

[**http://binary-academy.com/dnld**](http://binary-academy.com/dnld)
Download the sample pages of the Student's Books

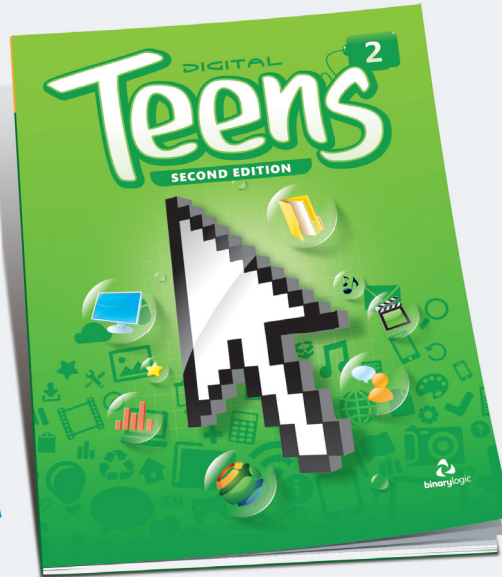
Computing and ICT

Courses for 21st Century Learners



Digital Kids
for Primary schools

6
LEVELS



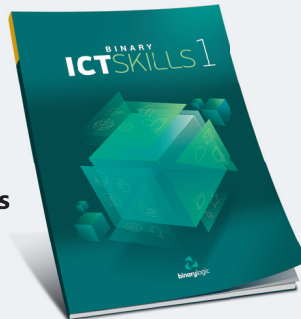
Digital Teens
for Secondary schools

6
LEVELS



eSkills
for schools

12
LEVELS



**Binary
ICT SKILLS**
for Colleges
& Universities



Student-centered learning through a fun, hands-on approach



Written and designed by educators



Modern educational material that meets various learning styles



Fully graded and designed for schools



Content aligned to student needs in each age group



Activities based on school subjects in each grade



Language in English edition is graded to facilitate non-native speakers



Available in several languages



Coding and robotics available in different grades

Local education with global standards



Contact us for custom localized editions



The International Society for Technology in Education (ISTE) completed a Seal of Alignment for Readiness review of Digital Kids, Digital Teens, eSkills and ICT Skills and determined that they provide an effective foundation for successfully acquiring the knowledge and applying the skills described by the ISTE Standards for Students.

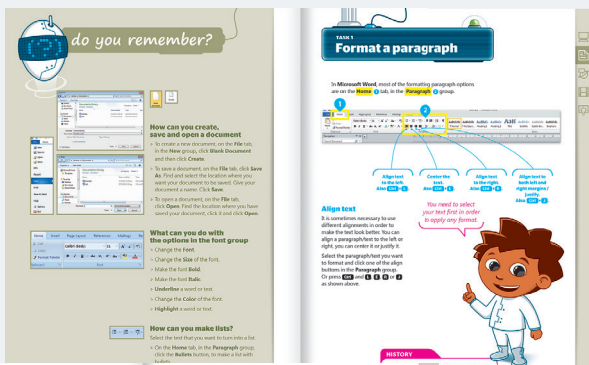


The DQ Adopter seal represents the alignment of the curriculum of Digital Kids, Digital Teens, eSkills and ICT Skills with the DQ Global Standards, the digital literacy framework created by the DQ Institute and IEEE Standards Association in collaboration with the World Economic Forum.

Key Features

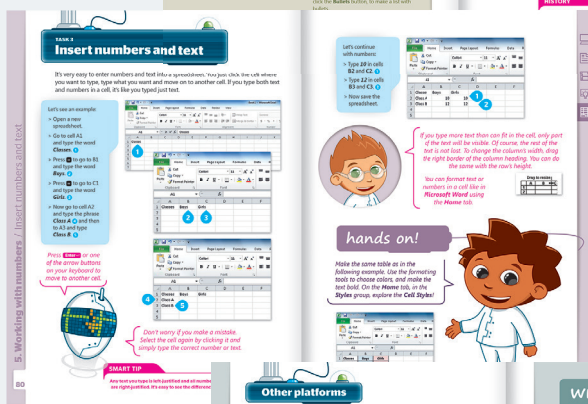
An innovative approach to teaching ICT written by a team of educators.

The “do you remember?” section focuses on important points which students need to revise.



Clear learning objectives and functional skills.

Each book has four or five modules. Each module provides a range of tasks and activities that help students to develop their ICT skills and allow teachers to monitor the students' progress.



Follows latest ICT teaching standards & requirements.

Clear explanations and illustrative contemporary examples. The activities are based on school subjects taught in each grade.

New content always updated according to changes in technology.

Students learn how to work with all kinds of platforms and tools. The “Other platforms” section at the end of each module shows some of the available alternatives. The online video tutorials guide the students through each task.



Project-based learning

The group-work activity consolidates skills previously taught and encourages students' collaboration. Most group-work activities are cross-curricular.

New vocabulary is organized in related topics.

Student Online Resources

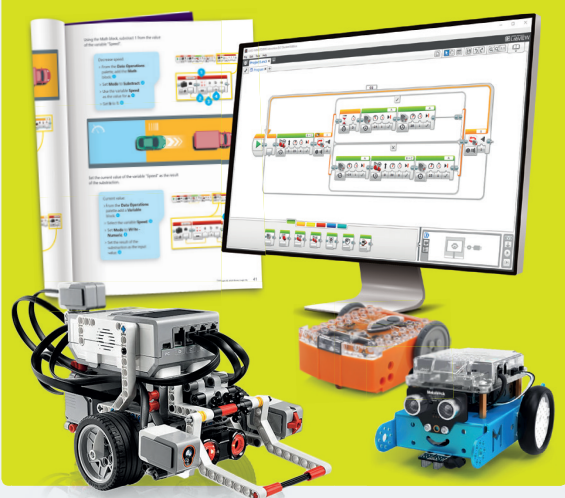
- > Video tutorials
- > Animated stories and interactive activities for very young learners
- > Digital resources
- > Online module tests
- > Final exam & certificate

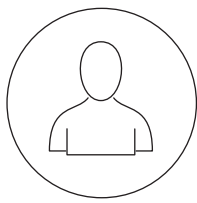
Teacher Academic Support

- > Teacher's guide with detailed lesson plans
- > Lesson presentation slides
- > Worksheets with extra activities
- > Self evaluation sheets
- > Teacher online community
- > Teacher training courses



Extra coding and robotics material for all grades





Get the Online Teaching Resources at:

binary-academy.com

Digital Kids Starter



Samples of

- > Lesson Plans
- > Activity Worksheets
- > Self-Evaluation Sheets

Syllabus

1

My computer

1. Dinosaurs and computers
2. They are everywhere
3. The computer
4. Click and type

Let's start

1. My desktop
2. Start a program
3. Text and pictures
4. My work space

Let's paint

1. Free drawing
2. Make shapes
3. Copy and paste
4. Save my picture

Let's type

1. The notepad
2. Letter and words
3. Move around
4. Select and change a word

Let's surf

1. The Internet
2. Communicate
3. Have fun
4. Learn

2

3

4

5

6

7

8

9

10

11

12

TEACHER _____

CLASS _____

DATE _____

OVERVIEW

Distinguishing the basic parts of a home computer and seeing how each part works.

OBJECTIVES

- To recognize the central unit, mouse, keyboard, monitor, printer and speakers.
- To see that the peripheral devices are connected to the central unit and not to each other.
- To see how to turn on the central unit, monitor, speakers and printer.
- To see the order in which they should turn on devices to:
 1. Listen to a song.
 2. View a picture.
 3. Watch a video clip.
 4. Print a clip art.
- To understand that the devices do something, because we tell them to do something with the keyboard or mouse.
- To see which devices must be connected to the power grid.

WHAT IS NEEDED**Resources**

- Digital Kids Starter Student's Book
- K.1.1.3_Worksheet.docx

Tools & Equipment

- Scissors, glue, pencil, rubber and letter paper.
- A power strip.
- A central unit with its power cable.
- A mouse.
- A keyboard.
- A monitor.
- Speakers.
- A printer with its cable.

LEARNING DIFFICULTIES

Students see that they use the mouse or the keyboard in order to operate the peripheral devices. In their everyday life they paint, write or make puzzles, in their block, notebook or desk. In their mind the monitor is their action field where all the "computer objects" are. They often do not understand what a central unit is. However, they can see that if they turn off the monitor when they hear a song, they will continue to hear it. Of course they believe that there is still something in the monitor even though we have turned it off. To end this false perception we disconnect the monitor and remove it from the system. (Of course afterwards we connect it again to continue the interaction with

the central unit).

Students also think that if they turn a device on it will start working. They cannot understand the role of the power grid or the role of the central unit and the input devices.

But they can see that:

- When the central unit isn't turned on, the peripheral devices don't work whether or not they are connected to the power grid space (power light switched on).
- When the central unit is in operation and we do not use the input devices, the peripheral devices don't work whether or not they are connected to the power grid space (power light switched on).

So students understand:

- the series of actions that are needed to operate a device
- the importance of voltage and the power indicator light
- the role of the central unit

LESSON DESCRIPTION**1. Introduction**

Put the following on the desk in separate locations:

- The power strip.
- The central unit and its power cable.
- The mouse.
- The keyboard.
- The monitor and its cable.
- Speakers.
- The printer and its cable.

2. Investigation

- a. Connect the central unit to the power grid.
- b. Connect the mouse to the central unit.
- c. Connect the keyboard to the central unit.
- d. Connect the monitor to the power grid and then to the central unit.
- e. Connect the speakers to the power grid and then to the central unit.
- f. Connect the printer to the power grid and then to the central unit.

Tell the students to open their Student's Books (Digital Kids Starter) to pages 12-13. Ask them to take a look at the picture on page 12 and then, to do the first activity on page 13 (Draw lines). Observe as the teams work together. Encourage the students in their collaboration. If you see something that they didn't do right, encourage them to see how the devices are connected to the desktop and let them discover their mistakes on their own. Then:

- Turn on the central unit, showing students the power button.

