the correct definition of digital citizenship?
   A) Spending long hours on the internet
   B) The ability to use technology in an ethical, responsible, and secure way
   C) Watching online videos only
   D) Sharing all your personal information
2) The activities you perform online that leave a trace are called.....
   A) Password
   B) Rights
   C) Responsibilities
   D) Digital footprint
3) One of the most important responsibilities regarding online content is:
   A) Publishing it immediately
   B) Respecting intellectual property rights and avoiding digital piracy
   C) Not citing any sources
   D) Using it to harm others

4 **When interacting with others online, you should:**

A) Express your opinions in an offensive manner

B) Ignore them

C) Display positive behavior and communicate respectfully

D) Ask for their personal information

5 **What should you do when you find information for your research?**

A) Ignore the source

B) Use it without verification.

C) Verify, evaluate, and properly cite the sources you find.

D) Publish it immediately as if it were accurate.

6 **What is one of your rights as a digital citizen?**

A) Scrapping content from the internet

B) The right to protection, including preventing others from copying your digital footprint without your permission

C) Neglecting your family time

D) Posting other people's photos

7 **What does it mean to use the internet safely?**

A) Using a simple password

B) Visiting random websites

C) Using updated software and creating strong, secure passwords

D) Not monitoring the time you spend online

8 **What results from not respecting intellectual property rights?**

A) Positive interaction

B) Citing sources

C) Digital piracy

D) A clean digital footprint

9 **Which of the following is an example of responsibility when using the internet?**

A) Expressing your opinion

B) Ensuring a healthy balance between online use and personal communication

C) Using technology only when needed

D) Watching anything randomly

10 **It is very important not to share your personal information or others' information online in a way that is:**

A) Responsible

B) Unsafe and irresponsible

C) Safe

D) Positive

Lesson 3:

Online Communication: Synchronous and Asynchronous

Lesson 3

Online Communication: Synchronous and Asynchronous

Lesson Objectives:

By the end of the lesson, the student will be able to:

1-identify the concept of online communication; synchronous and asynchronous modes.

2-distinguish between synchronous and asynchronous communication tools.

3-use the communication tools - synchronous or asynchronous—appropriately.

How do we communicate in a technology-driven world?

• Have you ever thought about the different ways you communicate with your friends or your teacher using technology?

• There are two main methods of communication on the internet.

Synchronous Communication

This type of communication is similar to speaking face-to-face, but it happens online!.

What is it?

It is communication that occurs in real time, and requires an immediate response.

- **Example:**

  When you talk on the phone, or when you speak directly with a classmate in the classroom.

Synchronous Communication Tool	How Does It Work ?	Required Tools
Video Calls	It allows direct communication with one or more people, where you can see nd hear each other instantly.	A device equipped with a camera and microphone, along with a mobile application or computer software.
Instant Messages	It enables you to send text messages or attach images and videos, and they are delivered instantly.	An instant messaging program on a computer or an application on a mobile phone.
Chat Rooms	It allows communication through written messages within groups on a specific topic, and the responses are typically quick.	An internet browser such as Google Chrome, or a mobile application.

Asynchronous Communicationtion

• This type of communication does not require an instant response. You can send your message, and the recipient can read it and reply later.

• This Communication does not require an instant response; information is transferred without the need for all participants to be present at the same time.

Asynchronous Communication Tool	How Does It Work ?	Required Tools
Email	You can use it to send formal or long messages, such as requesting assistance from your teacher or communicating with an administrator.	An internet browser (to access the email website) or an email application on your device.

When Do We Use Each Type?

Type of Communication	When Do You Use It?
Synchronous Communication	When discussing a lesson topic that requires quick interaction, an instant response, or exchanging simple information and files rapidly.
Asynchronous Communication	When sending a formal message, or when sending important or large files (such as a school assignment), or when you do not require an immediate response.

Practical Activity :

Dear student, send files using of the applications such as, Whats App , Email ,…etc..

General Exercises

First. Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1. Synchronous communication happens in real time and needs an immediate response. ( )
2. Email cannot be used to communicate with a teacher about a school project. ( )
3. Email is an example of asynchronous communication. ( )
4. For synchronous communication, both people must be present at the same time. ( )
5. Chat rooms can be used to discuss a specific school topic. ( )
6. Instant messaging (IM) is a tool of asynchronous communication. ( )
7. Internet browsers like Google Chrome can be used to access chat rooms. ( )
8. Asynchronous communication requires an immediate response from the other person. ( )
9. Video calls allow direct communication with one or more people. ( )
10. A mobile application cannot give you access to video calls. ( )

Second. Choose the correct answer from a, b, c. or d:

1. **What type of communication happens in real time and requires an immediate response?**
   A) Asynchronous communication B) Email
   C) Synchronous communication D) Traditional messaging
2. **Video calls are an example of which type of communication?**
   A) Asynchronous communication B) Traditional communication
   C) Synchronous communication D) Recorded messages
3. **The best way to send a formal message to your teacher or a government organization is:**
   A) Instant messaging B) Video calls
   C) Email D) Chat rooms
4. **Chat rooms are mostly used to:**
   A) Long personal conversations B) Sending formal homework
   C) Discussing a school topic or a specific idea D) Phone calls
5. **Which of the following tools does NOT require you and the receiver to be online at the same time?**
   A) Instant messaging B) Video calls
   C) Email D) Live phone calls

6 **What tool is needed to make video calls?**

A) Audio recorder only

B) Fax machine

C) A device with a camera and a microphone

D) Pen and paper

7 **Synchronous communication allows you to:**

A) Send a file and reply the next day

B) Send a long formal message

C) Exchange information and files between two or more people without delay

D) Read educational articles

8 **A mobile application is an app that works on the device and allows you direct access to:**

A) Cooking and recipes only

B) Email, social media pages, and video calls

C) Printed school books

D) Physical sports

9 **Which type of communication represents sending a digital file or a recorded educational program?**

