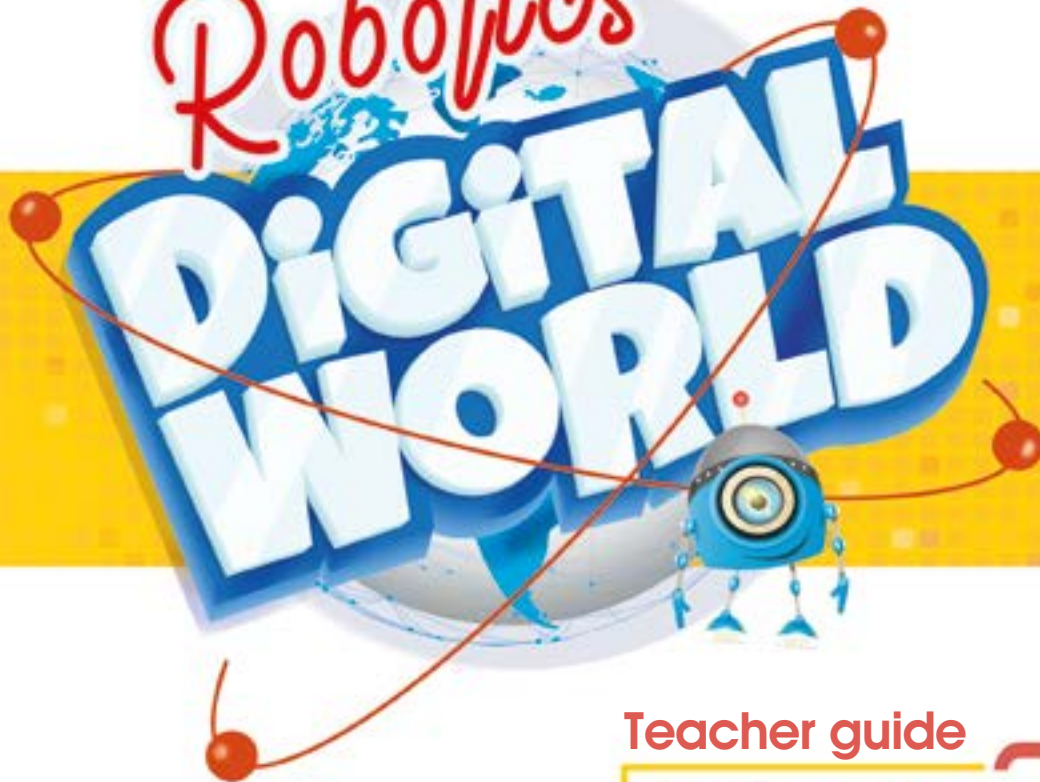


# Robotics



Teacher guide

Book 3



# Robotics DIGITAL WORLD

## Book 3

Windows 10

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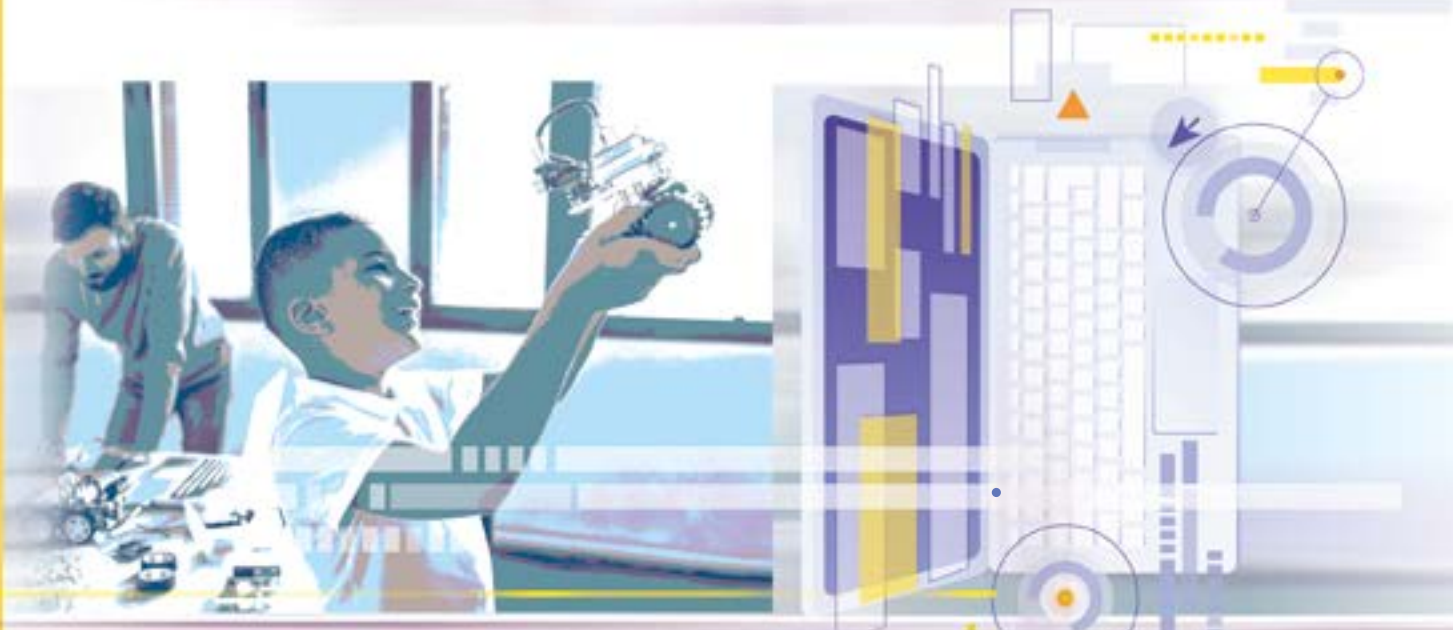
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يتحمل المؤلف كامل المسؤولية القانونية عن محتوى مصنفه ولا يعبر هذا المصنف عن رأي دائرة المكتبة الوطنية أو أي جهة حكومية أخرى.



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Microsoft  
Office 2019

**Unit  
One**

**Computer  
and Life**



## Unit Learning outcomes

**Upon completion of this unit students will be able to:**

- Define data, information and processing.
- Extracts data, information and processing from a given problem.
- Define the system and determines its components.
- Define computer networks.
- Enumerate the benefits of computer networks.
- Determine the requirements of networks.
- Compare different types of computer networks.
- Appreciate the role of technology in facilitating human life.

## Lesson 1: Data and information

### Learning outcomes

**Students will be able to:**

- Define data, information, and processing.
- Extract data, information and processing from a given problem.
- Define the processing Operations.

### Time needed

One class lesson.

## Teaching strategies and classroom management

1. Discussion.
2. Cooperative learning.
3. Find classmate.
4. Ice-Cream Sticks.

## Warm up

- Print (Find Classmate) cards in the resources.
- Use phrases to review what has been taken in previous grades.
- Print the diagrams of the cubes in the resources and form them as cubes.

## Instructions

- Use ([find classmate cards](#)) to form groups.
- Write the problem page (5) on the board and link it to mathematics in terms of problem analysis steps: (data (inputs), Outputs, planning, and solution).
- Explain the problem and define data, information, and processing.
- Make groups of 6 (according to the faces of the cube), and give each one [a cube](#).
- Each student takes one of the faces and identifies the data, information and processing.
- Ask the students to do activities page (7).
- Follow up the students and assess them.

## Evaluation Strategies

Performance based evaluation.

## Evaluation Tools

Verbal Appreciation Scale.

## Lesson 2: System

### Learning outcomes

**Students will be able to:**

- Identify the system, and the computer system.
- Recognize the components of the system.
- Express the components of the system by drawing.
- Identify the components of a system.