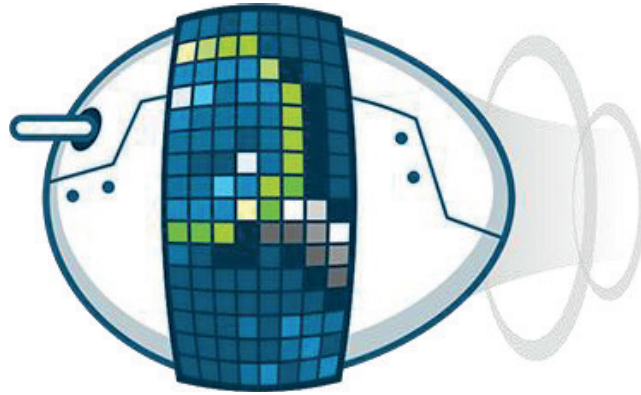


Worksheet

Level	1	Module	1	Task	3	Class
Student(s)				Date		

Create your computer

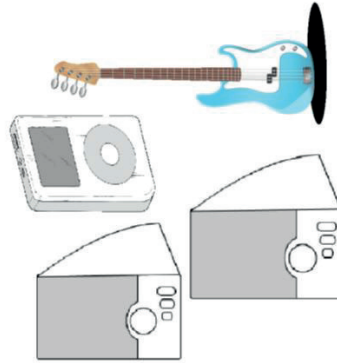
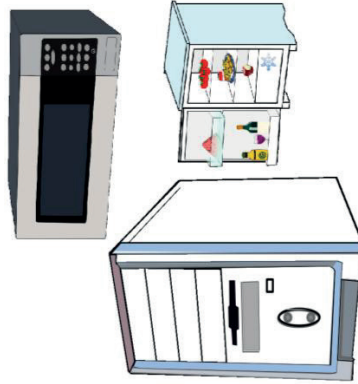
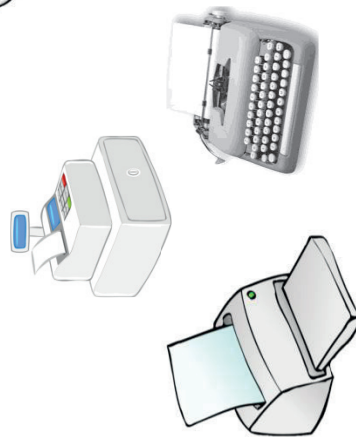
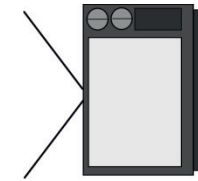
1 Find the parts of a computer, circle and color them.



2 Cut out the circled images and the names with scissors.

3 Match the computer parts with their names, glue them onto a piece of sheet and create a collage of a computer.

Level	1	Module	1	Task	3	Class		
Student(s)							Date	





Worksheet	Level 1	Module 1	Task 3	Class
	Student(s)			Date

 Keyboard

 Mouse

 System unit

 Speakers

 Printer

 Monitor

Self Evaluation	Level	1	Module	1	Task	3	Class
	Student						Date



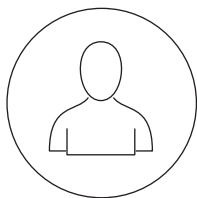
I know the computer parts.

I can turn on the computer.

I can turn on the monitor.

I can turn on the speakers.

I can turn on the printer.



Get the Online Teaching Resources at:

binary-academy.com

Online Teaching Resources

Digital Kids Explorer



Samples of

- > Lesson Plans
- > Activity Worksheets
- > Self-Evaluation Sheets

Syllabus

I use the computer

1. My computer
2. The desktop
3. Mouse and keyboard
4. My work space

I type a letter

1. Start typing
2. Change the font
3. Insert pictures
4. Save and print

I visit the world

1. How to surf
2. The web page
3. Educational games
4. Copy from the web

I have friends

1. My email
2. Send a message
3. Read and reply
4. Email rules

I give commands

1. LOGO and the turtle
2. Move the turtle
3. Draw a shape
4. Let's have fun!

1

2

3

4

5

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8

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11

12

OVERVIEW

The general purpose of this lesson is for students to use LOGO and move and turn the turtle.

OBJECTIVES

- To become familiar with the environment of LOGO.
- To know what each command does.

SKILLS

- Opening LOGO.
- Using commands in order to move the turtle.
- Drawing using LOGO commands.

WHAT IS NEEDED**Resources**

- Digital Kids Explorer Student's Book
- K.2.5.2_Worksheet_1.docx
- K.2.5.2_Worksheet_2.docx
- K.2.5.2_Worksheet_3.docx
- K.2.5.2_Evaluation_Sheet.docx

Tools & Equipment

- FMSLogo program
- Scissors
- Glue

Or a similar program from the list with alternative tools.

LEARNING DIFFICULTIES

1. Some students have difficulties when typing a command and the corresponding number next to it, and forget to leave a space between them. (e.g.: Fd10) In this case Logo displays the message: "I don't know how to fd10." Explain that we always need to leave a space between commands and numbers.
2. Before creating a new shape-drawing using the turtle, students forget to clear the screen (cs) and as a result the turtle draws over the existing drawing.
3. When students try to move the turtle along a certain route, if the turtle isn't facing upwards, then students get confused and they don't know where to turn the turtle. Students should have the same orientation as the turtle.
4. Students forget to put the pen down (pd) before making a shape or a drawing.

LESSON DESCRIPTION**1. Preparation**

Before the lesson starts, install FMSLogo on each computer.

2. Start - Brainstorming

In order to kindle students' interest in the lesson, show them videos of the turtle's moving. (e.g.:

<http://www.youtube.com/watch?v=5RJWD-LVxjw>).

Then ask students some questions in order to check their understanding of the turtle's movement:

- What commands can the turtle execute?
- What commands would you give the turtle in order to move it from your lab to your yard?

Then, write the following commands which students will learn in this lesson on the whiteboard: fd, bk, rt, lt, pd, pu, cs. Describe each one and mention that they can use their Student's Book as a guide in order to complete the worksheet.

Separate students into groups of 3-4.

3. Investigation – Development of knowledge

Hand out "K.2.5.2_Worksheet_1." Students have to draw the path that the turtle should follow in order to find the treasure! Then, ask them to write the commands that they should give in Logo language. Explain that each step the turtle makes, corresponds to one box on the path.

The correct commands that students have to write are the following:

1. rt 90
2. fd 4
3. rt 90
4. fd 3
5. lt 90
6. fd 2
7. rt 90
8. fd 3
9. rt 90
10. fd 5
11. lt 90
12. fd 4
13. lt 90
14. fd 4

In order to guide them correctly, advise students to place their erasers on the labyrinth, in the position of the turtle, and move it gradually, noting its steps one-by-one.

4. Implementation

- Hand out "K.2.5.2_Worksheet_2." Students will see Logo's programming environment for the first time. Ask them to:

- o start FMSLogo
- o briefly discuss the environment
- o investigate the command box area
- o type the commands given on the worksheet

As students type the commands, mention that they should press Enter after each command and then type the next command. At the same time, they can watch the turtle on their screen in order to observe how it executes each command.

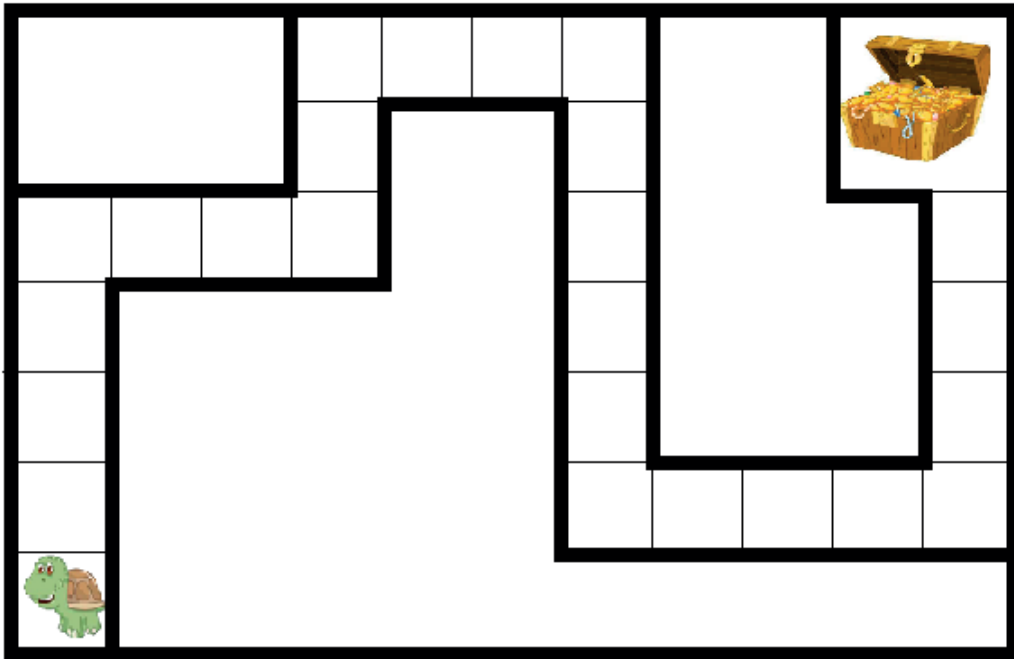
In the end, ask them to check the shape that the turtle drew.

- Hand out "K.2.5.2_Worksheet_3." Ask students

Worksheet	Level	2	Module	5	Task	2	Class
	Student(s)						Date

Move the turtle!

Give the turtle the correct commands to find the treasure!



Commands:

- 1
- 2
- 3
- 4
- 5
- 6
- 7

- 8
- 9
- 10
- 11
- 12
- 13
- 14

Worksheet	Level	2	Module	5	Task	2	Class
	Student(s)						Date

Move the turtle!



Open LOGO. Type the following commands in the command box and find out what the turtle draws!

Commands:

- 1 `pd`
- 2 `lt 60`
- 3 `fd 70`
- 4 `rt 90`
- 5 `fd 50`
- 6 `lt 50`
- 7 `bk 20`
- 8 `rt 60`
- 9 `pu`
- 10 `fd 80`
- 11 `pd`
- 12 `rt 70`
- 13 `fd 40`
- 14 `rt 40`
- 15 `fd 100`



Check what the turtle drew!

 <input type="checkbox"/>	 <input type="checkbox"/>	 <input type="checkbox"/>	 <input type="checkbox"/>
------------------------------	------------------------------	------------------------------	------------------------------

Worksheet	Level	2	Module	5	Task	2	Class
	Student(s)						Date

Move the turtle!



Cut out the following commands and glue them onto the next page in the correct order so that the turtle draws the shape in the bubble!

fd 40

lt 40

fd 40

pd

lt 90

fd 20

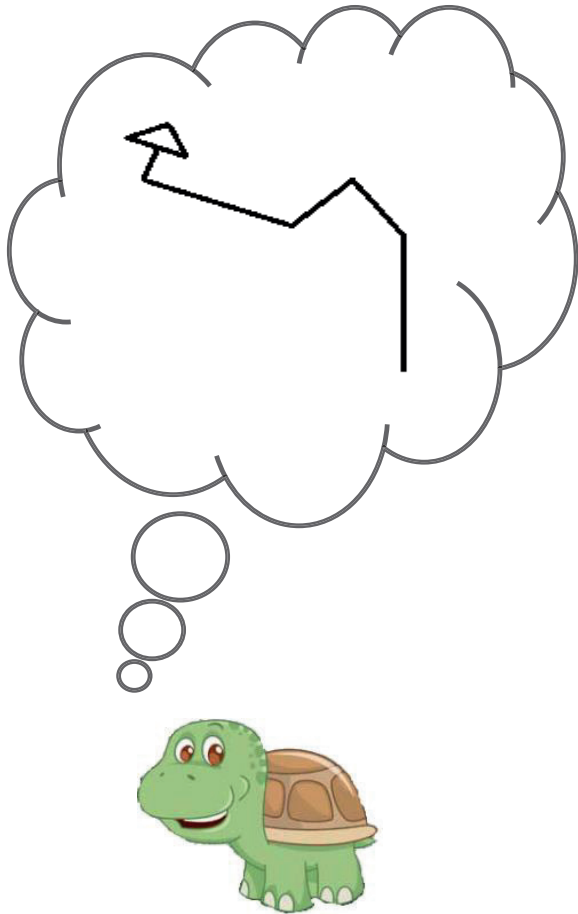
fd 80

rt 60

fd 80

rt 90

Worksheet	Level	2	Module	5	Task	2	Class	
	Student(s)						Date	



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Self Evaluation	Level 2	Module 5	Task 2	Class
	Student			Date



I can open Logo

I can type commands in the command box

I can figure out what the turtle will draw

I can glue commands in the correct order

I can move the turtle to the treasure

Online Teaching Resources

Digital Kids Racer



Samples of

- > Lesson Plans
- > Activity Worksheets
- > Self-Evaluation Sheets

Syllabus

My devices

1. Store
2. Print
3. Capture
4. Interact

My files

1. What is a file?
2. Organize my folders
3. Search and find
4. Start a program

My first article

1. Work with text
2. Give a title
3. Make a list
4. Check and save

My wired world

1. Search for anything
2. Knowledge treasure sites
3. Be polite
4. Safety online

My first presentation

1. All about slides
2. Insert text
3. Insert pictures
4. Presenting is cool

1

2

3

4

5

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11

12

Worksheet	Level	3	Module	4	Task	3	Class
	Student(s)						Date

Rules of Netiquette

Netiquette describes the culture of the Internet, what is appropriate to post, send, type and how you should present yourself.