A) Synchronous communication

B) Asynchronous communication

C) Video call

D) Instant messaging

10 **Instant messaging (IM) is an example of:**

A) Asynchronous communication

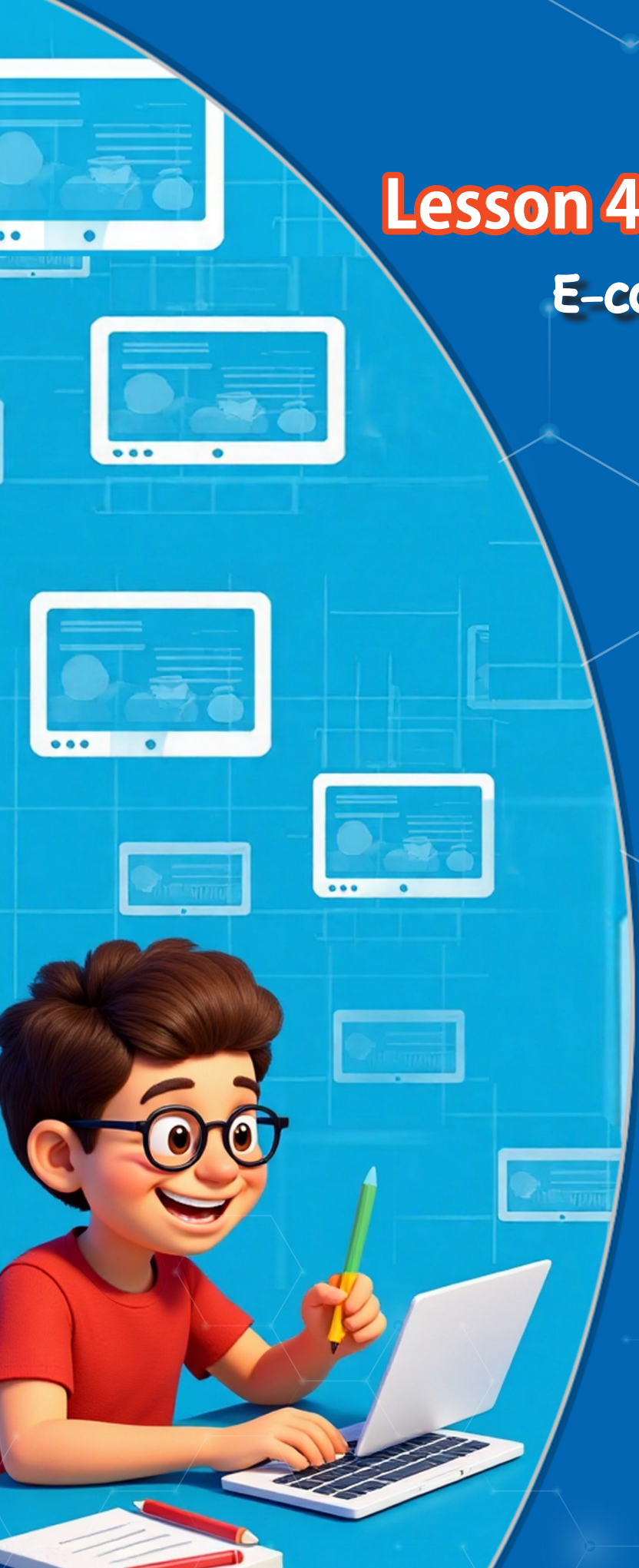
B) Synchronous communication

C) Formal email

D) Slow messaging

Lesson 4:

E-communication Tools



Lesson 4

E-communication Tools

Lesson Objectives:

By the end of the lesson, the student will be able to:

1- apply e-communication etiquette.

2- differentiate between using instant messaging (IM) and email.

3- write a well-structured email.

Let's learn how to use e-communication tools!

In lesson 3, we learned the different forms of communication (Synchronous and Asynchronous)

Now, Let's learn how to use each form in a responsible and appropriate way following e-communication etiquette.

Making Video Calls:

Imagine you are in a virtual classroom!

These are some important rules to look neat and polite.

- To start a call, make sure your microphone and camera are on (after having the permission to access).
- Be respectful: When someone else is speaking, mute your microphone. This helps prevent noise from reaching others.
- Be properly dressed and behave as if you were out in public.
- Make sure there is nothing in your background that indicates your address or any personal information that you do not want to share.

To join a call, click on a link and wait to be "let in" by the person who started the call

Chat Rooms and Instant Messaging (IM):

Here is a fast and fun way to communicate politely.

- Be polite and positive: Whether you are in a chat room or sending an instant message, always be kind and positive in your words.
- Use short phrases: Instant messaging is informal, so use short phrases instead of full sentences.
- Be respectful: You can use emojis and pictures, but always be polite with others.
- Remember, anyone who has access to the chat room will be able to read your messages.

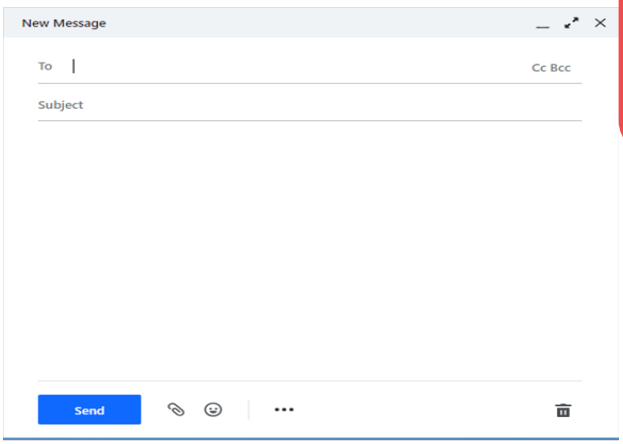
Email:

Email is the best tool for more formal situations- such as writing to your teacher or an official organization!.

- Writing the subject line

- To write an email to someone, type their email address in the "To:" field.
- Provide clear subject information in the subject line.

For example: write in the subject line (Digital Citizenship Lesson Homework).



Dear student, Here some rules you should follow when writing an email:

- Be polite: When writing an email to you teacher or your friends, be sure to use proper grammar
- Greetings and Closing: Be polite and clear. Start your message with a greeting and end with a closing
- Check attachments: If you're sending attachments, be sure the information you're sending is safe, accurate, and free from viruses.

Practical Activity:

Dear student, write a short formal email to your teacher. It should include:

- **Subject: Asking about the deadline of the unit project**
- **Email body: Start with a polite greeting, ask about the project submission date, and end with a polite closing.**

(For example: Thank you for your time, Best regards)

General Exercises

First. Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1. When having a video call, you should act as if you are in a public place. ( )
2. An email message should include polite greetings and a polite closing. ( )
3. You can leave the camera on in video calls even if you are not wearing suitable clothes ( )
4. Email is suitable for contacting your teacher or school principal. ( )
5. It is important to mute the microphone when you are not speaking during video calls. ( )
6. You can use emojis and pictures in instant messages. ( )
7. The "To" field in an email is used to write the subject of the message. ( )
8. In chat rooms, your message is private and only the receiver can see it. ( )
9. It is important to make sure that email attachments are safe and correct. ( )

Second. Choose the correct answer from a, b, c. or d:

1. If you are having a video call with your classmates, when should you mute your microphone?
   A) When you enter the call
   B) When you leave the call
   C) When it is another person's turn to speak
   D) During the whole call
2. Instant messaging is a type of communication that is:
   A) Very formal
   B) Complicated
   C) Informal
   D) Slow
3. Where do you write the email address of the person you are sending the message to?
   A) In the subject line
   B) In the CC field
   C) In the To field
   D) At the end of the message
4. When writing an email, you should use:
   A) Emojis and slang words
   B) Correct grammar with a greeting and a closing
   C) Many animated pictures
   D) Unclear words
5. What should you make sure is NOT shown in the background when the camera is on during a video call?
   A) School books
   B) Plants
   C) Personal information or your home address
   D) A plain color

6 **What should you do if you want to join a video meeting?**

A) Enter directly

B) Leave the room

C) Click the link and wait to be allowed to join

D) Turn off the camera immediately

7 **In chat rooms, who can read your messages?**

A) Only the person you sent the message to

B) Only you

C) Anyone who has access to the chat room

D) Only your teacher

8 **What is the main purpose of using email?**

A) Sending fun emojis

B) Formal situations

C) Fast instant chats

D) Sharing random videos

9 **What should you do when using instant messaging?**

A) Use very formal full sentences

B) Share information about others

C) Be polite and respectful with others

D) Send large files without notice

6 **Which part gives clear information about the content of an email message?**

A) To field

B) Subject line

C) Greeting

D) Message body

Lesson 5:

My Online Learning Tools

Lesson 5

My Online *Learning Tools*

Lesson Objectives:

By the end of the lesson, the student will be able to:

1- know some online learning platforms.