### Time needed

One class lesson.

### Teaching strategies and classroom management

1. Discussion.
2. Cooperative learning.
3. Active learning.
4. Fan & Pick.

## Warm up

- Pre-processing of the lesson by printing the **cards** from the appendices.
- Cut the cards and holds them in such a way that they form a Fan.
- Bring a cake or asks the students to bring it.

## Instructions

- Choose a student by the method of numbered heads.
- Ask the student to choose one of the cards and answer the question in it.
- Use the questions and their answers as an introduction to the lesson.
- Discuss the definition of the system.
- Draw the components of the system on the board and discuss to determine the components of making donuts.
- Explains when we call a system “computer system”.
- Ask the students to solve the activities page (10), and follow them up.
- Ask the students to solve **worksheet (1)** and follow up their work.

## Evaluation Strategies

Performance based evaluation.



## Evaluation Tools

Verbal Appreciation Scale.

## Lesson 3: Computer Networks

### Learning outcomes

#### Students will be able to:

- Explain the meaning of computer networks.
- Enumerate the benefits of computer networks.
- Mention the components of computer networks.
- Define network card, communication lines, protocol, and binding models.
- Compare the types of local and wide area networks.
- Enumerates the types of connection models.
- Compares between connection models.

### Time needed

Two class lessons.

### Teaching strategies and classroom management

1. Discussion.
2. Cooperative learning.
3. Brainstorming
4. Mind Map.
5. Think -pair- share.

## Warm up

- Bring small BBQ sticks, paste, adhesive cardboard, a piece of receiver cable, a piece of double braided cable, a piece of fiber optic cable (which can be replaced by bringing a transparent thread for the rosary and dividing it into equal parts and then wrapping it with black).
- Bring a network card, router.
- The teacher writes the following words on the board (network, computer, Facebook, online play, home wireless printer, photo exchange).

## Instructions

- Give students enough time to express the previous words through their own phrases and write them on the board.
- Discuss the concept of networks and their benefits through the previous brainstorming.
- Show the students the components of the networks and mention their names.
- Explain the types of networks and compare between them.
- Distribute the students into groups.
- Distribute [worksheet \(2\)/q1](#), follow up the students while working.
- Distribute the tools you prepared to groups, and ask them to form a network using the paste pieces for computers, the barbecue sticks for communication.

- Remind students of the importance of adhering to public safety guidelines when using sticks and paste.
- Explain the types of connection models using ) to show how the message is sent in each model.
- Ask students to think about the comparison between connection models, discuss their ideas with classmate, share with the class.
- Distribute [Worksheet\(2\)/q2](#), [worksheet \(3\)](#), follow up the students while working.
- Explain how to use the conceptual map and instruct the groups to make a mind map of the lesson.
- Ask students to do activity on page (15), and follow up their work.
- Distribute worksheet (1).

## Resources

- Worksheet1 (images of internet browsers).
- Worksheet2 (buttons images).
- Worksheet3 (IP address components).

## Evaluation Strategies

Performance based evaluation.

## Evaluation Tools

- Verbal Appreciation Scale.



Microsoft  
Office 2019

Unit  
**Two**

# Internet



## Unit Learning outcomes

**Upon completion of this unit students will be able to:**

- Explain what the Internet means.
- Enumerate the benefits of the Internet.
- Mention the requirements for internet connection.
- Define both web browser, and hyperlinks.
- Give examples of internet browsers.
- Deal with the web browser.
- Define the components of Microsoft edge home page.
- Define the parts of the website address.
- Search information using the internet.
- Save images from the internet.
- Print text from the Internet.
- Learn the ways to use internet safely.
- Commit the safe rules when using the Internet.

## Lesson 1: Internet

### Learning outcomes

**Students will be able to:**

- Explain the concept of Internet.
- Enumerate the benefits of the Internet.
- Mention the requirements for Internet connection.

### Time needed

one class lesson.

## Teaching strategies and classroom management

1. Discussion.
2. Presentation.
3. Collaborative Teamwork.
4. Brainstorming.

### Warm up

- Preface the session by presenting the video (what is the internet).
- Write the word Internet on the board and ask the students what this word means, and ask them to write one idea about internet on sticky notes.

### Instructions

- Give students enough time to express the previous words through their own phrases and write them on the board.
- Discuss the concept of networks and their benefits through the previous brainstorming.
- Show the students the components of the networks and mention their names.
- Explain the types of networks and compare between them.
- Distribute the students into groups.
- Distribute worksheet (2)/q1, follow up the students while working.

- Read the students ideas one by one and discuss them with the students in order to explain the concept of internet, the importance and benefits of the it.
- Ask the Students to solve the activity page (18) in groups. and follow up their work.
- Present the requirements of the Internet connection. And write them on the board.
- Ask the Students to solve the second activity at page (18) in groups, and follow up their work.
- Distribute the tools you prepared to groups, and ask them to form a network using the paste pieces for computers, the barbecue sticks for communication
- Remind students of the importance of adhering to public safety guidelines when using sticks and paste.

### Evaluation Strategies

- Performance based evaluation.
- Communication.

### Evaluation Tools

- Checklist.

## Lesson 2: Web Browser (Microsoft Edge)

### Learning outcomes

#### Students will be able to:

- Define web browser, and hyperlinks.
- Give examples of internet browsers.
- Deal with the web browser.
- Define the components of the Microsoft edge home page.
- Define the parts of the website address.
- Defines the type of service provided by the website from its address.

### Time needed

one class lesson.

### Teaching strategies and classroom management

1. Discussion.
2. Active learning/ games.
3. Demo.
4. Collaborative Teamwork.
5. Brainstorming.



## Warm up

- Print images of Internet browsers from appendices, two copies of each image.
- Crop images of buttons.
- Cut the cards of the URLs and keep the name of each site alone.
- Arrange the images so that every two copies of the same image are far apart, ask the students to watch the picture for 15 seconds and then quickly flip the images.
- Choose one of the students to find two similar images.
- And so on.

## Instructions

- Use the [previous cards](#) to introduce the programs:
- Internet explorer, Google Chrome, Firefox, Microsoft edge, Safari, and ask about them. (tell them that they are all Internet browsers.)
- Apply the steps of operating the browser (Microsoft edge), and ask the groups to apply the steps, and browse the components of the home page.
- Raise a picture of one of the [buttons](#) and ask the students about it, listen to their answers and correct them. Continue for all buttons.
- Distribute the [cards](#) for the names of the sites to the students and ask them to rearrange and paste them to form a correct website address.
- Explain the parts of the website and the codes of the services provided by the sites.
- Ask the students to do individually (Do & Observe) on pages (22,23)

## Resources

- Worksheet1 (images of internet browsers).
- Worksheet2 (buttons images).
- Worksheet3 (IP address components).

## Evaluation Strategies

- Performance based evaluation.
- Communication.

## Evaluation Tools

- Checklist.

## Lesson 3: Search

### Learning outcomes

#### Students will be able to:

- Search information using the internet.
- Save images from the internet.
- Print a text from the Internet.

### Time needed

Two class lessons.

## Teaching strategies and classroom management

1. Discussion.
2. Demo.
3. Collaborative Teamwork.
4. Brainstorming.

## Warm up

1. Preface the lesson by playing the video ([search](#)).
2. Ask the students to write three words about the video.

## Instructions

- Ask the students about their words and write them on the board.
- Explain the meaning of search engine, and use google to search the life cycle of the butterfly.
- Explain how to save an image using the internet.
- Ask the students in groups to do activity on page (25), and follow up their work.
- Ask students to search for archaeological sites and save images for these sites.
- Show students how to print a text from the Internet.
- Ask the groups to implement the steps, follow up their work and write notes.
- Distribute the [worksheet \(search\)](#) to groups, follow up their work and write notes.