Select the sentences that are Netiquette Rules!



- Always listen to others.
- Don't send chain emails.
- Don't be patient with those who don't answer immediately.
- If necessary you can blame someone.
- Show your mood using emoticons.
- Send your phone number to unknown people.
- Don't give your opinion clearly.
- Do unto others online as you would have done to you.
- Post all your personal photos.
- In a blog, your messages should be brief and to the point.

Worksheet	Level	3	Module	4	Task	3	Class
	Student(s)						Date

Rules of Netiquette

Match the ways of communicating with their features.



- | | | |
|------------|-----------------------|---|
| Blogs | <input type="radio"/> | <input type="radio"/> Brief messages |
| | | <input type="radio"/> Use a subject title |
| | | <input type="radio"/> Use emoticons |
| Emails | <input type="radio"/> | <input type="radio"/> Avoid sarcasm |
| | | <input type="radio"/> Listen to other people's opinions |
| Chat rooms | <input type="radio"/> | <input type="radio"/> Chain emails |

Worksheet	Level	3	Module	4	Task	3	Class
	Student(s)						Date

Rules of Netiquette

Circle the words that have a positive meaning relating to behavior on the Internet.



Listener

Chain emails

Spelling mistakes

Silly questions

Spam

Ban

Careful

Polite

Blame

Worksheet	Level	3	Module	4	Task	3	Class
	Student(s)						Date

Rules of Netiquette

Fill in the words: *address, behavior, spam, netiquette, blog, slang, age, disagreements, sarcasm* and solve the crossword puzzle.



1.describes the culture of the Internet.
2. Many schools teach students about responsibleon the Internet.
3. Don't forwardvia email.
4. On ayou must follow the creator's rules.
5. In chat rooms you must be careful withand
6. Don't answer to questions about yourand
7. Don't get involved in

The crossword puzzle grid consists of white squares for letters and black squares for empty space. The numbered starting points are:

- 1. Across: Row 3, Column 1 to Row 3, Column 10.
- 2. Across: Row 6, Column 4 to Row 6, Column 10.
- 3. Down: Row 5, Column 6 to Row 8, Column 6.
- 4. Down: Row 5, Column 8 to Row 8, Column 8.
- 5. Across: Row 7, Column 4 to Row 7, Column 7.
- 5. Down: Row 7, Column 4 to Row 9, Column 4.
- 7. Down: Row 2, Column 5 to Row 9, Column 5.
- 6. Down: Row 5, Column 1 to Row 6, Column 1.

Self Evaluation	Level 3	Module 4	Task 3	Class
	Student			Date

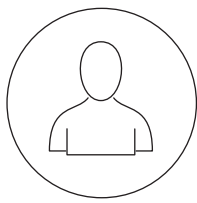


I can be polite when I communicate via the Internet.

I can use email safely.

I can use blogs safely.

I can use chat rooms safely.



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Digital Kids **Flyer**



Samples of

- > Lesson Plans
- > Activity Worksheets
- > Self-Evaluation Sheets

Syllabus

Learning the basics

1. My desktop
2. Files and folders
3. Control panel
4. Protect my computer

Working with text

1. Format a paragraph
2. Images - Advanced formatting
3. Spelling and grammar check
4. Print

Communicating online

1. My friends
2. Forward an email
3. Send a file
4. Email tips

Working with media

1. Create a sound clip
2. View images and videos
3. Fix a photo
4. Apply photo effects

Presenting your ideas

1. Transitions and animations
2. Set the timing
3. Insert a sound or video clip
4. Transfer data across apps

Working with numbers

1. What is a spreadsheet?
2. Row - Column - Cell
3. Insert numbers and text
4. Simple calculations

1

2

3

4

5

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11

12

OVERVIEW

The general purpose of this lesson is for students to become familiar with rows, columns and cells in a spreadsheet.

OBJECTIVES

- To understand that each cell has a unique name or cell reference which is made up of its column and row headings.
- To realize that when clicking on a cell, it becomes active and its border gets thicker.
- To understand that the top left corner of a spreadsheet is where the name of the active cell appears.
- To know how to move from one cell to another.

SKILLS

To correctly name each cell in a spreadsheet.

WHAT IS NEEDED

Resources

- Digital Kids Expert Student’s Book
- K.4.6.2_Worksheet_1.docx
- K.4.6.2_Worksheet_2.docx
- K.4.6.2_Worksheet_3.docx
- K.4.6.2_Evaluation_Sheet.docx

Tools & Equipment

Microsoft Excel
Or a similar program from the list with alternative tools.

LEARNING DIFFICULTIES

Some students get confused when referring to a particular cell, as they write the row number first and then the column letter.

LESSON DESCRIPTION

A. Start – Brainstorming

- Start a discussion with students about cell names. More specifically, open a new spreadsheet in Excel and then ask various questions like:
 - o Do you play chess?
 - o Did you know that spreadsheet cells have the same names as the squares on a chessboard?
 - o What is a row? What is a column?
- Click on various cells and ask students to name them.

B. Investigation – Development

- Separate students into groups of 2-3. Hand out “K.4.6.2_Worksheet_1.docx” and ask students to do the activity.
- Then hand out “K.4.6.2_Worksheet_2.docx”. Students have to select the correct sentences. During the activity:
 - o Remind students that each cell has a unique

name.

- Finally, hand out “K.4.6.2_Worksheet_3.docx.” Ask students to complete the activity. Point out that when they refer to a particular cell, they must first write the column letter and then the row number.
- Encourage discussion amongst students and remind them that if they have any questions they can ask you.

C. Completion – Evaluation

- Hand out an evaluation sheet to every student and ask them to complete it.
- Collect them and see if they understood all the objectives of this lesson.
- Check which part of the lesson students didn’t completely understand and make any changes required in the teaching process.

NOTES

Worksheet	Level	4	Module	6	Task	2	Class
	Student(s)						Date

Cells... the magic boxes

Do you play chess? Have you ever heard words like “Row”, “Column” or “Cell”? Well, apart from on a chessboard, these words are also used with spreadsheets. However, do you know what these words refer to?



Match the columns

A	B	C
1		
2		
3		
4		
5		

 This is cell A4

A	B	C	D	E	F
1					
2					
3					

 This is cell B4

A	B	C
1		
2		
3		
4		
5		
6		
7		
8		
9		

 This is a row

A	B
1	
2	
3	
4	

 This is a column

Worksheet	Level	4	Module	6	Task	2	Class
	Student(s)						Date

Cells... the magic boxes

Select the correct sentences!



		true
Each cell...	has two names (e.g. B3 or 3B).	<input type="checkbox"/>
	if it is active, its name appears at the top left corner of the spreadsheet.	<input type="checkbox"/>
	becomes active when it is clicked on and its border gets thicker.	<input type="checkbox"/>
	has a unique name.	<input type="checkbox"/>

Worksheet	Level	4	Module	6	Task	2	Class
	Student(s)						Date

Cells... the magic boxes

Guess the secret message.



Are you familiar with the names of the cells? Well, let's play a game. On the spreadsheet below, place the letters into the proper cells in order to spell the secret message. Can you guess it?

- Put the letters in the spreadsheet below:

"T" to cell F7	"M" to cell C4	"P" to cell D5	"R" to cell H9
"E" to cell G8	"H" to cell C6	"U" to cell G10	"C" to cell A2

	A	B	C	D	E	F	G	H	I
1									
2					T				
3	F	O	U	J		R			
4									
5	L	T	O		A				
6				I	U				
7			K						
8									G
9					Q		H		
10								L	S

What is the secret word?

Worksheet	Level	4	Module	6	Task	2	Class
	Student(s)						Date

Match the letters with the corresponding cell names which are located on the spreadsheet above.			
K	<input type="radio"/>		<input type="radio"/> Cell I10
Q	<input type="radio"/>		<input type="radio"/> Cell H10 and A5
H	<input type="radio"/>		<input type="radio"/> Cell E9
L	<input type="radio"/>		<input type="radio"/> Cell G9 and C6
S	<input type="radio"/>		<input type="radio"/> Cell C7

Self Evaluation	Level	4	Module	6	Task	2	Class
	Student						Date

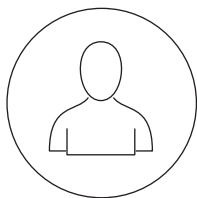


I can name a cell.

I can make a cell become active.

I can see the name of the active cell at the top left corner of a spreadsheet.

I can move from one cell to another.



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Digital Kids **Genius**



Samples of

- > Lesson Plans
- > Activity Worksheets
- > Self-Evaluation Sheets

Syllabus

Creating a document

1. Advanced formatting
2. Search and replace
3. Working with tables
4. Document views

Producing multimedia

1. Use capture devices
2. Create and edit a sound clip
3. Find and use multimedia material
4. Create an animated story

Using communication tools

1. Internet and the web
2. Communication tools
3. Sharing your moments
4. Be secure online

Sharing your ideas

1. Blogging
2. Social media
3. Safety rules
4. Intellectual property

Formatting numbers

1. Format a cell
2. Make calculations
3. Create a graph
4. Print a sheet

Collecting information

1. Gather data
2. Introduction to databases
3. Create a database
4. Sort and print

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TEACHER _____

CLASS _____

DATE _____

OVERVIEW

The general purpose of this lesson is for students to understand the structure of a database (records and fields).

OBJECTIVES

- To realize that a database is a system of organizing data.
- To define what a record of a database is.
- To define what a field of a database is.

SKILLS

- To design a database table.
- To recognize the records of a database table.
- To recognize the fields of a database table.