2- name three different and trusted places for learning on the internet.

3- describe a few features of an interactive map tool.

Think Did you know that learning is not only inside the classroom anymore?
Now you can learn and talk with your teachers and classmates, do experiments, and discover many new things while you are at home!
This is all possible because of online learning platforms and learning resources on the internet.

Online Learning Environments:

Imagine your classroom is on the internet!

- What is an online learning environment?

It's a website or app where teachers and students can communicate , share lessons, and send homework or tests.

For example: Edmodo an online learning environment.

- How does it help us? It enables you to communicate with your teacher, send your homework, and get lessons or quizzes online.

Online learning sources:

Here are reliable sources you can rely on.

Features	Type & Benefits	Source
Has many topics like articles and videos in all subjects	A big online library in Egypt	Egyptian Knowledge Bank (EKB)
Enables students and teachers to do lab experiments in an interactive environment	A virtual lab platform	Vlaby
Helps you draw maps and collect data. You can ask your Social Studies teacher for help	A free tool for tablets and laptops	Mapmaker Interactive

Practical Activity:

Use a Reliable Digital Source to help you learn with your teacher's help.

General Exercises

First. Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1. Online learning platforms allow teachers to give virtual lessons to students. ( )
2. The Egyptian Knowledge Bank is an online resource, not an online learning platform. ( )
3. Vlaby is a platform that allows students do science experiments in an interactive way. ( )
4. Trusted online sources are not important for research. ( )
5. Students can use Edmodo to talk with their teachers and send their homework. ( )
6. The Egyptian Knowledge Bank has English-only resources. ( )
7. Students can use online learning platforms to look up information about animals and science. ( )
8. An interactive map maker is used for instant messaging between students. ( )
9. Online learning is only about reading written articles. ( )
10. You can use the Egyptian Knowledge Bank to explore many different topics. ( )

Second. Choose the correct answer from a, b, c. or d:

1. **Which of the following is an example of an online learning platform?**

A) Paint
B) E-mail
C) Edmodo
D) WhatsApp

2. **Online learning platforms can offer all of the following EXCEPT:**

A) Advanced math lessons
B) Only science experiments
C) Topics like animals, science, history, and geography
D) Typing files

3. **The main feature of Vlab is that it allows students to:**

A) Download school tests
B) Communicate with parents
C) Do science experiments in an interactiveway
D) Read printed books

4. **The Egyptian Knowledge Bank (EKB) is:**

A) An instant messaging app
B) A drawing tool only
C) Egypt's first big online library with many resources
D) A gaming program

5. **What is the purpose of the interactive map maker (Mapmaker)?**

A) Watching fun movies
B) Making video calls
C) Drawing maps online and searching using data
D) Uploading math homework

6 **What can teachers share on platforms like Edmodo?**

A) Only video games
B) Virtual lessons, tests, and homework
C) Communicating only with the principal
D) Sending emails

7 **What is the most important thing about digital learning tools?**

A) They should be colorful
B) They should have pictures
C) They should be safe and trustworthy
D) They should be only for teachers

8 **You can access topics, articles, and videos on the Egyptian Knowledge Bank (EKB) by:**

A) Sending a formal request
B) Clicking on the resource
C) Visiting the school
D) Using another app

9 **Online learning platforms allow teachers and students to communicate:**

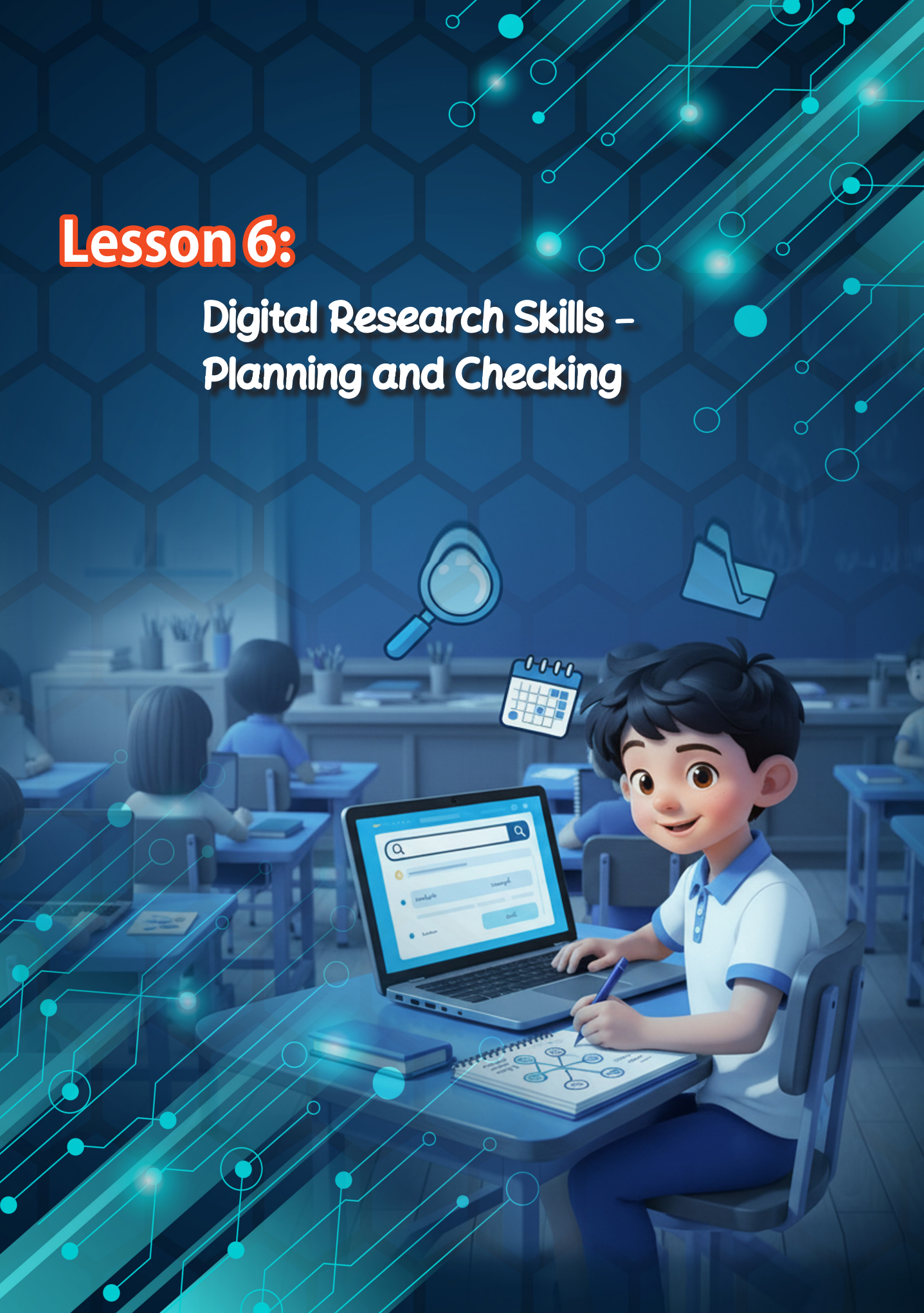
A) Only when they are in the same place
B) No matter where they are
C) Using a landline phone
D) Only early in the morning

10 **Vlaby is a platform that allows students to:**

A) Only look at pictures
B) Interact with scientific content
C) Only read texts
D) Use instant messaging

Lesson 6:

Digital Research Skills – Planning and Checking



Lesson 6

Digital Research Skills – Planning and Checking Sources

Lesson Objectives:

By the end of the lesson, the student will be able to:

1- plan a digital research task.