## Resources

- Video (Search).
- [Worksheet \(search\)](#).

## Evaluation Strategies

- Performance based evaluation.
- Communication.

## Evaluation Tools

- Checklist.

## Lesson 4: Cyber Security

### Learning outcomes

#### Students will be able to:

- Learn the ways of safely use the Internet.
- Commit the safe rules when using the Internet.
- Value the role of the Internet in saving time and effort when obtaining information.

### Time needed

One class lesson.

## Teaching strategies and classroom management

1. Discussion.
2. Demo.
3. Collaborative Teamwork.
4. Brainstorming.
5. Hot Chair.

### Warm up

- Preface the lesson by playing the video ([cyber security](#)).
- Put a chair in the center of the class and form a circle from students chairs.

### Instructions

- Explain the idea of the hot chair, that you will sit in the middle on a chair while the students surround you and ask questions.
- Each student will ask you a question. Answer it with details.
- Ask the students to respect each other when asking questions, and to listen carefully.
- When the students finish asking, ask them to write three tips for safety use of internet.
- Distribute the [worksheet \(cyber security\)](#) to students, follow up their work.
- Discuss, and tell the students to make a big panel for safety rules and hang it in the class.

## Resources

- Video (Cyber security).
- [Worksheet \(Cyber security\)](#)

## Evaluation Strategies

- Performance based evaluation
- Communication.

## Evaluation Tools

- Checklist.



Microsoft®  
Office 2019

**Unit  
Three**

# Microsoft Word 2019



## Unit Learning outcomes

Upon completion of this unit students will be able to:

- Open word 2019 program.
- Type text in Arabic and English.
- Use the keyboard correctly
- Coordinate paragraph alignment.
- Add numbering formatting to paragraphs.
- Add bullets formatting to paragraphs.
- Add shading to paragraphs.
- Insert an image into a word file.
- Insert clip art into a word file.
- Insert a shape into a word file.
- Insert Word Art text.
- Insert header and footer.
- Insert table and format it.

## Lesson 1: Let's Start With Word

### Learning outcomes

Students will be able to:

- Open the Microsoft Word 2019 program.
- Distinguish keyboard keys and their functions.
- Type and format a text in Arabic.
- Type and format a text in English.
- Copy & paste a text.
- Cut & paste a text.



## Time needed

Two class lesson.

## Teaching strategies and classroom management

1. Direct method.
2. Discussion.
3. Collaborative Learning.
4. Brainstorming.

## Warm up

- Discuss with students the programs they have learned, including Microsoft word program, and ask them to open the program and recognize the screen parts.
- Prepare a cartoon board (or poster) and draw keyboard buttons without typing the letters.

## Instructions

- Prepare a cartoon board (or poster) and draw keyboard buttons without typing the letters.
- Divide the students into two groups and give each group stickers on which a set of letters, numbers and symbols are written, the group is asked to choose a student alternately to paste the sticker in its correct place on the keyboard poster.

- Enhance the winning team with the most correct answers and the least time.
- Explain how to type a text using keyboard.
- Ask the students to do activities on p. 32 and follow up their work.
- Show the pictures of icons (copy, paste, cut) and ask the students about their functions and their location in the toolbar.
- Ask the students to do activities on page 33 and follow up their work.(You can make competition between groups in this activity, so that the student who gets the most words wins)
- Ask The students to save the files and close the program correctly.

### Resources

- Key board poster.
- Stickers (numbers, symbols and letters)
- Pictures of (copy, paste, cut)

### Evaluation Strategies

- Performance based evaluation
- Communication.

### Evaluation Tools

- Checklist
- Numerical Estimation Scale

## Lesson 2: Paragraph

### Learning outcomes

#### Students will be able to:

- Recognize the concept of paragraph.
- Align paragraph (right, left, center, adjust).
- Add numbering formatting to paragraphs.
- Add bullets formatting to paragraphs Shade text with a color.

### Time needed

Two class lesson.

### Teaching strategies and classroom management

1. Direct method.
2. Discussion.
3. Collaborative Learning.
4. Brainstorming.
5. Heads up.

### Warm up

- Store the file (Eid sacrifice) on the desktop.
- Direct the students to open the Arabic language book the first lesson and ask them: how many paragraphs in the lesson?
- Discuss the concept of paragraph and ask them to recalculate the number of paragraphs in the same lesson.

## Instructions

- Distribute worksheet (1), and follow up the student's work.
- Explain the importance of alignment in clarifying the text and making it easier to read.
- Use data show to explain how to apply right alignment.
- Direct the students to explore other types of alignment and line spacing, apply them and observe their impact on the paragraph.
- Select a student from the groups by the numbered heads to illustrate using data show the alignment of the paragraph (left, center, adjust) Infront of students.
- Direct the students to do activity on page 39, follow up their work and evaluate them.
- Discusses (**think**) with the students and explain the answer.
- Ask the students to solve (Do & Observe) individually, follow up their work and support them.
- Uses the Data show (projector) to explain how to add numbering and bullets formatting to paragraphs and how to shade text.
- Direct the students to do activities on pages (43,44), follow up their work and evaluate them.

## Resources

- Worksheet (1).
- Worksheet (2).

## Evaluation Strategies

- Performance based evaluation.
- Communication.

## Evaluation Tools

- Checklist.

## Lesson 3: Insert (part 1)

### Learning outcomes

#### Students will be able to:

- Insert an image into a word file.
- Adjust the image size.
- Relocate the image in the file.
- Insert shapes into a word file.
- Adjust the shape size, the shape fill, and the shape outline.

### Time needed

Two class lessons.

### Teaching strategies and classroom management

1. Training a classmate.
2. Discussion.
3. Collaborative Learning.
4. Brainstorming.
5. Heads up.

## Warm up

- Store the file (**sport benefits**) on the desktop, and the picture (**sports**) in the (**pictures**) folder.
- Show the students some pictures using the projector for one minute, then asks them several questions, note their answers and discuss which is better: the file that displays the information in text only or the file that contains images in addition to the text.
- Discuss the sources of obtaining images with students, listen to their answers and explain some sources such as the Pictures folder and online pictures.

## Instructions

- Use the projector to show the students how to insert an image into a file and show them how to adjust its size.
- Direct the students to do the activity on (p. 46), follow up their work and evaluates them.
- Distribute worksheet (3), ask the students about the names of the shapes as a competition and reinforce the students who answers correctly.
- Select a student from each group using numbered heads and explain how to insert shape, and how to change its location, its size, or its color.
- Ask these students to train their classmates in the group.
- Choose a student from the group using the numbered heads to insert shape using the Data show (projector) and choose other students to adjust the size, the color and the position.

- Direct the students in groups to do the activity on page 48, follow up their work and evaluates them.
- Direct the students to do (Do & Observe) on page 48.

### Resources

- The word file (sports benefits).
- The picture (sports).
- Worksheet (3).

### Evaluation Strategies

- Performance based evaluation.
- Self-Evaluation.

### Evaluation Tools

- Numerical estimation scale.
- Learning description record.

## Lesson 3: Insert (part2)

### Learning outcomes

#### Students will be able to:

- Insert WordArt text.
- Adjust the size of the WordArt text.
- Format WordArt text.
- Insert header and footer.
- Format header and footer.

### Time needed

One class lesson.

### Teaching strategies and classroom management

- Direct Teaching
- Exploration
- Numbered Heads.
- Discussion.
- Collaborative Learning.