WHAT IS NEEDED

Resources

- Digital Kids Genius Student’s Book
- K.5.6.2_Worksheet_1.docx
- K.5.6.2_Worksheet_2.docx
- K.5.6.2_Worksheet_3.docx
- K.5.6.2_Evaluation_Sheet.docx

Tools & Equipment

Pencil

LEARNING DIFFICULTIES

Explain that a database is organized into one or more tables. Give some examples in order to illustrate what a database is.

- A school database may have one table for students’ information and another for teachers’ information.
- A grocery store database might have one table for sales information and another for purchases information.

LESSON DESCRIPTION

A. Start – Brainstorming

- Introduce the topic of the lesson which is creating a database table.
- Hand out “K.5.6.2_Worksheet_1.docx” to students and ask them to read the introduction and the questions. Encourage them to discuss the questions amongst themselves in order to answer them.
- Separate students into groups of 3-4.

B. Development – Investigation of knowledge

- Then students have to decide whether the given sentences are true or false. By doing this they will realize that a database is a system for organizing data where we can change, search and sort data. At this point mention that there are always similar items in a database.

- Then, hand out “K.5.6.2_Worksheet_2.docx.” There is an example of a database and the corresponding database table. This database consists of 6 records with 4 fields for each record.
- Explain to students that a record is a piece of information with certain characteristics and a field is any characteristic or piece of information. Explain that records are the rows of the table and the fields are the columns.

C. Implementation

- Hand out the “K.5.6.2_Worksheet_3.docx”. Students have to create their own database table. They will use the cards that they created about planets in the previous lesson. As they have created four cards, there will be four records and six fields (their characteristics: Name, Radius, Mass, Distance from the Sun, One satellite, Color).
- The database table should look like the following:

Name	Radius	Mass	Distance from the Sun	One satellite	Color
Mars	3,2444 km	6.42 × 10 ²⁶ kg	2.279 × 10 ⁵ km	Phobos	red
Uranus	25,361 km	8.68 × 10 ²⁵ kg	2.888 × 10 ⁹ km	Ariel	blue-green
Saturn	58,232 km	5.68 × 10 ²⁶ kg	1,432,999,999 km	Mimas	Pale yellow
Neptune	24,621 km	1.02 × 10 ⁹ kg	4.503 × 10 ⁹ km	Triton	Light blue

- Remind them to ask for your help if necessary.
- ##### D. Completion – Evaluation
- Hand out the evaluation sheet to every student and ask them to complete it.
 - Collect them and see if they understood all the objectives of this lesson.
 - Check which part of the lesson students didn’t completely understand and make any changes required in the teaching process.

NOTES

Worksheet	Level	5	Module	6	Task	2	Class
	Student(s)						Date

A database table with records and fields!

In the previous lesson you created four cards about four planets. For each planet you wrote down some characteristics, so these cards can be a database.

- But what is a database?
- Why do we create databases?
- What does a database consist of?



Decide whether the sentences are True or False:		
	True	False
1. A database is a system for organizing data.	<input type="checkbox"/>	<input type="checkbox"/>
2. You can change the data in a database.	<input type="checkbox"/>	<input type="checkbox"/>
3. You can't sort the data in a database.	<input type="checkbox"/>	<input type="checkbox"/>
4. You can search for something specific in a database.	<input type="checkbox"/>	<input type="checkbox"/>
5. There aren't always similar items in a database table.	<input type="checkbox"/>	<input type="checkbox"/>

Worksheet	Level	5	Module	6	Task	2	Class
	Student(s)						Date

A database table with records and fields!

Imagine that you are a store owner and you want to record all the items in your grocery store. One valid way to do this is by creating the following database:



Name	Cost	Items	Expiration date
Can of tomato sauce	\$1.30	15	05-12-2019
Milk	\$1.60	21	12-08-2017
Canned tuna	\$2.50	16	05-10-2021
Salad	\$0.50	10	05-03-2019
Can of soda	\$1.60	12	11-02-2020
Butter	\$2.40	17	09-06-2017

In this database you can add a new product or change the cost or number of items at any time.

- 1) How many different kinds of products does your grocery store have now?
- 2) How many characteristics does each product have?

Match each item in the first column with the proper description in the second:

- | | | | |
|----------------|-----------------------|--|--|
| Database table | <input type="radio"/> | | <input type="radio"/> Every characteristic or piece of information |
| Record | <input type="radio"/> | | <input type="radio"/> A piece of information with some characteristics |
| Field | <input type="radio"/> | | <input type="radio"/> Includes similar items |

Choose the proper word:

Name	Cost	Items	Expiration date
Can of tomato sauce	\$1.03	15	05-12-2019
Milk	\$1.00	21	12-08-2017
Canned tuna	\$2.50	16	05-10-2021
Salad	\$0.50	10	05-03-2019
Can of soda	\$1.60	12	11-02-2020
Butter	\$2.40	7	09-06-2017

This is a record/field

This is a record/field

Worksheet	Level	5	Module	6	Task	2	Class
	Student(s)						Date

A database table with records and fields!

Create your database!



Now, using the cards that you made in the previous lesson, create a new database about the planets:

- How many records will your database table have?
- How many fields will each record have?
- Write down the names of the fields:.....

- Create your database table at the bottom of the page:

Self Evaluation

Level	5	Module	6	Task	2	Class
Student						Date



I can define a database.

I can recognize the records of a database table.

I can recognize the fields of a database table.

I can create a database table.

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Digital Kids Expert



Samples of

- > Lesson Plans
- > Activity Worksheets
- > Self-Evaluation Sheets

Syllabus

Designing a document

1. Presentation graphics
2. Columns and tabs
3. Header and footers
4. The final touch

Building a website

1. What is a web page
2. Design a web page
3. Add more pages
4. Publishing the web page

Analyzing data

1. More calculations
2. Functions
3. References
4. More charts

Handling data

1. Structured information
2. Use a data entry form
3. Filter the data
4. Create a report

Programming the computer

1. Introduction to programming
2. How to design a program
3. Variables and commands
4. More programming

Let's have fun

1. Fun with shapes
2. What is datalogging
3. Robots!
4. Create your computer game

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TEACHER _____

CLASS _____

DATE _____

OVERVIEW

The general purpose of this lesson is for students to understand the concept of algorithms, programs and flowcharts.

OBJECTIVES

- To understand what a program is.
- To understand what happens when a program runs.
- To describe how programmers write programs.
- To understand what an algorithm is.

SKILLS

- To create an algorithm in order to solve a problem.
- To convert an algorithm into a flowchart.
- To draw a flowchart.
- To name the boxes that a flowchart consists of.
- To describe the function of each box in a flowchart.

WHAT IS NEEDED**Prerequisites**

(None)

Resources

- Digital Kids Expert Student's Book
- K.6.5.1_Worksheet_1.docx
- K.6.5.1_Worksheet_2.docx
- K.6.5.1_Worksheet_3.docx
- K.6.5.1_Evaluation_Sheet.docx

LEARNING DIFFICULTIES

- Students have difficulty understanding that 0s and 1s can control a computer.
- Students have difficulty understanding that in programming there are rules that always have to be followed.
- Students have difficulty analyzing a problem correctly in order to present its solution, broken down into smaller subunits.
- Students have difficulty understanding the input and output of data in a flowchart.

LESSON DESCRIPTION**1. Start – Brainstorming**

Introduce the purpose of the lesson which is for students to understand the meaning of programming. Then they have to introduce the meaning of algorithms. More specifically:

- Ask students to describe the solution to a problem, such as the recipe of a cake, using simple and clear steps.
- Write down the steps on the whiteboard and ask them to put the steps in a logical order.
- Liken this process to the meaning of the

algorithm.

- Ask them if the order of the steps of a solution are changed, will the solution still work?

Draw a flowchart representing an algorithm to introduce the steps applied in execution of an algorithm.

Separate students into groups of 2-3. Give out "K.6.5.1_Worksheet_1.docx" and ask students to read the introduction and encourage them to answer the questions.

2. Investigation – Development of Knowledge

Then, ask students to do the activities on the worksheet. During the activities they will realize that:

- A program is a list of instructions.
- There are people that create programs in order to solve problems.
- An algorithm is a step-by-step list of instructions in a specific order.
- A flowchart is a representation of an algorithm.
- There are specific types of boxes in a flowchart.

3. Implementation

Hand out "K.6.5.1_Worksheet_2.docx." In this activity students have to create a flowchart. They have to put the steps in the correct order.

Then, hand out "K.6.5.1_Worksheet_3.docx."

Students have to draw the correct shape and arrows in order to complete the flowchart.

During the completion of the flowchart, students should note the importance of:

- The correct input of data
- The validity of data
- The output of data

Let students discuss how to draw their flowcharts amongst themselves and if necessary consult the Student's Book.

4. Completion – Evaluation

After completing the activities, collect all the worksheets and file them in the class folder.

- Hand out the evaluation sheet to every student and ask them to complete it.
- Collect the sheets and see if the students understood all the objectives of the lesson.
- Check which part of the lesson students didn't completely understand and make any changes required in the teaching process.

NOTES

Worksheet	Level	6	Module	5	Task	1	Class
	Student(s)						Date

The concept of the program

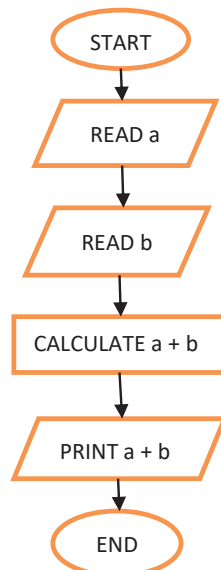
As you know, computers consist of hardware and software. Hardware is all the devices that are necessary for a computer to work. On the other hand, software is all the programs that hardware needs in order to work correctly!

- But what is a program?
- Do you know of any programs?
- What happens when a program runs?







Indicate whether the following sentences are true or false?

- | | True | False |
|---|--------------------------|--------------------------|
| 1. A computer program is a list of instructions. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Computers understand the English language. | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Programs are written by programmers in 0s, 1s and 2s. | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. There are special programming languages such as Small Basic. | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Computers cannot make decisions by themselves. | <input type="checkbox"/> | <input type="checkbox"/> |
- There are many problems in our everyday life that we try to solve. Sometimes their solutions are easy and obvious and other times they are difficult. A good way to solve a problem is to use an algorithm.
 - An algorithm is a sequence of defined actions. We use a flowchart in order to represent an algorithm. This is a flowchart:



Worksheet	Level	6	Module	5	Task	1	Class
	Student(s)						Date

Match each action with the proper box:

- Mark the beginning of the process 
- Give commands
- Show data 
- Mark the end of the process
- Make a decision 
- Get data
- Do calculations 

Indicate whether the following sentences are true or false?