2- differentiate between trusted and untrusted sources.

3- organize research notes using a simple plan.

When you want to search for a new topic on the internet, do not start searching right away. First, you should develop a search plan to locate the most reliable and accurate information. Before you begin, think about these three simple steps:

Planning Your Digital Research:

1 Choose your topic: Think about what you want to research, such as dinosaurs, space, or protecting the environment.• Set your goal: What do you already know about the topic?

- What else do you want to learn about?
- Think and write your notes.

2 Choose your sources: Choose the types of sources you will use

- Choose the types of sources you will use
- Remember that a digital research can include videos, pictures, and audio, not just text sources
- Consider asking your teacher or parents about which sources to use for your research

3 Evaluate your sources: Be ready to evaluate your sources Are they reliable or unreliable?

Evaluate your sources: Reliable and Unreliable:

While conduction your digital research, you will find two types of sources. You should distinguish between them:

Unreliable Sources	Reliable Sources
Unreliable Sources are information that full of opinions, errors, and even lies.	Reliable sources are articles or information written and verified by experts.
Such as Facebook, Wiki pages, and blogs.	Such as Egyptian Knowledge Bank (EKB).
You should be aware of information you find on these types of sources.	The source information is well-written, without grammar or spelling. Don›t forget to cite your sources.

Tip!

While conducting your digital research, be sure to stay focused on the topic you're researching.

Organizing and writing your report

- After gathering your notes from the reliable source information, use you notes to write your report in a logical way
  - Use an outline to organize your notes before start writing
  - An outline should include:
    - An introduction that introduces the topic of the report.
    - A conclusion or final thoughts on the information that you have
    - presented supporting paragraphs that present the information.

Practical Activity.:

Conduct a digital research on '' The importance of protecting environment"

You report should include:

- An introduction that introduces the topic of the report.
- Three supporting paragraphs, each paragraph should have a sub-heading such as Environment Pollution Causes, our Role in Protecting the Environment, and The Benefits of a Clean Environment.
- A conclusion that summarize the importance of the topic.

General Exercises

First. Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1. You should start your digital research by planning the topic and focusing on it. ( )
2. Reliable sources provide information written professionally and without spelling mistakes. ( )
3. The conclusion of a report explains the topic in detail. ( )
4. Information found on blogs is always reliable and can be trusted. ( )
5. Supporting paragraphs in a report present the information and data collected. ( )
6. You should only search for written sources and ignore audio recordings and videos. ( )
7. After finishing your research, you should use an outline to organize your notes logically. ( )
8. When you find information, you should ask yourself: Is it reliable? ( )
9. There is no need to mention sources in your report because information belongs to everyone. ( )
10. You can ask your parents or teacher about reliable research sources. ( )

Second. Choose the correct answer from a, b, c. or d:

1. What is the first step you should do before starting any digital research?
   A) Start searching immediately
   B) Plan and choose the topic
   C) Print the report
   D) Write the conclusion
2. What do we call the organized notes that help you arrange your report ideas?
   A) Detailed report
   B) Reliable source
   C) Outline
   D) Final conclusion
3. Information found on social media websites is considered:
   A) Reliable
   B) Accurate
   C) Unreliable
   D) Professional
4. What should you write in your notes when using a reliable source?
   A) Only your personal opinion
   B) Unimportant information
   C) Detailed and accurate notes and mention the source
   D) Lies and others' opinions
5. Which part of the outline presents the ideas and information you found in your research?
   A) Introduction
   B) Supporting paragraphs
   C) Conclusion
   D) Subject line

6 **Digital research can include non-text sources such as:**

A) Paper books
B) Videos and audio recordings
C) Regular mail messages
D) Charts only

7 **Reliable sources should be written in a way that is:**

A) Informal with many mistakes
B) Professional, careful, and free of grammar mistakes
C) Very short
D) Unofficial

8 **What should you focus on in the introduction of a report?**

A) Final results
B) Presenting the topic briefly
C) Unreliable sources
D) The final conclusion

9 **What should you do when you find information before using it?**

A) Start writing immediately
B) Evaluate it and make sure it is reliable
C) Share it on social media
D) Write only your personal opinion

10 **Who should you ask about good sources for research?**

A) A friend who does not know the topic
B) An online blogger
C) Your teacher or the school librarian
D) A commercial advertisement

Unit 4

My Digital Project

Lesson 1:

Solving Digital Problems

Lesson 1

Solving *Digital Problems*

Lesson Objectives:

By the end of the lesson, the student will be able to:

1- break down a big digital problem into small parts.

2-construct a Hypothesis about a technology problem and try to test it.

3-understand that asking for help from a teacher or others is important when solving difficult technology problems.

Think:

Just like in our daily life, we may face small or big problems when using technology. We will learn together how these tools can be useful to us and to our community.

Steps to solve a problem

Solving problems in technology needs clear and logical thinking steps to fix the problems you may face

Steps	?What to do	Why?
Construct a Hypothesis	Make a simple, educated guess about why the problem happened.	This guess is called a hypothesis. It is where you start.
Test your Hypothesis	Try your guess carefully without doing anything that could harm your device.	The test should always be safe.
Learn from mistakes	If your test does not work, think: What went wrong? What did I learn?	We learn from our mistakes and make new, accurate hypotheses next time.

•Breaking down problems into smaller sections

Some ICT problems may be more complicated than others, such as an internet connection or a broken application.

Work on solving such problems in small sections, step-by-step, then work on each section at a time.

Real-world example:

You are asked to help organize the class trip.

- At first, the task you're being assigned may seem quite difficult. But if you break it down into multiple smaller tasks, it becomes more manageable.
- When solving larger ICT problems, break them down. Start with the parts that you can solve, step-by-step, so you can solve the bigger ones.

Asking for Help

If a technology problem is very hard, do not be afraid to ask for help.

Your teacher is your assistant:

You can ask your teacher for help. At first, the problem may seem big or difficult, but asking for help makes it easier to break the problem into small parts.

Note:

If you have a group of people solving a problem, assign each person one section.

Practical Activity

Think of one problem you may face when using your device

(such as a computer or mobile phone), and explain how to solve it by breaking the problem into small steps.

the Bibliotheca Alexandrina, the website of the Grand Egyptian Museum, etc.

1. Construct Hypothesis

Write one simple guess about why the problem is happening.

2. Break the Problem into Steps

Write two small steps you can do to help solve the problem.