### Warm up

- Show the students a WordArt text, ask the students to explore how to insert it, reinforce student who answers correctly.
- Store the file (living creatures) on the desktop.



## Instructions

- Use the projector to show how to insert and edit WordArt text.
- Direct the students to do activities on Page 50, follow up their work and evaluates them.
- Direct the students to open the file (living creatures) and ask them to copy it five times on separate pages, and ask them to print the name of the group at the end of each page and calculate the time they took.
- Discuss what if the number of pages is 100 pages? How long will it take?
- Explain how to do it easily through the header and footer.
- Use the data show to explain how to add header to the page and format it.
- Direct the students to do the activities on Pages (52,53), follow up their work and evaluates them.

## Resources

- Word file (living creatures).

## Evaluation Strategies

- Performance based evaluation
- Self-Evaluation.

## Evaluation Tools

- Numerical estimation scale.
- Learning description record.

## Lesson 3: Insert (part3)

### Learning outcomes

#### Students will be able to:

- Recognize the concept of the table and its importance.
- Insert a table into a word file.
- Insert data into the table and format it.
- Add columns and rows to the table.
- Delete columns and rows from table.

### Time needed

Two class lessons.

### Teaching strategies and classroom management

1. Direct Teaching
2. Jigsaw
3. Discussion.
4. Collaborative Learning.

### Warm up

- Ask the students: what is the meaning of table? When do you use the table?
- Ask the students to write their answers on sticky notes and hang it on the board.

**Note:** (you can use google jamboard to make live notes).

## Instructions

- Explain the concepts of Table, row, and column.
- Use ClassDojo to distribute the students into groups.
- Choose a student from each group and explain how to insert a table with specific rows and columns.
- Choose another student from each group and explain how to format the table.
- Ask these students to explain what they have learnt for their colleagues in the group.
- Redistribute the groups, so the students will teach the new colleagues what they have learnt.
- Follow up the students and give support and feedback.
- Use the projector to show how to insert a table, format data, and how to modify columns and rows.
- Direct the students to apply the activities on pages (55,57), follow up their work and evaluates them.

## Resources

- Google Jamboard.

## Evaluation Strategies

- Performance based evaluation.

## Evaluation Tools

- Numerical estimation scale.
- Learning description record.

## Lesson 4: I am a skilled writer

### Learning outcomes

#### Students will be able to:

- Review the information and skills learned in the unit.
- Use the skills he learned in typing and formatting texts.
- Show the ability to create and innovate.

### Time needed

Two class lessons.

### Teaching strategies and classroom management

1. Direct Teaching
2. Jigsaw
3. Discussion.
4. Collaborative Learning.

### Warm up

- Explain the aim and the time needed for this lesson.
- Show the students the assessment standards for the final project.

## Instructions

- Direct the groups to choose one of the topics in the lesson or any other topic they prefer.
- Specify the time for the project.
- Watch students while working and write notes.
- Support the groups if needed (take that in consideration in assessment).
- Evaluate the final project and give the students feedback about their work.

## Evaluation Strategies

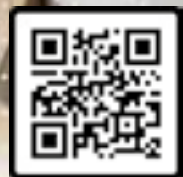
- Performance based evaluation.

## Evaluation Tools

- Numerical estimation scale.

**Unit  
Four**

# Scratch



## Unit Learning outcomes

- Recognize the looks blocks functions.
- Show text bubbles.
- switch the costumes of the sprites depending on the situations.
- Know the importance of sensing blocks.
- Recognize the types of sensing blocks.
- Use sensing blocks.
- Make an animation.

## Lesson 1: Looks Blocks (Purple Blocks)

### Learning outcomes

- Recognize the looks blocks functions.
- Show text bubbles.
- switch the costumes of the sprites depending on the situations.

### Time needed

Two class lesson.

### Teaching strategies and classroom management

- Collaborative Work.
- Direct teaching.
- Practice.
- Brainstorming.
- Class do jo.

## Did the students remember?

- The main category of the sprites?
- How to build a stack from blocks?
- How to make a sprite moves?

## Preparing the portion

- Divide the students into groups.
- Print worksheet (1) according to the groups number.
- Bring comics or storyboard with you which they have bubble texts. (you can open some of them using internet and datashow).

## Warm up

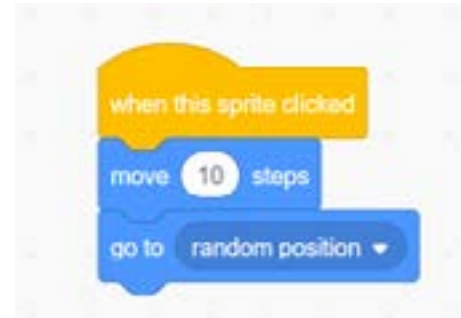
- give the groups 15 mins to answer worksheet 1.
- Open worksheet (1) on datashow and select a student randomly using class do jo each time to answer question no. 1 in front of the students.
- Display the comics or storyboard which has the bubble text on the datashow and ask them if we can do that using Scratch program?
- Listen to their answers and discuss them.

## Instructions

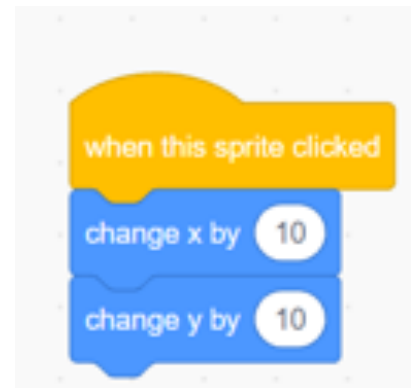
- Display the looks blocks in front of the students one by one to tell them about its function.
- And tell them that they can make bubble text using Scratch program (looks blocks).



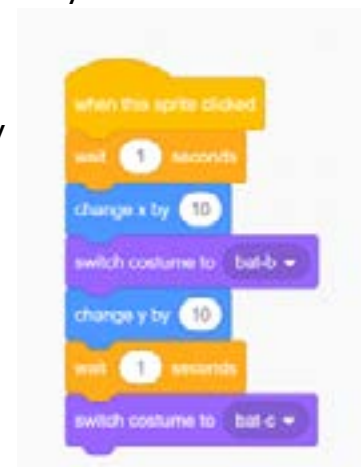
- Direct the students implement the activity on p. 61 in 15 mins.
- Follow them up and evaluate them.
- Ask them to apply the “Do & Observe” on p. 62
- Return to the worksheet 1 and ask the students what blocks category did they use to make the Bat flying?
- Add the Bat sprite to stage.
- Use the motion blocks maybe like this  
Notice that each group can use different blocks.



- Listen to their answers. Then ask them if this move of the Bat is like the real move? (brainstorming).
- Discuss the students that this flying not reality so they have to change the x and y, which means they have to use these blocks.



- It still not reality so tell them about the looks blocks.
- Explain that this sprite has 4 costumes and they have to use the suitable one.
- Try in front of them until access this stack:
- Direct the groups to implement the activity on p.62.
- Follow them up and evaluate them during that.
- Ask them to answer the “Think” item on p. 63.



## Resources

- worksheet (1).
- [Scratch - Imagine, Program, Share \(mit.edu\)](https://scratch.mit.edu) to see projects.

## Evaluation Strategies

- Performance based evaluation.

## Evaluation Tools

- Chick list.

## Enrichment Activity

- Ask these students to use the Clouds sprite, Crab sprite and the dog2 sprite to make a storyboard.

## Remedial Activity

- Ask these students to implement the Bat flying each one alone.

## Computational Thinking

- How to make the Bat flying faster than that?

## Lesson 2: Sensing Blocks

### Learning outcomes

- Know the importance of sensing blocks.
- Recognize the types of sensing blocks.
- Use sensing blocks.