- | | True | False |
|--|--------------------------|--------------------------|
| 1. An algorithm is a step-by-step list of instructions. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. A computer can decide which instructions of an algorithm need to be followed in order to solve a problem. | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. An algorithm's instructions must be simple. | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. There are algorithms in the world of computers, but not in the real world. | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. A recipe is like an algorithm. | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. An algorithm describes steps. | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. If a programmer gives the wrong instructions to a computer, the computer can correct them. | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. A flowchart represents an algorithm. | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. A flowchart is the only way to solve a problem. | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. A flowchart shows the steps of a solution to a problem, as well as their order. | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. You should first write a program and then the corresponding flowchart. | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. The arrows in a flowchart show us the order of the steps. | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. The arrows in a flowchart are optional. | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. To draw a flowchart you use 5 different types of boxes. | <input type="checkbox"/> | <input type="checkbox"/> |

Worksheet	Level	6	Module	5	Task	1	Class
	Student(s)						Date

The concept of the program

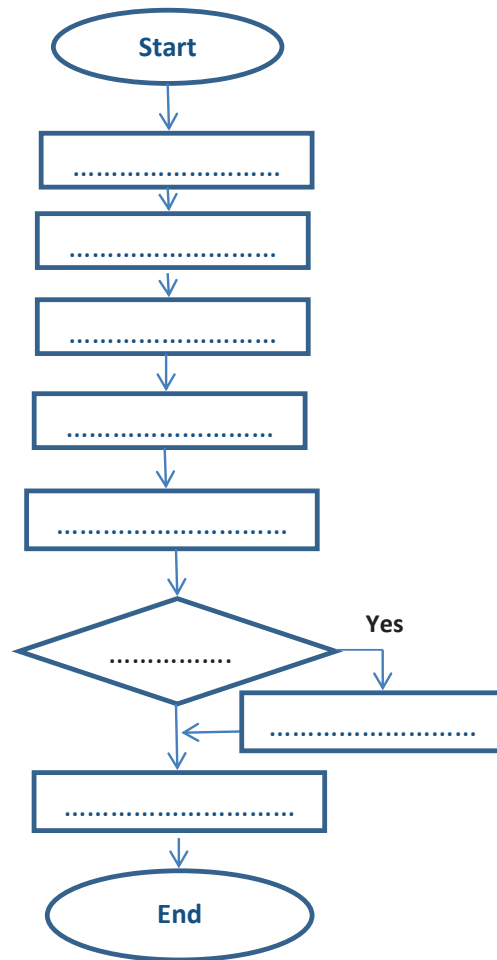
Create an algorithm!



When you get up every morning, you follow a set of actions to go to school. Below is a list of instructions that you have to use in order to fill in the blanks in a step by step algorithm and in a flowchart:

- Eat breakfast
- Go to school
- If it is raining take an umbrella
- Brush your teeth
- Put on your clothes
- Get up from bed
- Get your backpack

Step by step algorithm	
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Worksheet	Level	6	Module	3	Task	1	Class
	Student(s)						Date

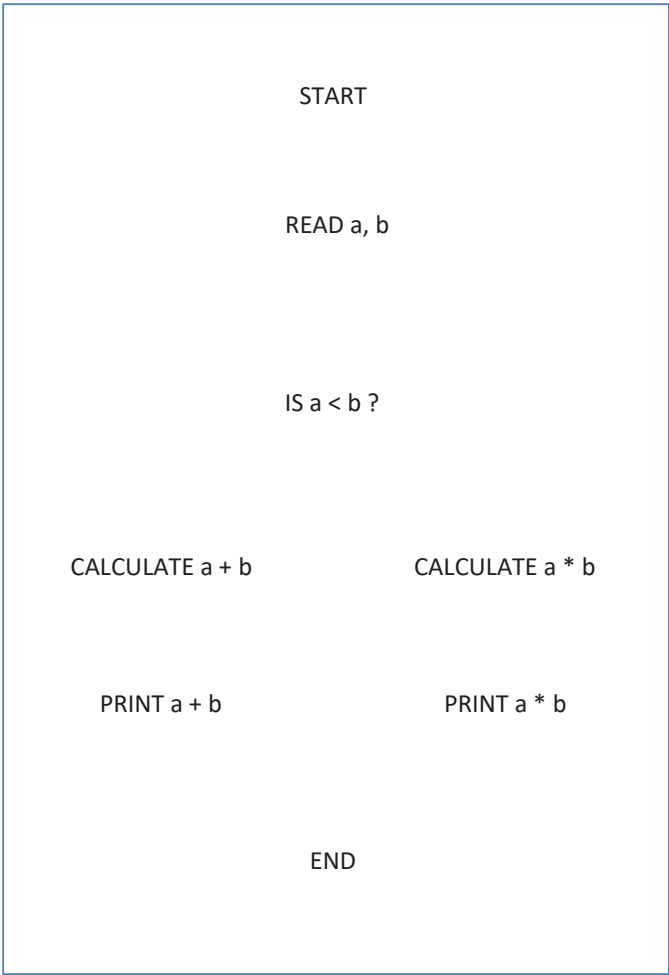
The concept of the program

Use boxes to complete the flowchart!



The shape below is an incomplete flowchart. It represents an algorithm that:
Reads two numbers and if the first is lower, then it calculates and prints their sum, otherwise, it calculates and prints their product.

Use your pencil in order to draw the corresponding boxes to complete the flowchart. Don't forget to draw arrows to show the correct order of the steps!



Self Evaluation	Level	6	Module	5	Task	1	Class
	Student						Date



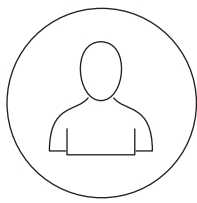
I can create an algorithm in order to solve a problem.

I can convert an algorithm into a flowchart.

I can draw a flowchart.

I can name the boxes that a flowchart consists of.

I can describe the function of each box in a flowchart.

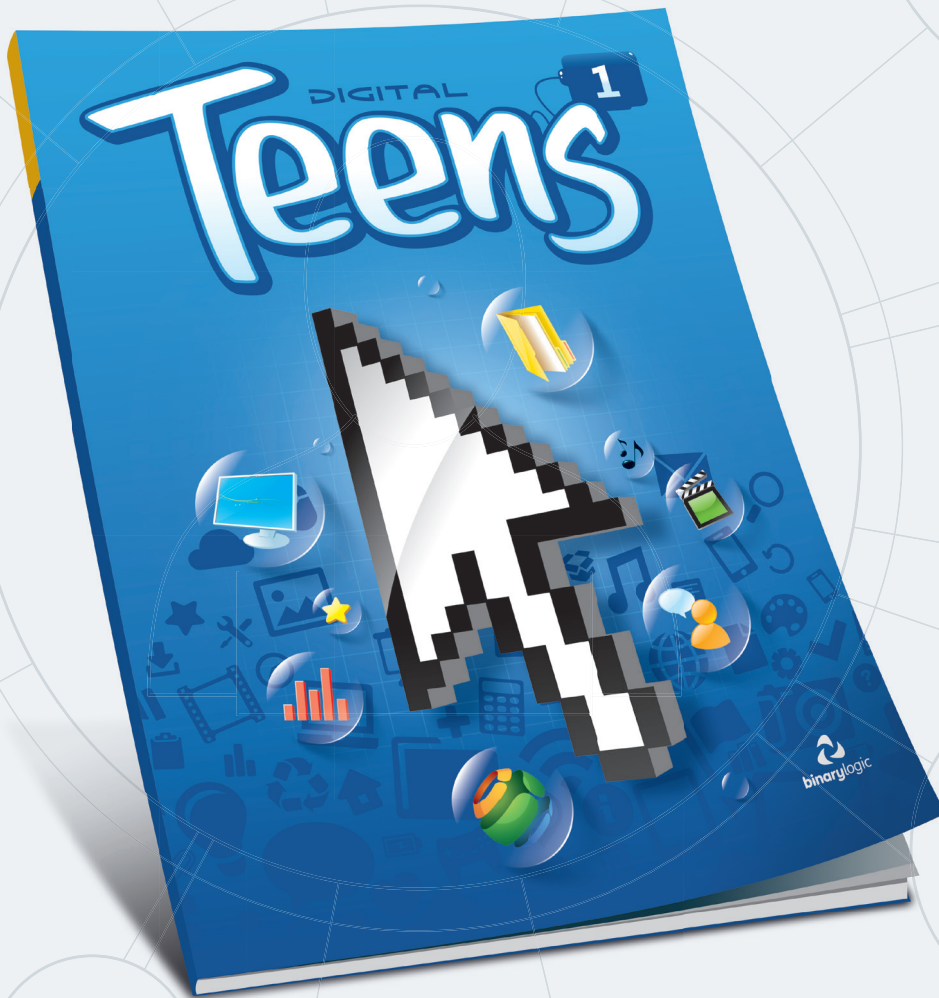


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Digital Teens 1



Samples of

- > Lesson Plans
- > Activity Worksheets
- > Self-Evaluation Sheets

Syllabus

Learning the basics

1. Computers and devices
2. The operating system
3. Files and folders
4. Basic settings
5. Hints and tips
6. Project

Creating a document

1. Formatting text
2. Advanced font formatting
3. Images and graphics
4. Working with tables
5. Check and print
6. Project

Getting online

1. Surfing the web
2. Use online resources
3. Send and receive email
4. Organizing email
5. Be safe online
6. Project

Working with numbers

1. Rows and columns
2. Advanced formatting
3. Simple calculations
4. Logical functions
5. Create a chart
6. Project

Presenting your ideas

1. Slides, text and images
2. Transitions and animations
3. Sound and video
4. Charts and graphs
5. Tips and tricks
6. Project

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OVERVIEW

Applying basic formatting to a text.

OBJECTIVES

- To identify the kind of format that has been applied to a text.
- To create, save and open a new document.
- To format a text.
- To create attractive lists.
- To format a paragraph.
- To add borders and shading to a text document.

SKILLS

- To change the font and the size of a word or phrase
- To make a text bold and underline it
- To make the font italic
- To create a subscript
- To create a superscript
- To highlight the font
- To change the color of the font
- To apply a list
- To align a paragraph
- To apply a paragraph indentation
- To apply line spacing
- To apply shading to a paragraph
- To add borders to a paragraph

WHAT IS NEEDED

Prerequisites

Basic knowledge of formatting text using the Microsoft Word.

Resources

- Digital Teens 1 Student’s Book
- T.1.2.1_Worksheet_1.docx
- T.1.2.1_Worksheet_2.docx
- T.1.2.1_Evaluation_sheet.docx
- “T.1.2.1_The earth’s climate” folder

Tools & Equipment

Microsoft Word

Or similar program from the list with alternative tools.

LEARNING DIFFICULTIES

- Many students have difficulty using the rulers in order to align their text, such as setting the indent of the first line of a paragraph.
- Students have difficulty changing the indentation of a paragraph.
- Sometimes students press enter to start a new paragraph. This adds an unintentional space before the new paragraph.

LESSON DESCRIPTION

A. Preparation

- Place the folder “T.1.2.1_The earth’s climate” in the “My Documents” folder.

B. Start – Brainstorming

- Start by asking students questions with reference to formatting a text. For example, you could ask them:
 - o Do you often use Microsoft Word?
 - o What is the main reason you use this program?
 - o Why do you think it is important to format a text?

C. Development of Knowledge – Implementation

- Separate the students into groups of 2-3.
- Hand out “T.1.2.1_Worksheet_1.docx” and ask students to do the activity.
- Students have to analyze the document and try to find out what kind of format has been applied.
- Then, hand out “T.1.2.1_Worksheet_2.docx” and ask students to complete the activity.
- Ask students to apply the proper formatting to the text according to the worksheet.
- Encourage discussion amongst students and add that if they have any questions they can ask you.
- Point out that if they make a mistake they can use undo.
- Don’t forget to ask them to save the document frequently.
- Help them to find particular information when needed.