General Exercises

First. Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1. Technology problems become easier when we break them into small parts. ( )
2. A hypothesis is the final and sure answer to a problem. ( )
3. You should always solve technology problems alone and never ask for help ( )
4. Problem-solving steps can be used for real-life problems, not only technology problems. ( )
5. Testing a hypothesis should not harm your device. ( )
6. The teacher can help organize and simplify big tasks and problems. ( )
7. If your idea does not work, you should feel upset and stop trying. ( )
8. When working in a group, each person can solve a small part of the problem. ( )
9. A hypothesis is a smart guess about why something happens, and it can be tested. ( )
10. You do not need steps to solve technology problems; the solution comes by itself. ( )

Second. Choose the correct answer from a, b, c. or d:

1. **A scientific guess about how a problem happens is called:**

A) The final solution
B) An experiment
C) A hypothesis
D) A small problem

2. **When a technology problem is very difficult, the best way to solve it is to:**

A) Ignore it and look for another problem
B) Break it into small parts and solve it step by step
C) Start solving without thinking
D) Ask any random person for help

3. **The goal of testing a hypothesis is to:**

A) Prove that you are always right
B) Know if the hypothesis works or not and learn from mistakes
C) Put the device in danger
D) Make the problem bigger

4. **When you have a big task, how can you make it easier?**

A) Leave it as it is
B) Break it into small tasks
C) Ask someone else to solve it completely
D) Ignore it

5. **If your hypothesis test does not work, what is the most important thing to learn?**

A) Never construct hypotheses again
B) That you cannot solve problems
C) What went wrong and how to make a better hypothesis
D) That the problem has no solution

6 **What should you avoid when testing your hypothesis?**

A) Making a new hypothesis

B) Doing anything that may harm the device

C) Breaking the problem into parts

D) Asking the teacher for help

7 **When planning a school trip, choosing the destination is:**

A) The hypothesis

B) The big problem

C) A small part of the problem

D) The final step

8 **What should you do when you face a difficult technology problem?**

A) Try to solve it alone only

B) Ask the teacher or specialists for help

C) Give up

D) Play on the computer

9 **When a group works on a big problem, how should the work be organized?**

A) Everyone works on the same part

B) Each person works on a small part

C) No one helps

D) One person does everything

10 **Problem-solving needs:**

A) Random actions

B) Thinking steps to understand and solve the problem

Lesson 2:

Presenting Information

Lesson 2

Presenting *Information*

Lesson Objectives:

By the end of the lesson, the student will be able to:

- name digital tools used to design a poster, such as Publisher or PowerPoint.
- identify important design basics, like margins, font type and size, colors, and pictures.
- create a simple and attractive digital poster using the right font and colors.

Think:

When we want to share information or advertise an idea in an attractive way, we use digital tools and design a poster or a billboard.

Digital Tools for Presenting Information

Microsoft 365's bundle gives us great options to design posters and billboards:

- PowerPoint:
  Great for making easy and quick presentation slides.
- Word :
  Used for writing texts, and it can also be used to design simple posters.
- Publisher:
  A professional program used to design organized posters and newsletters.

To use these programs, you need Microsoft 365 on your device.
Make sure your device is up to date so you can download and use the programs properly.

Digital concepts to consider

When creating your poster, think about the following digital concepts:

Concept	Meaning	Tip for the designer
Margins	A margin is the space left around the edges of your poster or billboard.	Leave a ٢,٥ cm margin.If you include content too close to the edge, it will appear crowded and cramped.
Font size and type	Your audience should be able to read the information easily.	Simple is better. A complicated or decorative font is distracting and hard to read.
Colors	Colors help you get your message across.	It is better to use less than 3 colors in a poster, and take into **consideration** the color of the background when choosing the font color
Images	They should also make sense in terms of the content you are creating.	Use clear, good-quality, and appropriate images.

Practical Activity :

Create a poster or billboard on one of the following topics using margins to make the poster more beautiful and well organized.

- The Grand Egyptian Museum
- Resources conservation
- Protecting the environment.

General Exercises

First. Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1. Margins are the empty spaces around the edges of a poster. ( )
2. Publisher is a good tool for designing posters. ( )
3. Using many colors always makes the design better. ( )
4. A difficult font makes reading easier. ( )
5. Images in a poster should match the topic and be clear. ( )
6. To use Microsoft 365, you need an updated digital device. ( )
7. Aligning content very close to the edges makes the poster visually attractive. ( )
8. Word can also be used to design simple posters. ( )
9. We do not need to care about background color when choosing font color. ( )
10. Images should be unclear to help people focus on the text. ( )

Second. Choose the correct answer from a, b, c. or d:

1. **Which tool is best for designing a digital poster or billboard?**
   A) Word B) PowerPoint
   C) Publisher D) Mobile app
2. **What do we call the empty space around the edges of a poster?**
   A) Background B) Colors
   C) Margin D) Font type
3. **How many colors is best to use in one poster?**
   A) Five colors B) Less than three colors
   C) Ten colors D) One color only
4. **If the font in a poster is complicated, it:**
   A) Looks very attractive B) Is hard to read
   C) Makes pictures better D) Helps people read easily
5. **When using pictuers in a poster, they should be:**
   A) Unclear B) Not related to the topic
   C) Clear and good quality D) Full of text
6. **Word is part of which program bundle?**
   A) Google Drive B) Microsoft 365
   C) Adobe programs D) Vlaby

7 **What happens if content is very close to the edges of a poster?**

A) The poster looks great

B) The poster looks crowded

C) The poster quality increases

D) Reading becomes easier

8 **Before downloading Microsoft 365, your computer should be:**

A) Very old

B) Not connected to the internet

C) Updated and ready

D) Using a very small font

9 **When choosing colors, you should think about the color of the:**

A) Computer

B) Font only

C) Background

D) Mouse

10 **In general, the best font choice is usually:**

A) Very complex

B) Unclear

C) Simple

D) Full of details


Lesson 3:
Algorithms

Lesson 3

Algorithms

Lesson Objectives:

By the end of the lesson, the student will be able to:

- explain the concept of algorithms.
- Know why choosing the right keywords is important when searching online.
- Write a simple algorithm.

Do you know that everything you do in your day is made of steps?
This group of steps is called an algorithm.

An algorithm: is a series of steps that explain how to do a task.

Algorithm to Add Two Numbers

Start

- **Enter the first number (A).**
- **Enter the second number (B).**
- **Add the two numbers: C = A + B.**
- **Show the answer (C).**

End

A good algorithm should have these features:

- **Definiteness:** Every step must be easy to understand.
- **Input:** It can take one or more inputs (numbers or data).

Basic Rules of an Algorithm

- **Output:** It must give at least one result.
- **Finiteness:** It must stop after a limited number of steps.
- **Effectiveness:** Each step should be simple and possible to do.

Computers and applications use algorithms to do specific jobs, like search engines.

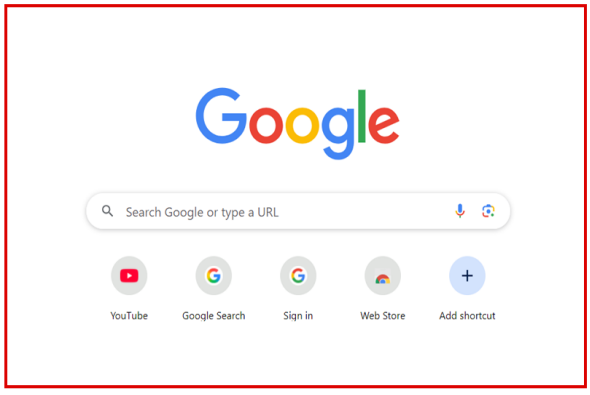
- **Keywords:** Every time you type words into a search engine, it uses algorithms to find results for you.