### Time needed

Two class lesson.

### Teaching strategies and classroom management

- Exploring.
- Collaborative Work.
- Practice.
- Fun learning.
- Direct teaching.
- Numbered head.

### Did the students remember?

- The categories of the blocks?
- How to use the looks blocks?

## Preparing the portion

- Bring cartons with the color of categories.
- Divide the students into groups.

## Warm up

- Ask each groups' member to sit to each other because you will play a game with them.
- Give each group number and each member of group number.
- select 2 numbers randomly the first number is the number of the group, the other one is the number of the group member.
- Raise a cartoon (for example the one that have the same color with the looks blocks).
- Ask him/her that this color belong to which category? (let the color of the sensing block to the end).
- Give him/her 30 secs for answer.
- Give the group one point if he/she answer.
- Transfer the question to another group if he/she cannot answer.
- Ask about one function of this category and give them points if they answer.
- Announce the winning groups and tell them that this information is essential and they have to know it.

## Instructions

- Show the football kick video to the students and ask them how the football move (what make it move?).
- Discuss the students until you reach to the importance of sensing blocks the make the football sense the touch of the leg to it.
- Open the sensing blocks and explain to the students the types of these blocks and their functions.
- Explain the touching blocks in front of the students.
- Ask them to implement the activity p.65.
- Follow them up give them support if they needed.
- Ask them how the robot know the distance between it and the other things, and how it avoids accidents?
- Listen to their answers and explain that sensing blocks have blocks calculate the distance between the robots and other thinks.
- Ask them to apply activity on p.66.
- Follow them up, evaluate them during that and give the support if needed.
- Direct them to think on the "Think" question on p. 67.
- Ask the students how they can make a conversation between characters?
- Listen to them, then ask them to explore that when they apply the activity on p. 67.
- Follow them up and give support if needed.
- Direct the students to apply "Do & Observe" on p.68.
- Evaluate the students.

## Resources

- Football kick video.

## Evaluation Strategies

- Performance based evaluation.
- Observation.
- Questions and answers.

## Evaluation Tools

- Chick list.

## Enrichment Activity

- Apply the “think” item on p. 67 on the computer.

## Remedial Activity

- Add a sprite and try the sensing blocks for it.

## Computational Thinking

- How to make race between cars and how to know who is win the race.

## Lesson 3: My Animation

### Learning outcomes

- Make an animation.

### Time needed

Two class lesson.

### Teaching strategies and classroom management

- Direct teaching.
- Practice.

### Did the students remember?

- How to use motion, looks, audio and sensing blocks?

### Warm up

- Ask the students if any of them know how the animation is built?
- Listen to the answers and discuss them about that?

## Instructions

- Apply the first activity on p. 69 in front of the students.
- Ask the groups to implement it on their devices.
- Follow them and give support if needed.
- Repeats the previous steps for each activity.
- Direct the students to apply “Do & Observe” on p. 72.

## Resources

- Jumping images.

## Evaluation Strategies

- Performance based evaluation.
- Observation.

## Evaluation Tools

- Chick list.

## Enrichment Activity

- Let these students make their own animation.

## Remedial Activity

- Let these students search on “freepik.com ” web site about a picture can be used as animation



# Appendices & Worksheets



# Unit One 1: Computer and life

## Lesson One: Data and Information

### Find Classmate

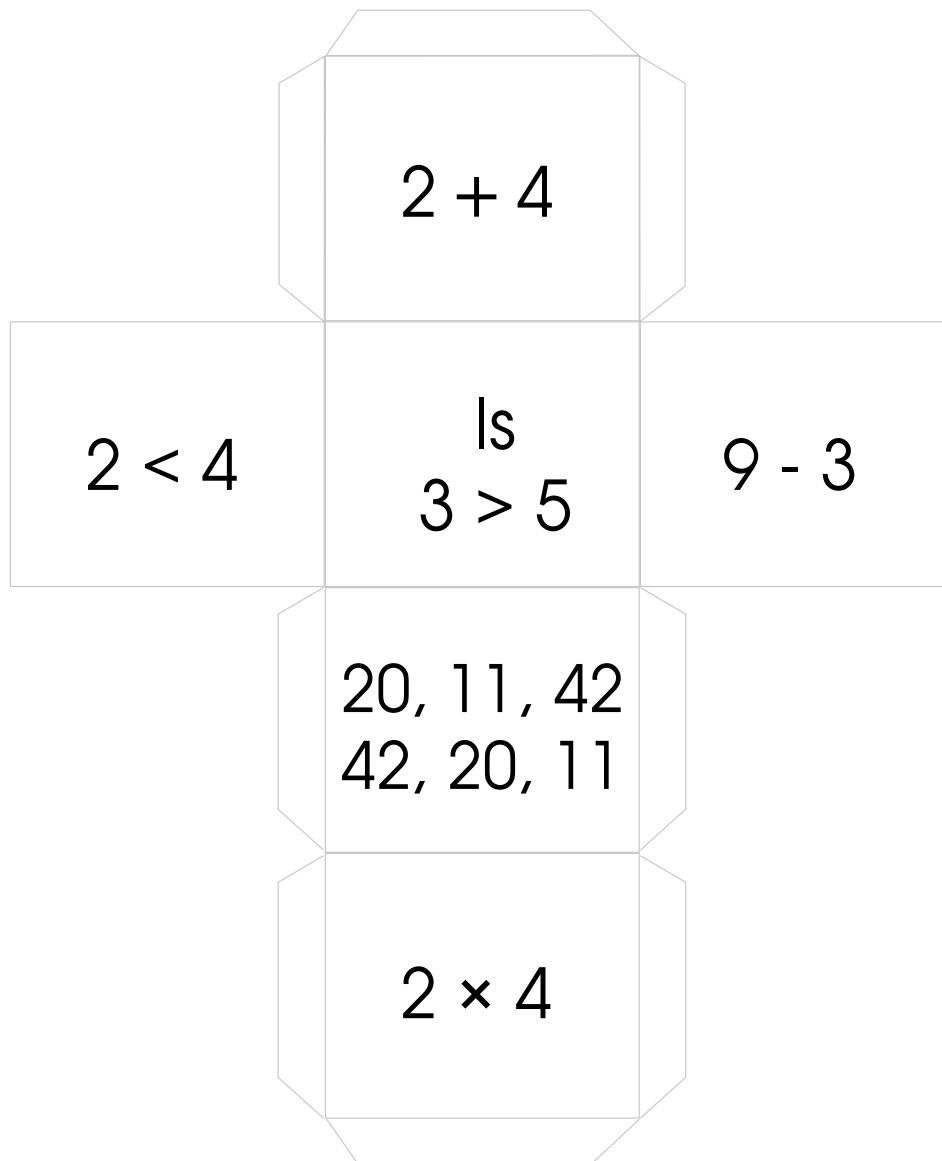
- Cut the cards and distributes them to the students and use them as shown in the lesson

Control .....	..... Unit
Input .....	..... Units
Key .....	..... Board
Output .....	..... Units
Computer .....	..... Components
Software and .....	..... Hardware
E .....	..... Learning
Files & .....	..... Folders
Desktop .....	..... Customization
Central .....	..... Processing Unit
Mother .....	..... Board
Operating .....	..... System
Windows .....	..... Explorer
Paint .....	..... Program
Network & .....	..... Internet
Task .....	..... bar
Time & .....	..... Language

## Lesson One: Data and Information

### Cubes

- Throw the cube then Determine (Data, Processing, Information) for the problem that appears.



- The teacher Cuts the following diagram and make copies as the number of groups, then form a cube for each group.
- Each student will throw the cube then answer the question about the problem appears on the cube face.