D. Completion – Evaluation

- Hand out the evaluation sheet to every student and ask them to complete it.
- Collect the sheets and see if the students understood all the objectives that we had for this lesson.
- Check which part of the lesson students didn’t completely understand and make any changes required in the teaching process.

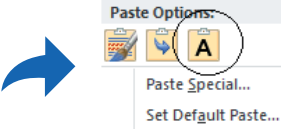
NOTES

Worksheet	Level	1	Module	2	Task	1	Class
	Student(s)						Date

Format your text

1. Get ready to format a text

- **Now it's your turn to format a text. More specifically you have to:**
- Create a new blank Word document and give it a name of your choice.
 - Open the formatted text "T.1.2.1_Climate changes."
 - Copy the whole text and paste it into the document you previously created, selecting "Keep text only."



2. Format the text

- **Now it's time to format this text in order to make it look more attractive, too. So you have to:**
- Make the changes you want to the whole text. More specifically:
 - Change the font face of words or phrases
 - Change the size of the font
 - Make the text Bold or italic and underline it where appropriate
 - Highlight important words
 - Make text superscript or subscript if possible.
 - Format the title changing the color behind the text and putting borders around it.
 - Insert bullets or numbering where necessary.
 - Align your paragraphs to the side of your choice.
 - Change the indentation of the paragraphs.
 - Change the distance between the lines in the last paragraph.
 - Use the tab key to set the indent of the first line of each paragraph you want to begin.
 - Do not forget to save your file

Note: It is helpful to consult your Student's Book. It will help you apply the formatting you want.

Worksheet	Level	1	Module	2	Task	1	Class
	Student(s)						Date

Format your text

1. Microsoft Word is an important tool

➤ As you know Microsoft Word has been developed to create and edit text. However the main advantage of this program is that you can format your text in a simple and easy way. Now, let's look at a formatted text in order to draw some useful conclusions. More specifically, you have to:

- Open the subfolder with the name "T.1.2.1_The earth's climate" which is in the "My Documents" folder and find the Word file with the name "T.1.2.1_Climate changes." Then open this file.
- Observe the text carefully and prepare to place your mouse pointer in various positions in the text document in order to answer the following questions on your worksheet.

As you can see, the title of the text has been formatted to look more attractive. Now explore this particular area of the text using the mouse pointer and fill in the following table with reference to font changes.

2. Formatting the title



What is the font style?						
What is the font size?						
Has shading been applied?	YES <input type="checkbox"/>			NO <input type="checkbox"/>			
Circle the borders which have been applied.	<input type="checkbox"/> Bottom border	<input type="checkbox"/> Top border	<input type="checkbox"/> Left border	<input type="checkbox"/> Right Border	<input type="checkbox"/> No border	<input type="checkbox"/> All borders	<input type="checkbox"/> Outside borders
Tick the way the text was aligned	<input type="checkbox"/> Left	<input type="checkbox"/> Center	<input type="checkbox"/> Right	<input type="checkbox"/> Justify			
Has a space been added to the paragraph after the title?	YES <input type="checkbox"/>			NO <input type="checkbox"/>			

Worksheet	Level	1	Module	2	Task	1	Class
	Student(s)						Date

3. Formatting paragraphs

➤ The next two paragraphs have been formatted too. Browse the text in the same way in order to fill in the table below.

Our world is always changing. Look out your window long enough and you might see the weather change. Look even longer, and you'll see the seasons change. The Earth's climate is changing, too, but in ways that you can't easily see.
The Earth is getting warmer because people are adding **heat-trapping gases** to the atmosphere mainly by burning fossil fuels. These gases are called **greenhouse gases**.

Write the italicized word(s)		
Write the highlighted word(s)		
What is the line spacing of the first paragraph?		
Tick the way the second paragraph has been aligned	Left <input type="checkbox"/>	Center <input type="checkbox"/>	Right <input type="checkbox"/> Justify <input type="checkbox"/>
Has a space been added before the second paragraph?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Has a space been added after the second paragraph?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	

4. An attractive list

➤ Observe the central section of the text in order to fill in the table below.



The main **GREENHOUSE-GASES** are:

- Water-vapor-(H₂O), occurs naturally in the atmosphere
- Carbon-dioxide-(CO₂), produced naturally when people and animals breathe
- Methane-(CH₄), comes from cattle as they digest their food
- Nitrous-oxide-(N₂O), when plants die and rot, nitrous-oxide is produced

What is the line spacing of the list?		
Has shading been applied to the list?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Has the indentation of the list been increased?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Tick the way the list was aligned	Left <input type="checkbox"/>	Center <input type="checkbox"/>	Right <input type="checkbox"/> Justify <input type="checkbox"/>
Is subscript used in the paragraph?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Is superscript used in the paragraph?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	

Self Evaluation	Level 1	Module 2	Task 1	Class
	Student			Date

1. Put a if the sentence is correct

1. You can align your text using the spacebar.

2. You can set the distance between the lines using the enter key.

3. The only way to add space after a paragraph is to press the enter key.

4. You can align a text to the right using the tab key.

5. You can save a Microsoft Word document as a Microsoft Excel file.

6. You can save a Microsoft Word document as a CSV file.

7. You can save a Microsoft Word document as a PDF file.




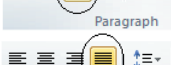
8. To change the font size of a particular word you can just click on the word.

9. To change the font size of a phrase you must select the whole phrase.

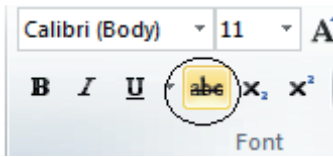
10. You can change the indentation of a paragraph using the “indent increase / decrease” buttons.

11. You cannot apply shading to a list.

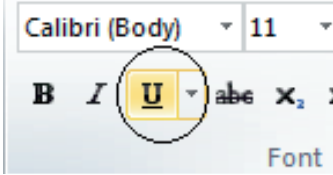
2. Match the columns to show how to align text

 <input type="radio"/>	<input type="radio"/> Align text to both left and right margins/justify
 <input type="radio"/>	<input type="radio"/> Center the text
 <input type="radio"/>	<input type="radio"/> Align text to the left
 <input type="radio"/>	<input type="radio"/> Align text to the right

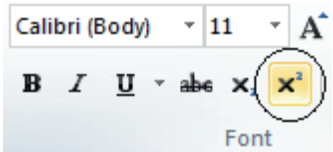
3. Match the buttons in the font group with the corresponding actions



Create a subscript



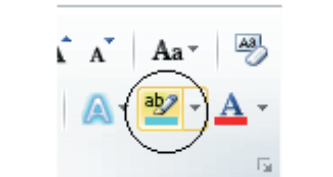
Create a superscript



Strikethrough text



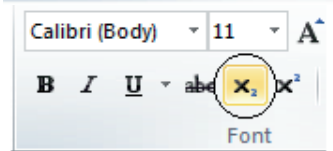
Underline text



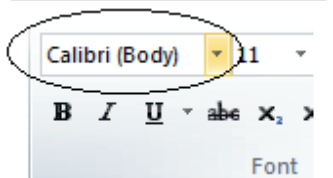
Make the font bold



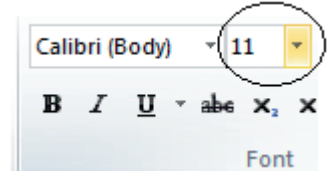
Make the font italic



Change the font



Change the size of the font



Highlight text

1

2

3

4

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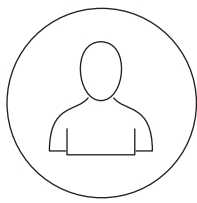
8

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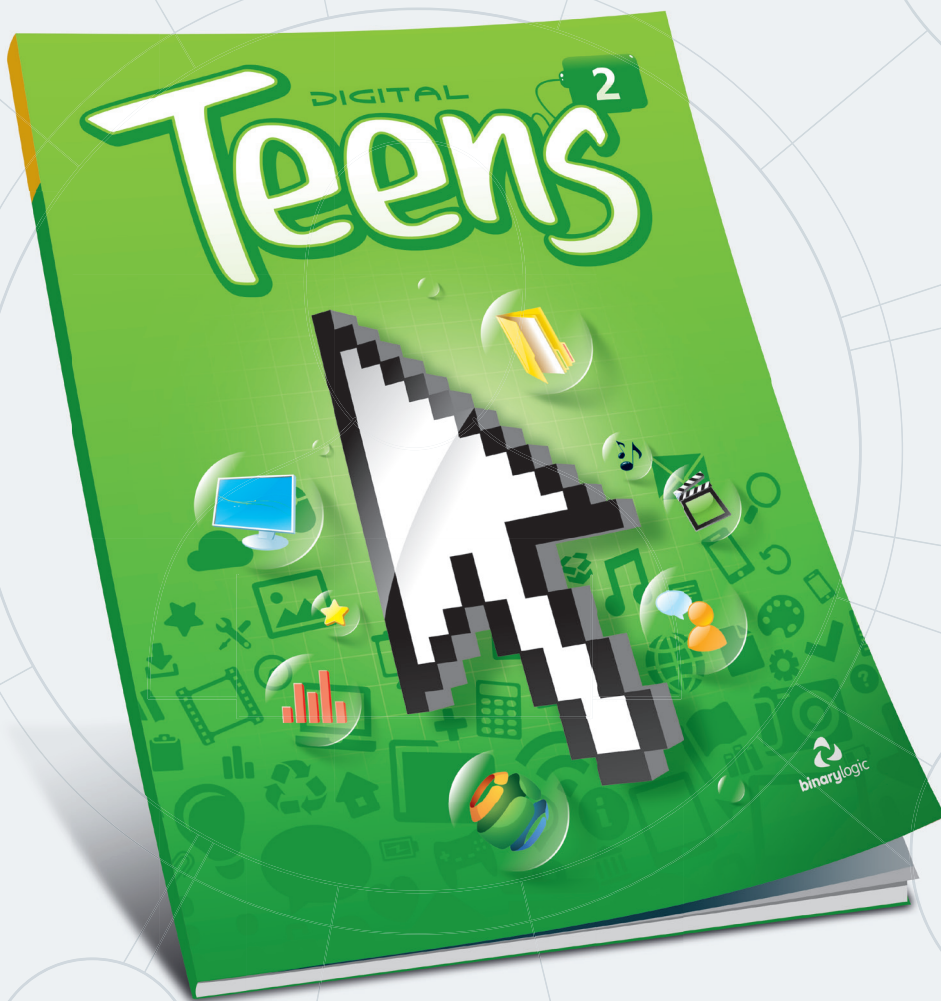


Get the Online Teaching Resources at:

binary-academy.com

Online Teaching Resources

Digital Teens 2



Samples of

- > Lesson Plans
- > Activity Worksheets
- > Self-Evaluation Sheets

Syllabus

Collecting information

1. Introduction to databases
2. Filter and sort
3. Keys and relationships
4. Contact management
5. Lab data collection
6. Project

Designing a document

1. Tabs and columns
2. Headers and footers
3. HTML and PDF
4. Mail merge
5. Advanced topics
6. Project

Multimedia presentations

1. Storyboarding
2. Capture and edit multimedia
3. Record your voice
4. Fix photos and add effects
5. Create an animated story
6. Project

Communicating online

1. Networking basics
2. What is a blog?
3. Social Media
4. Communications tools
5. Digital citizenship
6. Project

Analyzing data

1. Complex calculations
2. Functions
3. References
4. Advanced charts
5. Import and export data
6. Project

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OVERVIEW

To make complex calculations in Microsoft Excel.