Algorithms and Search Engines

These words are called keywords.

- **What does the algorithm do?** The algorithm helps choose the best and most related results for what you are searching for.
- **Smart algorithms:** For example, when you use a search engine to find directions to a place, it uses information from digital maps to guide you.
- **Search accuracy:** It is very important to choose the right keywords when searching.

If your words are not clear, the search **results** may not be accurate.



Practical Activity

Write the steps of an algorithm to add three numbers.

You can work in groups.

General Exercises

First. Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1. An algorithm is a set of steps that shows how to do a task ( )
2. Algorithms help search engines find results that are not related to your search. ( )
3. Following a cooking recipe is an example of an algorithm. ( )
4. You do not need to choose the right words when searching online. ( )
5. Solving a math problem using steps is part of an algorithm. ( )
6. When cleaning a room, you should clean the floor before removing dust. ( )
7. Using unclear keywords gives very accurate search results. ( )
8. Search engines use map data to help you find directions to places. ( )
9. An algorithm is a group of random steps. ( )
10. Computers use algorithms only to decorate the desktop. ( )

Second. Choose the correct answer from a, b, c. or d:

1. **What do we call a group of steps to do a task?**

A) Keyword B) Digital search

C) Algorithm D) Database

2. **What does a search engine use to choose the best results?**

A) Food recipes B) Spelling mistakes

C) Algorithms D) Pictures only

3. **When solving a word problem in math, you usually need to:**

A) Ignore the question B) Break it into steps

C) Use one word only D) Ask for help without trying

4. **When searching for directions to a place, the search engine uses:**

A) Your personal files B) Digital map information

C) Math questions D) Cooking recipes

5. **How do you tell the search engine what you want?**

A) Turn off the computer B) Type keywords

C) Clean your room D) Make food

6. **What may happen if your keywords are not clear?**

A) Results are always correct B) Results may not be accurate

C) The room becomes clean D) Devices stop working

7 **A food recipe is an example of:**

A) A hard problem
B) An algorithm
C) A random result
D) A messy process

8 **What should you choose carefully when searching for information?**

A) Background color
B) Search words
C) Bedtime
D) Furniture

9 **What is the first step when cleaning a room?**

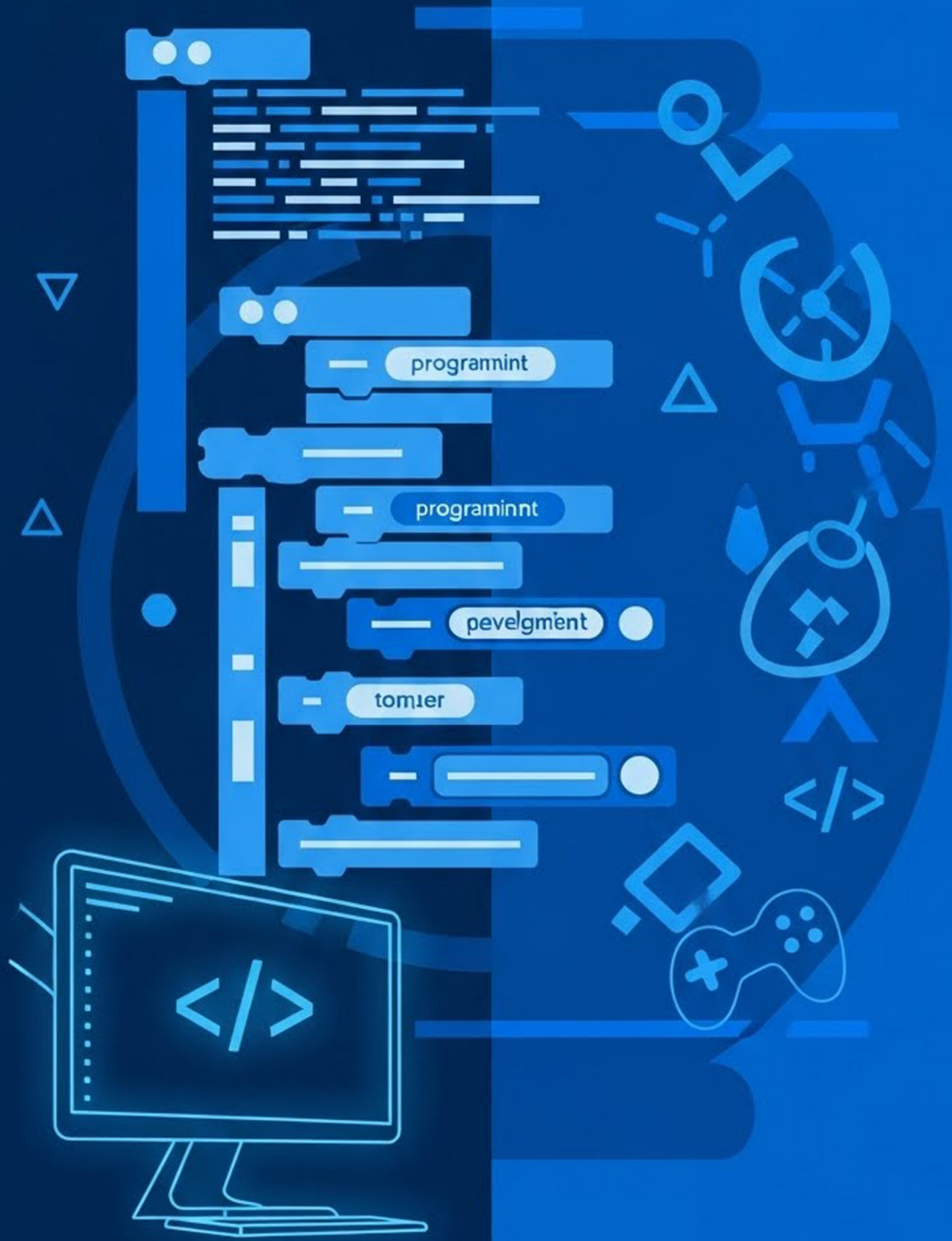
A) Clean the floor
B) Remove dust
C) Wipe surfaces
D) Leave the room

10 **Computers and apps use algorithms to:**

A) Decorate rooms
B) Do specific tasks
C) Cook food
D) Send spam

Lesson 4:

Programming and Designing Games



Lesson 4

Programming and Designing Games

Lesson Objectives:

By the end of the lesson, the student will be able to:

- explain what coding is in a simple way.
- understand why coding is important for making games, cartoons, and movies.
- use logical thinking to write simple steps to solve a maze or an easy task.

Hello, everyone. Can you imagine communicating in a computer's language?

This language, known as coding, is similar to writing an extensive set of instructions—much like a detailed recipe.

Coding:

•It is writing many algorithms to make a complete computer program.

Algorithms:

•They are steps and instructions that tell the computer what to do, just like the steps to solve a math problem or make a falafel sandwich.

Coding in the World of Technology

Look around you and think:

All the online animations and movies you have viewed and the online games you have played were created and designed using coding.

Problem Solving and Computational Thinking

Have you ever solved a maze? Coding means thinking about the instructions you can use to get through the maze in a computer program.

For example, when solving a maze, programming instructions might include commands such as: "Move two steps up," 'turn one step to the left,' and so on."