## Lesson Two: System

### Fan Cards

**What is the process that converts data into information by doing: comparing, deleting, classifying, ranking, and all arithmetic operations?**

**The raw material that is entered into the computer, and it needs a set of operations such as: classification, ordering, comparison or arithmetic operations, is called .....**

**The result of processing data is called**

.....

**While making a cake, flour, milk and eggs are called** .....

**The processing processes that where done while making cake are** .....

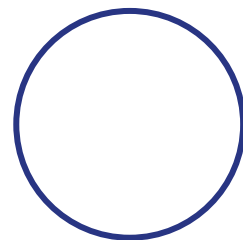
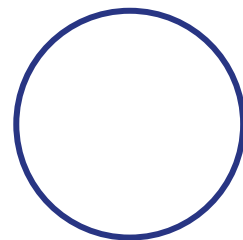
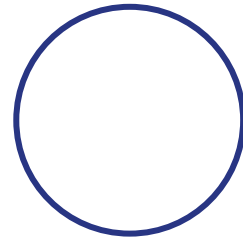
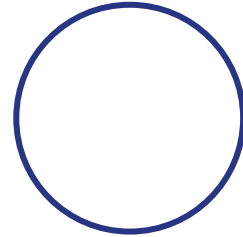
**The ready-made cake is called**  
.....

- **Note:** Cut each card separately and hold it in the form of a fan, ask the student to choose one of them to answer the question.

## Lesson Two: System

### Worksheet 1

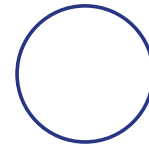
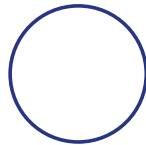
**My Little Thinker:** Put (✓) next to the image that represents a system:



## Lesson Three: Computer Networks

### Worksheet (2)

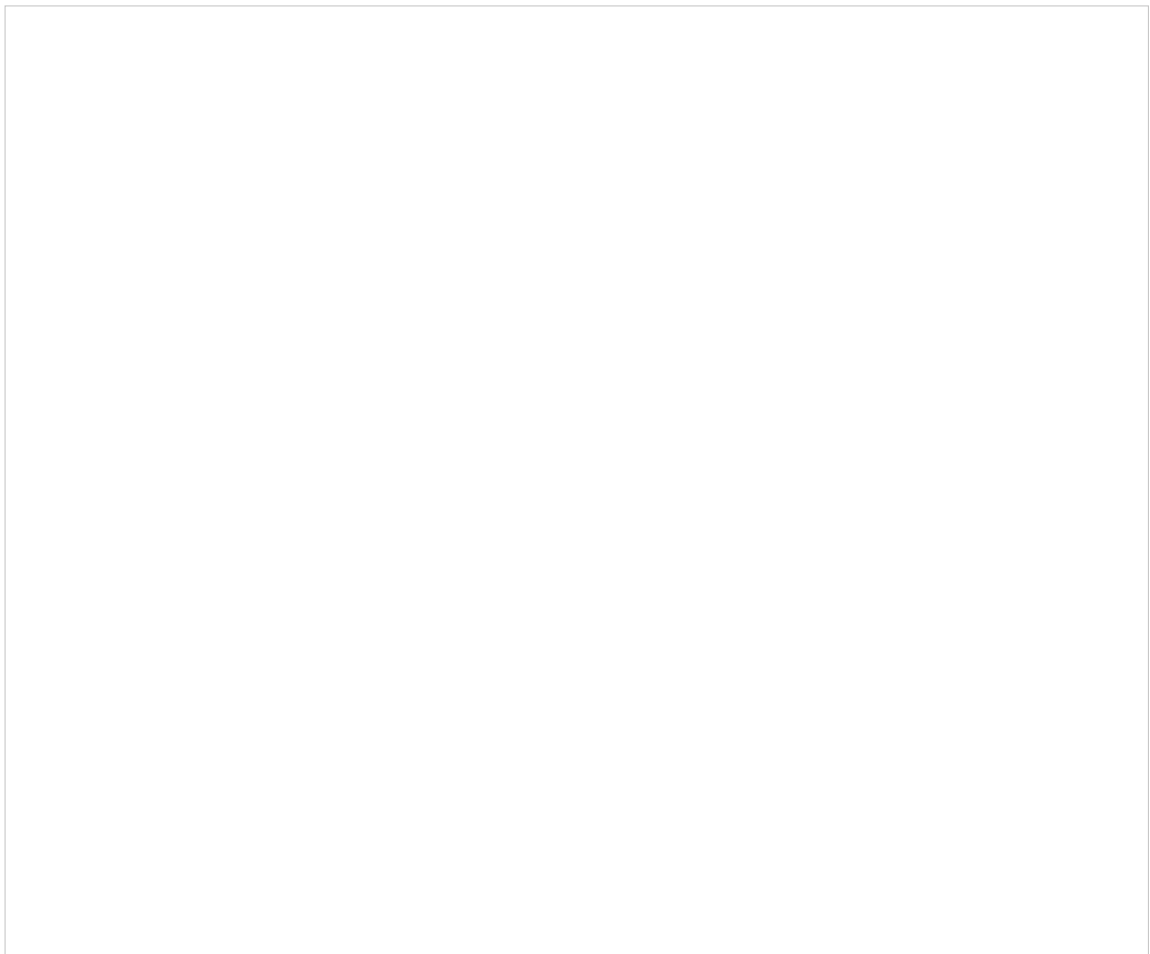
- Draw 😊 under the image that represents a computer network:



- Choose one of the following symbols, rearrange the letters, and write the correct type of connection model and draw it in the last column:

<b>A</b>	<b>S B U</b> The model is .....	
<b>B</b>	<b>G I R N</b> The model is .....	
<b>C</b>	<b>T R A S</b> The model is .....	

- Cut the following computer images and paste them into the following box to form a connection model which you choose above:





# Lesson Three: Computer Networks

## Connection models



## Lesson Two: System

### Worksheet (3)

- Write the name of the connection model Next to the picture:



## Verbal Appreciation Scale

Student Name: \_\_\_\_\_

Day & Date: \_\_\_\_\_

<b>Standard</b>	<b>First Level</b> Shows very limited required knowledge And skills (The results are much lower than the standard)	<b>Second Level</b> Shows some of the required knowledge and skills. (The results approaching the standard )	<b>Third Level</b> Shows most acquaintances and required skills ( results Achieves the standard)	<b>Fourth Level</b> Shows almost all acquaintances and required skills (Results exceed the standard)
Defines data, information, processing and extracts them from a given problem	Specifies only the data (data) from the question	Specifies data and information but does not specify processing	Identifies data, information, and processing but can't explain about them	identifies data, information, processing and explains each one.
Defines the system and identifies its components	Defines a system only	Defines the system and identifies its components	Defines a system, identifies its components, and shows the importance of feedback	Expresses Any system by drawing.
Defines computer networks, enumerates their benefits, identifies their components and compares different types of computer networks	Defines computer network only.	Defines computer networks and enumerates their components	Defines computer networks, lists their components, and mentions their benefits	Defines computer networks, enumerates their components, mentions their benefits, compares the types of computer networks according to the geographical area , and compares different connection models.

## First Unit Exam

- **Question (1):**

Dima is a wonderful girl who helps her mother with housework, and when the mother makes the salad, Dima takes the seeds and plants them in the ground as a habit she learned from grandmother. After a certain period, the plants began to appear, so Dima took care of them, the surprise was when colored peppers and small tomatoes appeared. She was very happy with the fruits she picked and took them to her mother to make the salad. The father said this is the best salad I have ever tasted.