OBJECTIVES

- To understand the correct order of calculations. More specifically to know that:
 - o multiplication and division are done first and then addition and subtraction.
 - o If there are parentheses, first do the calculations inside them and then the rest.
- To work with percentages making the proper calculations.
- To realize the different ways to calculate percentages.
- To understand how to calculate the power of a number in different ways.

SKILLS

- To perform more complex calculations in a formula.
- To transform a number to a percentage and more specifically to:
 - o Add percentages with the Percent Style button
 - o Determine the decimal places
- To calculate a power of a number using the symbol $^$.
- To use the Power function (x , y).

WHAT IS NEEDED
Prerequisites

Basic knowledge of Microsoft Excel (to use AutoFill in order to copy, to add columns and rows to a spreadsheet, to know the correct sequence of calculations).

Resources

- Digital Teens 2 Student's Book
- T.2.5.1_Worksheet_1.docx
- T.2.5.1_Worksheet_2.docx
- T.2.5.1_Evaluation_Sheet.docx
- T.2.5.1_Final.xlsx

Tools & Equipment

Microsoft Excel

Or a similar program from the list with alternative tools.

LEARNING DIFFICULTIES

- Many students have difficulty in following the proper sequence of math calculations as they don't know the basic mathematical rules.
- Some students confuse the function of the percent sign of Percent Style on the Formatting toolbar with the percent sign. When they need to add a percent sign to a number, they select the cell first and then click the Percent Style button on the Formatting toolbar. Doing this, won't only add a percent sign to the number, but it will also multiply the number by 100. On the other

hand, if they just want to add a percent sign to a number without multiplying it by 100, they should just type the symbol.

LESSON DESCRIPTION
A. Start – Brainstorming

- Ask students questions about the importance of making calculations and using functions in Microsoft Excel. More specifically, you could ask them:
 - o How can we analyze imported data in a table?
 - o Do you know the proper sequence of math calculations?
 - o Have you ever used AutoFill in order to avoid repeating the same process?
 - o Have you ever worked with functions in Microsoft Excel? Have you ever used the Power function?
 - o Do you know how to calculate percentages?
- Separate students into groups of 2-3.

B. Implementation

- Hand out "T.2.5.1_Worksheet_1.docx." Ask students to do the activity. Open the Excel file "T.2.5.1_Final.xlsx" to show students an example of what their table should look like.
- Then, hand out "T.2.5.1_Worksheet_2.docx." Ask students to complete the activity. During the activity:
 - o Explain to students that the total area of the items must be exactly the same as the area of the square (7,850 m²).
 - o Help them calculate the percentages if necessary.
 - o The total building cost must not exceed \$15,000.
- Tell students that they can consult their Student's Book.
- Encourage discussion amongst students and add that if they have any questions they can ask you.

C. Completion – Evaluation

- Hand out the evaluation sheet to every student and ask them to complete it.
- Collect the sheets and see if they understood all the objectives that we had for this lesson.
- Check which part of the lesson students didn't completely understand and make any changes required in the teaching process.

NOTES









Worksheet	Level	2	Module	5	Task	1	Class
	Student(s)						Date

Let's work with spreadsheets

➤ As you know, the main reason people use spreadsheets is to organize and analyze information. Imagine that the mayor of your city assigns some research for the construction of a round square in your neighborhood to your group. Analyze the given data using a spreadsheet in order to get the best results. First of all, you have to know that:

- The radius of the round square is 50 m.
- The budget is \$15,000.
- You can choose five different items that your square can contain.
- Below is a table of the construction costs which will help you calculate the total building cost.



Cost (\$) / m ²				Cost (\$) / Item			
							
Grass	Fountains	Trees	Flowers	Playground 500 m ²	Basketball court (28x15) m	Mini soccer field (20 x40) m	Tennis court (37x16)m
2 \$	20 \$	1.5 \$	0.5 \$	3000 \$	2500 \$	5000 \$	2000 \$

Create a table in a spreadsheet

Now, you have to create a table to analyze this data making calculations and using functions that Microsoft Excel offers. More specifically:

- Open Microsoft Excel and create a table similar to the one on the right. More specifically:
 - The "Area" column depicts the surface area which you want to cover with each item in the square.
 - The "Percentage" column depicts what part of the total area is covered by each item.
 - The value column depicts the construction cost of each item.
 - In this table cell **B7** must contain the total area of the square.

	A	B	C	D
1		Area (m ²)	Percentage	Value
2	Item_1			
3	Item_2			
4	Item_3			
5	Item_4			
6	Item_5			
7	Total			
8	Radius (m)	50		

Assuming that the shape of the square is a circle, put a if the following calculations calculate the area correctly.

- = 3.14*B8^2
- = 3.14*POWER(50^2)
- = 3.14*POWER(2,50)
- = 3.14*POWER(50,2)

Worksheet	Level	2	Module	5	Task	1	Class
	Student(s)						Date

Let's work with spreadsheets

Make calculations and enter data

Now you have to enter the proper data into your Excel table. Remember that:

- The total building cost must not exceed \$15,000.
- The total area of the items must be equal to the area of the square.

However, do you know which calculations and functions you have to use in order to get the desired result? Look carefully at the spreadsheet below. Then select what we have to write in the cells in order to have the correct content.

	A	B	C	D
1		Area (m ²)	Percentage	Value
2	Trees			
3	Grass			
4	Fountains			
5	Tennis court			
6	Flowers			
7	Total			
8	Radius (m)	50		

1. D2

= B2^2

= C2 * 1.5

= B2 * C2

= B2 * 1.5

2. C2

= B2/B7 %

= B2/B7*100 %

= D2/B7 %

= B7/B2 %

3. C5

= B7/B5 %

= 30*20/B7*100 %

= 30*20/B7*100

= (30*20) + B7*100

4. B7

= SUM (B2:B8)

= SUM (B2:B6)

= B2*4

= B1+B2+B3+B4+B5+B6

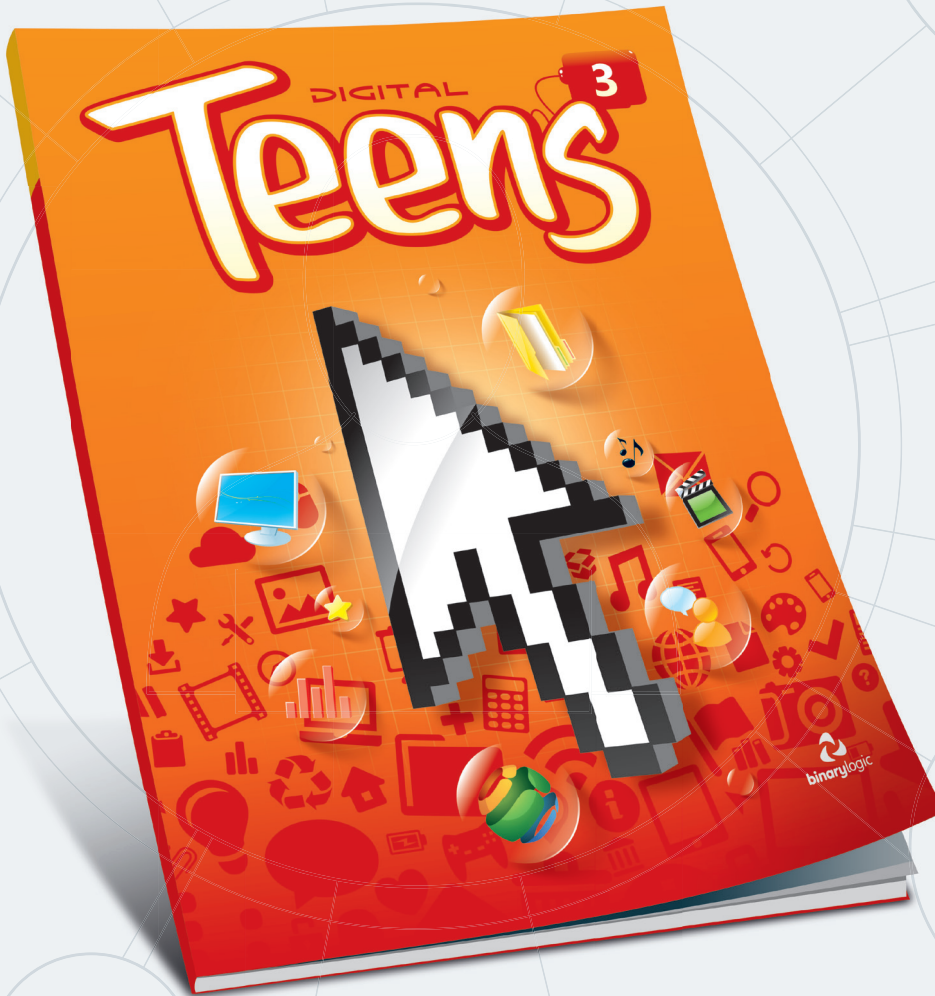
Now, it's time to enter data in your table making the proper calculations. Then fill in the table below:

Worksheet	Level	2	Module	5	Task	1	Class
	Student(s)						Date

Which items will you use for the square in the end?	1.....	2.....	3.....	4.....	5.....
Which item takes up the most space?	Item: Percentage:				
What is the total building cost?	Total cost:				

Online Teaching Resources

Digital Teens 3



Samples of

- > Lesson Plans
- > Activity Worksheets
- > Self-Evaluation Sheets

Syllabus

Handling databases

1. Structured information
2. Data entry forms
3. Queries
4. Reports
5. Import and export data
6. Project.

Documents for a purpose

1. Text documents
2. Spreadsheets
3. Presentations
4. Project 1 – Leaflet
5. Project 2 – Labels
6. Project 3 – Market research

Programming the computer

1. What is a program?
2. Variables and commands
3. Conditions and branching
4. Functions and subroutines
5. Have fun!
6. Project

Deep diving

1. Advanced networking
2. Servers and storage
3. I'm an IT administrator
4. Data and network security
5. Cloud storage
6. Project

ICT is fun

1. Design your website
2. Science projects
3. Robotics
4. Design your own game
5. Build your own radio station
6. Project

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OVERVIEW

To design your own computer game using Kodu Game Lab.

OBJECTIVES

- To understand that Kodu is a visual programming language used for creating games in a simple, direct and intuitive manner.

SKILLS

- To create a new world or use an existing world in order to design your own game.
- To use the terrain tools to create the world for your game.
- To create a terrain, add colors and select the brush type and adjust its size.
- To add objects to a game and adjust them.
- To add Kodu code rules to a game.