Learning Tools, There are many websites, such as Code.org, that can help learners develop coding skills."

Practical Activity :

Dear student, Explore the website Code.org to learn programming.

(You may ask your teacher for help)

General Exercises

First. Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1. Coding means writing step-by-step instructions to create a program. ( )
2. Movies and cartoons are not created using coding. ( )
3. Algorithms are sets of steps that instruct a computer on what to do. ( )
4. Video games can be developed using coding. ( )
5. Code.org helps students learn coding skills. ( )
6. Coding cannot be used to solve mazes or other step-by-step problems. ( )
7. When solving a mathematics problem, a series of steps is used. ( )
8. Coding involves giving clear instructions to a computer. ( )
9. Coding does not help individuals think logically. ( )
10. Coding is very difficult, and children cannot learn it. ( )

Second. Choose the correct answer from a, b, c. or d:

1. **What do we call writing many algorithms to make a full program?**

A) Math
B) Coding
C) Cleaning
D) Planning

2. **What is made using programming?**

A) Food recipes only
B) Cartoons, movies, and online games
C) Falafel
D) Home furniture

3. **Programming helps us learn how to solve:**

A) Random puzzles
B) Cooking recipes
C) Problems
D) Impossible mazes

4. **What do we call the steps that tell the computer what to do?**

A) Helper programs
B) Computer language
C) Algorithms
D) Secret codes

5. **Which website can help you learn programming?**

A) Facebook
B) Code.org
C) Google Maps
D)Microsoft Word

6. **When solving a maze, programming needs thinking about:**

A) Random paths
B) Step-by-step paths
C) Leaving without steps
D) Turning off the computer

7 **What does the word "coding" mean?**

A) Reading
B) Handwriting
C) Programming
D) Coloring

8 **When computers use algorithms, they do:**

A) Any task
B) Specific tasks
C) Random actions
D) Sleeping

9 **What should you give the computer to solve a maze?**

A) Personal notes
B) Internet pictures
C) Instructions (steps)
D) Food recipes

10 **Programming is the computer language that helps us:**

A) Break games
B) Make games and movies
C) Stop devices
D) Send emails only

Lesson 5:

Explore Scratch

Lesson 5

Explore *Scratch*

Lesson Objectives:

By the end of the lesson, the student will be able to:

- identify examples of programs and applications that use block-based coding.
- recognize and describe the main parts of the Scratch interface.
- practice building simple programs using the Scratch.

Are you ready to become a programmer?

Imagine being the conductor of an orchestra, where each instrument is a character on the screen.

You control when they move, speak, or play music—just like writing code to tell them what to do.

Many educational apps use block-based coding to teach children programming fundamentals.

One of the most widely used platforms is :

Scratch

Scratch is a programming language made especially for your age.

It helps you turn your ideas into fun interactive stories and games very easily.

Tynker

Tynker is an educational platform designed to help children learn the fundamentals of coding.

It offers a wide range of projects and lessons and uses block-based coding, similar to Scratch.

Tynker also introduces students to other programming languages, such as Python and JavaScript.

Tynker website link: https://www.tynker.com

Blockly

It is an open-source visual programming language like Scratch in its block-based interface .

You drag and drop blocks to make programs.

Getting Started with Scratch:

The user puts blocks together to solve puzzles and finish tasks.

It can also work with other languages like Python and JavaScript.

You can start using Scratch easily:

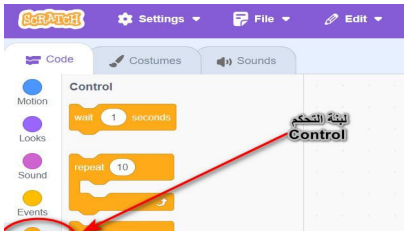
- Go to the official Scratch website on the internet.
  (https://scratch.mit.edu/projects/editor/?tutorial=getStarted)
- Download the program:

You can download Scratch on your computer and use it offline.

The Scratch interface consists of the following areas:

Getting to know the Scratch interface

- Stage: This is where your project gets displayed when it's active.
- Command Blocks Area: It is the library that has all the colorful blocks, such as motion, looks, sound, and more.
- Scripts area: This is the area that you drag the blocks of code to and snap them together to create scripts—and eventually your project.

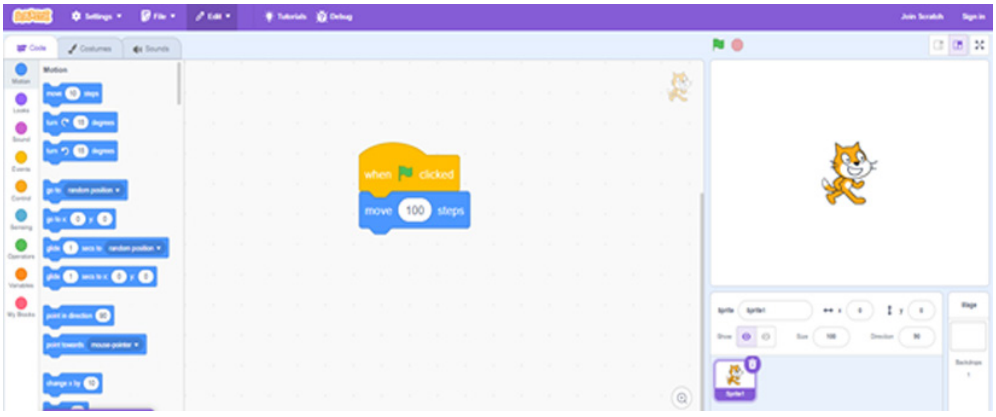


Simple Practical Projects in Scratch

Sprite object:

It is the first character that you see in Scratch. We call it Scratch Cat or Sprite.

Let's move the sprite (cat) on the stage, follow these steps:



Goal: Make the Sprite (Cat) move 100 steps when we click the green flag.

•Start:

From the Event category (yellow), drag the block "when green flag clicked."

•Command:

From the Motion category (blue), drag the block "move 100 steps" and snap it under the start block.

•Run:

Click the green flag and watch the cat move.

Practical Activity :

Dear student,

Add talking and sound using block-based coding in the Scratch program.

General Exercises

First, Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1. Scratch uses text-based coding like Python. ( )
2. Blocks in Scratch help students program without writing code. ( )
3. A sprite in Scratch can move, talk, and make sounds. ( )
4. You cannot change the sprite's appearance in Scratch. ( )
5. The block "wait 1 second" is found in the Motion category. ( )
6. The Blocks Palette contains ready-made commands. ( )
7. The Stage is the area where we build code blocks. ( )
8. A Scratch project can be run by clicking the green flag. ( )
9. You cannot add new sounds in Scratch. ( )
10. Scratch is suitable for teaching coding to children. ( )

Second, Choose the correct answer from a, b, c. or d:

1. **What is the main system Scratch uses instead of writing difficult text code?**

A) Complex code system
B) Block-based system (Blocks)
C) Math equations system
D) Drop-down menu system

2. **Which part of the Scratch screen shows the final result of your project?**

A) Scripts Area
B) Blocks Palette
C) Stage
D) Sprite Library

3. **What do we call a group of connected blocks that give commands to a sprite?**

A) Sprite
B) Block
C) Script
D) Command

4. **What is the function of the "next costume" block in Scratch?**

A) Move the sprite 10 steps
B) Play a sound
C) Change the sprite's appearance to look like it is walking
D) Show a text message

5. **Which block-based coding app also supports text languages like Python and JavaScript?**

A) Scratch
B) Tynker
C) Daisy the Dinosaur
D)Blockly

6. **In which block category can you find "move 100 steps"?**

A) Events
B) Motion
C) Looks
D) Sound

7 **What is the default sprite that appears when you open Scratch?**

A) Football B) Wizard

C) Scratch Cat D) Horse

8 **Which category contains the "when green flag clicked" start block?**

A) Looks B) Control

C) Sound **D)** Events

9 **Why do we add the "wait 0.2 seconds" block inside a loop?**

A) To repeat the movement many times

B)To avoid very fast movement and make it look natural

C) To play a sound when changing costume

D) To make the sprite say "Hello!"