- Based on the above story, determine the following:

Inputs: .....

Out puts: .....

Processing: .....

Feedback: .....

- **Question (2):**

- Determine the benefit expressed by each of the following:

1. Using many programs such as Facebook .....
2. Use one printer for a group of devices within the network .....
3. Transfer files and photos from one device to another .....

# Unit One 2: Internet

## Lesson Two: Web Browser

- The teacher cuts the images of browser icons two copies and uses them in a game.





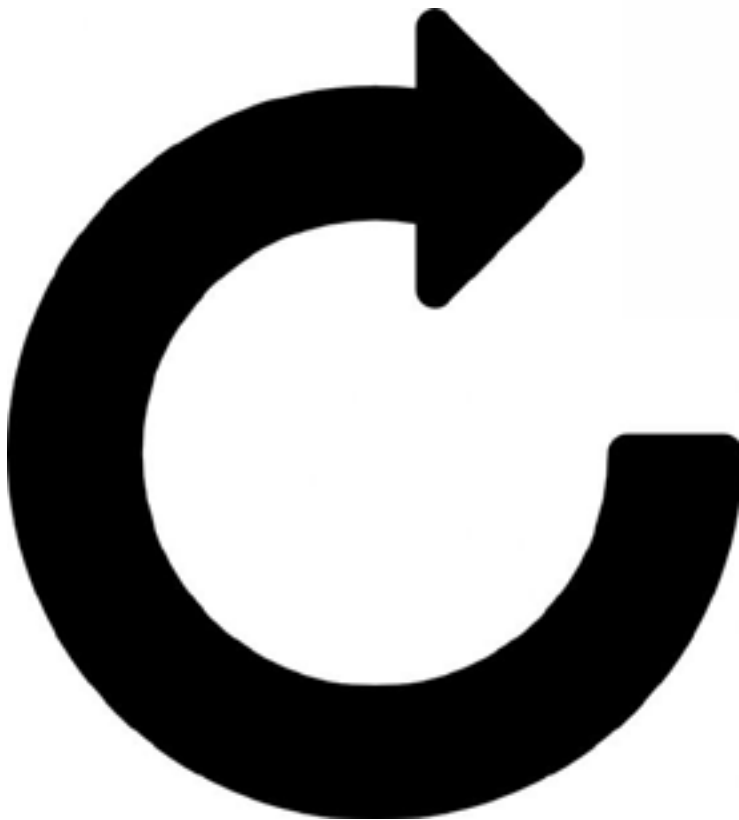








- The teacher cuts the Internet browser buttons to be used in the lesson as described in the instructions:



## Lesson Two: WebBrowser/IP Address

- Our little thinker: Cut the following squares that represent parts of the name of websites, and rearrange them to form correct website address, then write in the following table the address and its domain type:

**JU.**

**WWW.**

**Edu.**

**Jo**

<b>Website Address</b>	<b>Domain Type</b>

**jo**

**Moe**

**Gov.**

**www.**

**Website Address**

**Domain Type**

**net**




**Alssa**

**www.**

<b>Website Address</b>	<b>Domain Type</b>

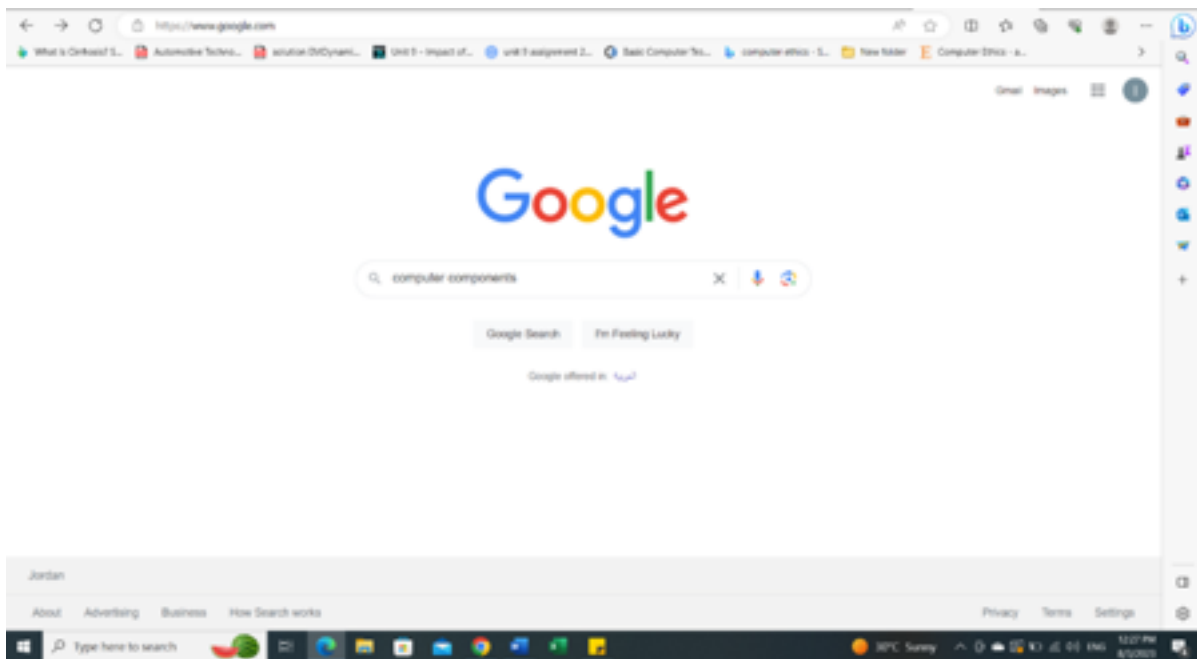


**My Little Thinker:** write the function of the button in each of the following:

## Lesson three: search

1. Use the Internet, search for the following topics, and write a report using Microsoft Word:
  - Google Founder.
  - Apple Founder.
  - Network types.
    - save suitable images for each topic.
2. look at the following picture and the answer the following questions:



- What is the Internet web browser?
- What is the search engine used?
- What is the subject of research?
- What happens if you press **Enter**?

## Lesson four: Cyber security

**My little thinker:** Read the following sentences and draw 😊 next to the sentence that represents the correct behavior, and draw ☹️ next to the picture that represents the wrong behavior, and discuss it with your classmates and teacher:

	Ahmed likes to use the internet a lot and believes in everything he reads and sees on it.
	Osama asks his parents about the topics he search about using the Internet.
	Salwa likes to post her pictures everywhere she goes online to share fun with her friends.
	When Donia was browsing her email, a link appeared telling her that she had won a gift so she clicked on it.
	Dana likes to talk online with her friends but she doesn't talk to people she doesn't know.
	Asaad republishes all the posts reach to him.





## Evaluation Strategy: Communication – Performance Based Assessment

**Assessment Tool:** check List

**Student Name:** .....

**Date:** .....

No	Indicator			Notes
1.	Explains the concept of the Internet.			
2.	Enumerates the benefits of the Internet.			
3.	Mentions the requirements for Internet connecting			
4.	Defines web browser, hyperlinks.			
5.	Gives examples of internet browsers.			
6.	Defines the components of the Microsoft edge home window.			
7.	Defines the components of the website address.			
8.	Extracts the type of service provided by the website from its address.			
9.	Search information using the internet.			
10.	Saves photos from the internet.			
11.	Prints text from the Internet.			
12.	applies the tips for using Internet safely.			

# Unit Three 3: Microsoft word 2019

## Lesson2: Paragraph

### Worksheet (1)

**Our little writer:** look at the following figures then answer questions next to each of them:

- The number of paragraphs in the text is .....
- Text format:
  1. Appropriate
  2. Inappropriate
- What edits are required to make the text look better?