10 **Which of these applications is an open-source visual programming language that can be combined with other languages like Python?**

A) Movie Maker B) Blockly

C) Daisy the Dinosaur D) Paint

Lesson 6:

Graphic Art–
Creating and Editing Digital Images

Lesson 6

Graphic Art *Creating and Editing Digital Images*

Lesson Objectives:

By the end of the lesson, the student will be able to:

1-identify common tools and programs used for editing pictures and drawings, such as Paint.

2-use an office program to add different graphic elements, like pictures, text, and shapes.

3-use Paint to make simple edits to images, such as cropping or adding text.

Do you like drawing and coloring?

In the world of technology, we can do this using computer programs.

This is called Graphic Art.

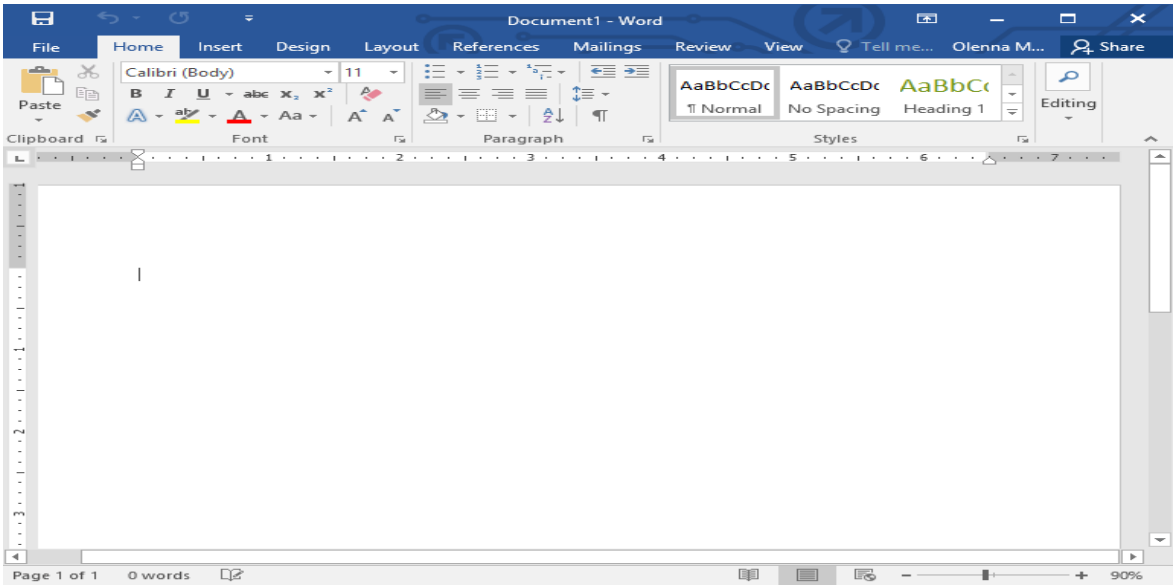
Graphic Art means creating and editing digital pictures and drawings.

Graphic Art Tools

There are popular programs that can help you create your own drawings and edit images.

- **Microsoft Paint:** This is a popular program on computers that helps you draw pictures or edit images easily.
- **To find Microsoft Paint:** Click on Accessories in the "Start-up menu". Find Paint and click on it.
- **Toolbar:** In Paint, you will find the menu bar and toolbox. The toolbox includes all the tools you will need for drawing and coloring.
- **Microsoft Word:**

Microsoft Word also offers graphic tools to create a graphic such as shapes, icons, 3D models, and smart art. To see these options, click on "Insert" from ''the menu bar"



You can edit photos in Paint, as follows:

- **Cropping: Select areas of the photo to use in your drawing.**
- **Add text: To add text to a photo, click on the bottom right corner of the photo. Drag your mouse to the right until you have enough white space to write your text.**
- **Change the size and color of the photo: Use "Fill with color" option in Paint to change the color of the photo. Also, you can change the size and direction of the photo.**

Practical Activity

Dear student, using Microsoft Word or any other writing program, write a short paragraph about:

"The importance of cropping in editing pictures, and how it helps the designer focus on one part of the image."

In your paragraph:

- **Mention why you may need to crop a photo you took with your mobile phone.**
- **Explain how cropping makes the final picture look better and more focused on the main subject.**

General Exercises

First: Put (√) if the sentences is correct or (X) if the sentence is incorrect:

1. Paint is used to create drawings and edit pictures. ( )
2. The process of selecting part of an image and cutting the rest is called cropping. ( )
3. You cannot use Word to add graphic elements such as shapes. ( )
4. To add text to an image in Paint, you need a white space to type the text. ( )
5. Common programs for editing pictures and drawings are found only on mobile phones. ( )
6. You can change the size or direction of an image using Paint. ( )
7. You can access graphic design tools in Word from the Insert tab. ( )
8. When you open Paint, you can find the tools in the menu bar and the toolbox. ( )
9. Algorithms are the main tools in the Paint program. ( )
10. You cannot fill colors using special options in Paint. ( )

Second: Choose the correct answer from a, b, c. or d:

1. **Which of the following programs is commonly used for editing pictures and drawings?**
   A) Publisher B) Microsoft Paint
   C) Google Chrome D) Excel
2. **What is the process of selecting specific parts of an image and cutting the rest called?**
   A) Coloring B) Cropping
   C) Insert D) Erase
3. **Where can you find graphic tools such as shapes and icons in Word?**
   A) Taskbar B) Start menu
   C) File tab D) Insert tab
4. **When you open Paint, where can you find the editing tools?**
   A) Search engine B) Menu bar and Toolbox
   C) Settings menu D) Publisher program
5. **What do you drag when adding text to an image in Paint?**
   A) Close button B) Mouse pointer
   C) Menu bar D) The whole image

6 **Paint is part of:**

A) Internet browsers

B) Video games

C) Accessories in the Start menu

D) Search engines

7 **Word can help design graphic elements such as:**

A) Emails

B) Map databases

C) Shapes and diagrams

D) Video chats

8 **What can you change in an image using Paint?**

A) The whole image topic

B) Image size or direction

C) Computer settings

D) Designer's name

9 **To open Paint, you search for it in the:**

A) Tools menu

B) Start menu

C) Files menu

D) Presentation programs

10 **Graphic Art is a field related to:**

A) Writing long texts

B) Creating and editing digital photos and drawings

C) Sending emails

D) Solving math problems

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