#### The Ugly Duckling

On a farm long ago, a Mama Duck sat on her nest. "How long must I wait for my babies to hatch?" she said. "I have to sit here all alone! And no one comes to visit me." But what could she do? A Mama duck must keep her eggs warm till they hatch.

At last, the eggs began to crack. One by one, yellow ducklings stepped out of their shells. They shook their wings and said, "Quack, quack!"

"Look at all of you!" said Mama Duck with joy. "You are all so cute!"

"Quack, quack!" they said.

Mama Duck said, "Come and line up. We will go down to the lake for your very first swim." She counted - one, two, three, four, five. "Oh dear!" she said. "I should have six ducklings!"

But one large egg was still in the nest. "Well," said Mama Duck, "it looks like that big egg will take more time." So she had to go on her nest again and wait some more.

- What is the difference between this figure and the first one?
- Text format:
  1. Appropriate
  2. Inappropriate
- What edits are required to make the text look better?

#### The Ugly Duckling

On a farm long ago, a Mama Duck sat on her nest. "How long must I wait for my babies to hatch?" she said. "I have to sit here all alone! And no one comes to visit me." But what could she do? A Mama duck must keep her eggs warm till they hatch.

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"Quack, quack!" they said.

Mama Duck said, "Come and line up. We will go down to the lake for your very first swim." She counted - one, two, three, four, five. "Oh dear!" she said. "I should have six ducklings!"

But one large egg was still in the nest. "Well," said Mama Duck, "it looks like that big egg will take more time." So she had to go on her nest again and wait some more.

- What is the difference between this shape and the previous ones?
- Text format:
  1. Appropriate
  2. Inappropriate
- The title is located in ..... Text
- Read the text in front of your colleagues.

#### The Ugly Duckling

On a farm long ago, a Mama Duck sat on her nest. "How long must I wait for my babies to hatch?" she said. "I have to sit here all alone! And no one comes to visit me." But what could she do? A Mama duck must keep her eggs warm till they hatch.

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"Quack, quack!" they said.




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But one large egg was still in the nest. "Well," said Mama Duck, "it looks like that big egg will take more time." So she had to go on her nest again and wait some more.

## Lesson2: Paragraph

### Worksheet (2)

**Our little writer:** Circle the symbol of the formatting that was applied from paragraph group to each of the following figures:

<p>A. Center B. Align Right C. Align Left D. Justify E. shading F. Bullets G. Numbering</p>	
<p>A. Center B. Align Right C. Align Left D. Justify E. shading F. Bullets G. Numbering</p>	
<p>A. Center B. Align Right C. Align Left D. Justify E. shading F. Bullets G. Numbering</p>	



- Connect each case with the suitable type of format:

Bullets	Text title in Arabic
Justify	Beginnings of paragraphs in English
Align left	Paragraphs talking about the harms of the Internet
Center	List of class students' names
Numbering	Key words within the text
Shading	Endings of paragraphs in Arabic

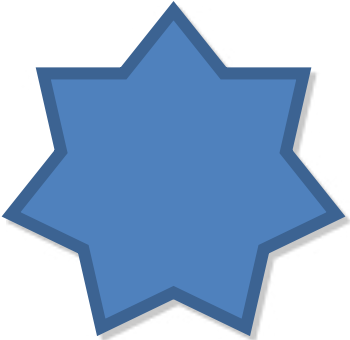
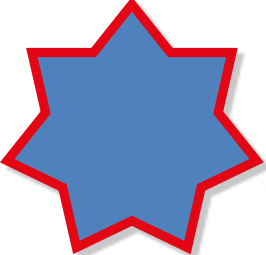
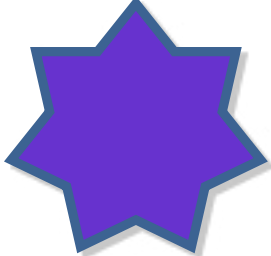

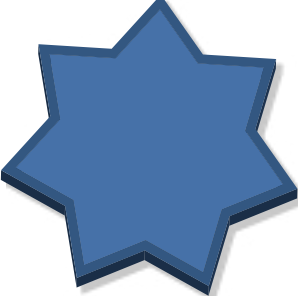




## Lesson 4: Insert/part1

### Worksheet (3)

**Our little writer:** color the circle next to the shapes in ● .  
color the circle next to the pictures in ● :





- Connect the command with the effect it represents as follows:

	   	 Shape Fill ▾   Shape Outline ▾   Shape Effects ▾   Edit Shape ▾
--	---	--

## Lesson4: Insert/part 2

### E- Worksheet

- Ctrl-click the icon in the first column and type the WordArt text that appeared in the second column and circle the format you saw in the third column:

A.		
B.		
C.		
D.		

- Type the following technical texts into a word processor file and save it:

**Open your mind to the world**

**The perfect mind in The healthy body**

**Computer is an electrical device**





## Evaluation Strategy: Communication – Performance Based Assessment

### Assessment Tool (1): check List

Student Name: .....

Date: .....

No	Indicator The student is able to:			Notes
1.	Open Microsoft Word 2019.			
2.	Distinguish keyboard keys and their functions.			
3.	Write and formats a text in Arabic.			
4.	Write and formats a text in English.			
5.	Copy a text			
6.	Cut a text			
7.	Define the concept of paragraph.			
8.	Coordinate paragraph alignment (right, left, center, adjust)			
9.	Add text numbering			
10.	Add bullets to text			
11.	Shade text with a color			

**Evaluation Strategy:** Communication – Performance Based Assessment

**Assessment Tool (2):** check List

Student Name: .....

Date: .....

No	Indicator	Mastery degree		
		Excellent	Very Good	Good
1.	Inserts an image into a word file.			
2.	Adjusts image size			
3.	Relocates the image in the file.			
4.	Inserts shape into a word file.			
5.	Adjusts shape size.			
6.	Fills the shape with a color.			
7.	Changes the frame color to shape			
8.	Inserts a header and footer for the page			
9.	Coordinates header and footer.			
10.	Inserts a table into a word processor file.			
11.	Inserts and formats data into the table.			
12.	Adds columns and rows to table.			
13.	Deletes columns and rows from table.			

**Evaluation Strategy:** Self-Evaluation  
**Assessment Tool (3):** Learning description record

**Name:** .....

**Class:** .....

**Lesson Title:** .....

**I have learned in this lesson:**

.....  
.....  
.....  
.....  
.....

**I didn't know or found it difficult:**

.....  
.....  
.....  
.....  
.....

**Teacher Notes:**

.....  
.....



**You create your own  
opportunities**

**You are never as stuck as you  
think you are**

**Never break your  
promises**

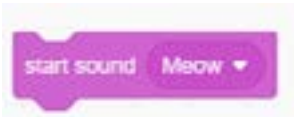


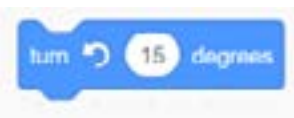




**Happiness is a choice**

# Unit Four 4: Scratch

## Lesson 1: Looks Blocks (Purple Blocks)

### Worksheet (1)

- Open Scratch program then answer these questions:

Block	Color	Category
		
		
		
		
		
		
		
		

- Add a Bat sprite and make it move?

## General Assessment for Unit Four

**Evaluation Strategy:** Communication – Performance based evaluation

**Assessment Tool:** check List

**Date:** .....

No	Name	Recognize the looks blocks functions.	Show text bubbles.	switch the costumes of the sprites depending on the situations	Know the importance of sensing blocks.
1.					
2.					
3.					
4.					
5.					

<b>Recognize the types of sensing blocks.</b>	<b>Use sensing blocks.</b>