WHAT IS NEEDED

Resources

- Digital Teens 3 Student’s Book
- T.3.5.4_Worksheet.docx
- T.3.5.4_Evaluation_Sheet.docx
- T.3.5.4_Kodu2.Kodu2
- “T.3.5.4_cmap files” folder

Tools & Equipment

Kodu Game Lab

LEARNING DIFFICULTIES

- While students are adding fish to the lake they should be careful and change their height so that when the Kodu tries to eat them they are at the same level and not inside the water! They can rotate the camera and see if the fish are high enough from the bottom of the lake.

LESSON DESCRIPTION

A. Preparation

Install Kodu Game Lab on each computer. Make sure that there is a shortcut to it on each Desktop.

B. Start – Brainstorming

- Start a discussion with students about video games. All students have probably played at least one game.
- Hand out the worksheet and ask them to read the questions and the first paragraph. Encourage them to have a discussion amongst themselves in order to answer the questions. This is a subject that students can discuss and analyze for many hours!

C. Implementation

- The first thing that students have to do is open Kodu. Explain that this is a free program for creating games! Ask them to open it and navigate through its interface.
- Mention the main idea of the game: Kodu eats

the fish in the lake and catches the fallen apples. Explain that they will create a lake with fish and some trees with apples.

- The first thing is to create the terrain using the Raise tool. Then, they have to add a round lake in the middle of the terrain and add water and fish to it. They also have to make fish move around inside the lake using a random path.
- In addition, they will add some trees and some apples around the lake.
- In order to complete their game they have to add the game character, which is the Kodu. Ask them to add the Kodu using the Object tool and adjust its size and color. Then they have to make Kodu:
 - o eat fish when he bumps into them.
 - o move when they press the arrows of the keyboard.
 - o grab fallen apples when he bumps into them:



- Mention that they can press the Play button each time they want to check and test their game. Also remind them that they can use their Student’s Book as a guide.
- At the end, ask them to play their game or ask a classmate to play.
- The file “T.3.5.4_Kodu2.Kodu2” is an example of a completed game.

D. Completion – Evaluation.

- Hand out the evaluation sheet to every team and ask them to complete it.
- Collect them and see if they understood all the objectives that we had for this lesson.
- Check which part of the lesson students didn’t completely understand and make any changes required in the teaching process.

NOTES

Worksheet	Level	3	Module	5	Task	4	Class
	Student(s)						Date



My first game!

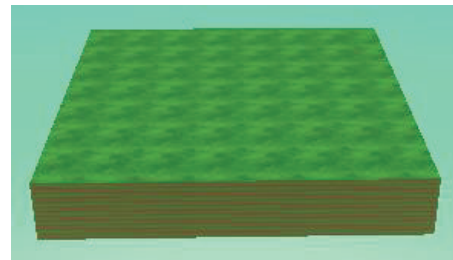
- Do you play video games?
- What is your favorite?
- If you were a game character what would you be like?

It's really difficult to create a computer game using a specific programming language. However, there are some free labs online that allow you to create your own game, such as Kodu Game Lab. Are you ready to create your own computer game? Let's try!

Using Kodu Game Lab!

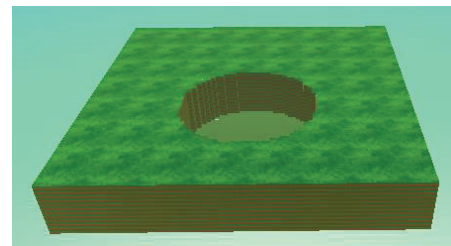
- Open Kodu Game Lab and click LOAD WORLD.
- From "All categories" select the **First Tutorial** world.
- Press **Esc** (keyboard) to edit the world.

Use the Raise tool  and select the last magic brush  to raise the terrain.

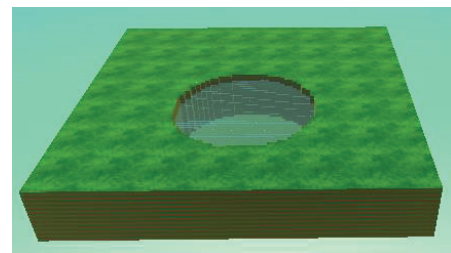


Add a lake in the middle!

- Now select the circle brush, adjust its size and click in the middle of the square. Go to the Raise tool again, select the same magic brush and lower the round area using the left mouse button.



- The lake is ready! The only thing left is to add water! Select the Water tool and natural color, click in the middle of the lake and hold the left mouse button in order to fill the lake with water! Be careful that the water doesn't overflow!



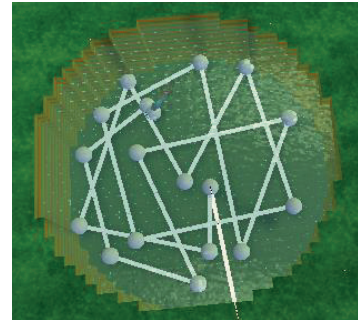
Worksheet	Level	3	Module	5	Task	4	Class
	Student(s)						Date

Let's add some fish!

- Go to the *Object* tool and choose a fish to add. (Hint: you can rotate the camera in order to handle the tools better.)
- Choose the color of your fish and rotate it as you want.
- Change the Height of the fish, so they are at the level of the grass.

Let's make the fish move in the lake and make your game more exciting!

- You have to add a path. Click on the *Path* tool and click on the lake in order to create a path for your fish! You can see an example in the picture on the right:
- *To end the path just right click!*



- Now you have to make the fish move along the path! Right-click the fish, click Program and then click move on path.
- *Click the play button to try your game!*

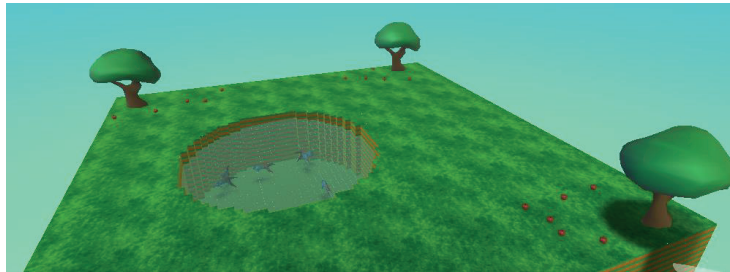


- *Create more than one fish!* Copy and paste 6 more fish into the lake and rotate them as you want!



- Now, add three trees around the lake. To do this, click on the Object Tool and click the tree icon. Add some fallen apples around the trees:

Worksheet	Level	3	Module	5	Task	4	Class
	Student(s)						Date

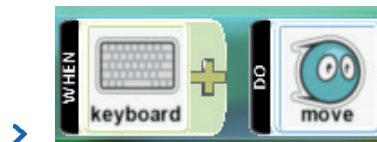


It's time to add the game character, Kodu!

- Add Kodu with the Object tool, adjust its size and then rotate it. The role of Kodu is to eat the fish when he bumps into them. So, program the Kodu to do this:



- But in order for Kodu to bump into the fish you have to be able to move him. So, program Kodu to move with the proper rules:



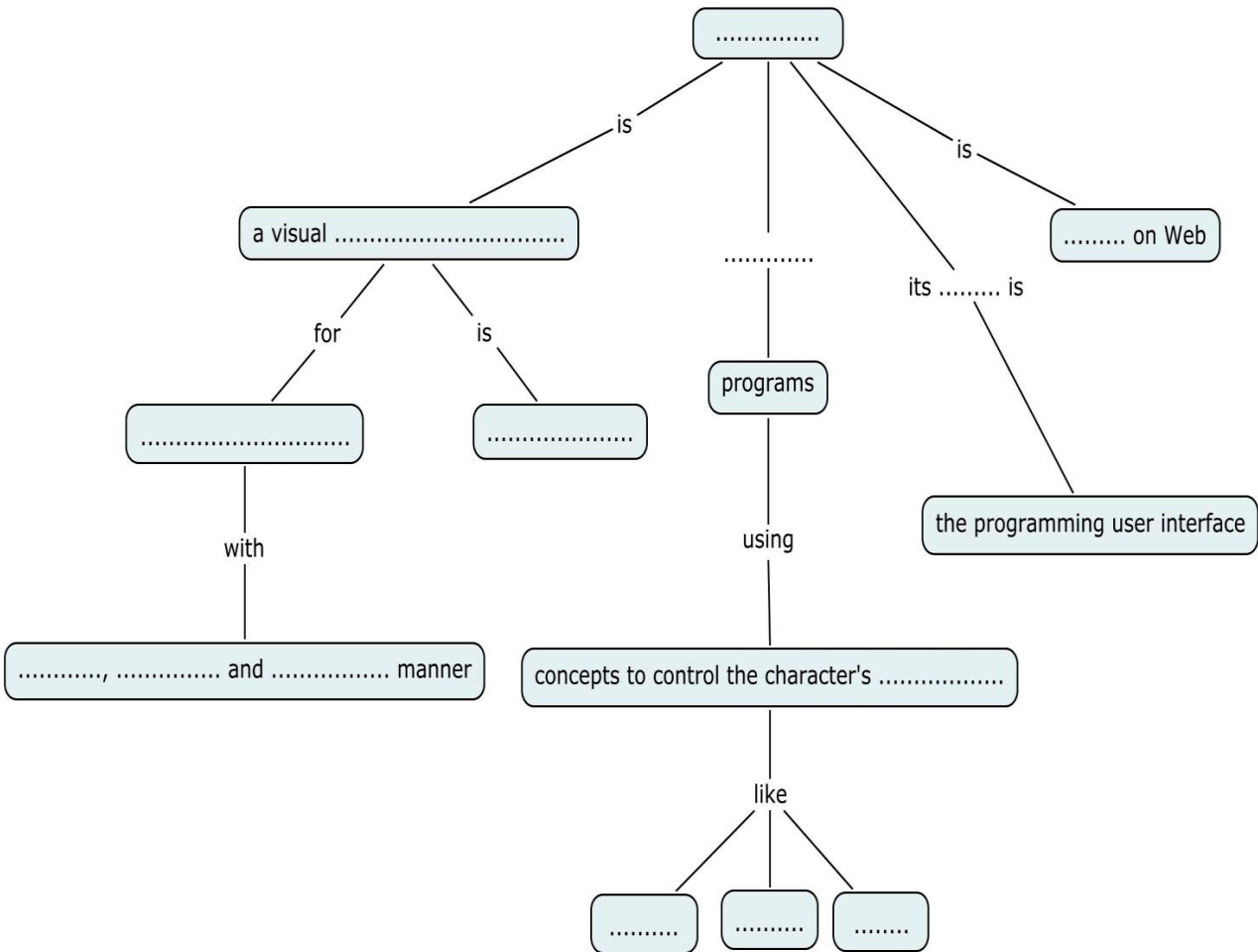
- Click the play button and use the arrows to move Kodu to bump into the fish.
- Finally, program Kodu with the proper rules in order to grab the fallen apples!
- Export it as "My first game" to My Documents.

Your game is ready! Play your game and have fun!

Self Evaluation	Level 3	Module 5	Task 4	Class
	Student			Date

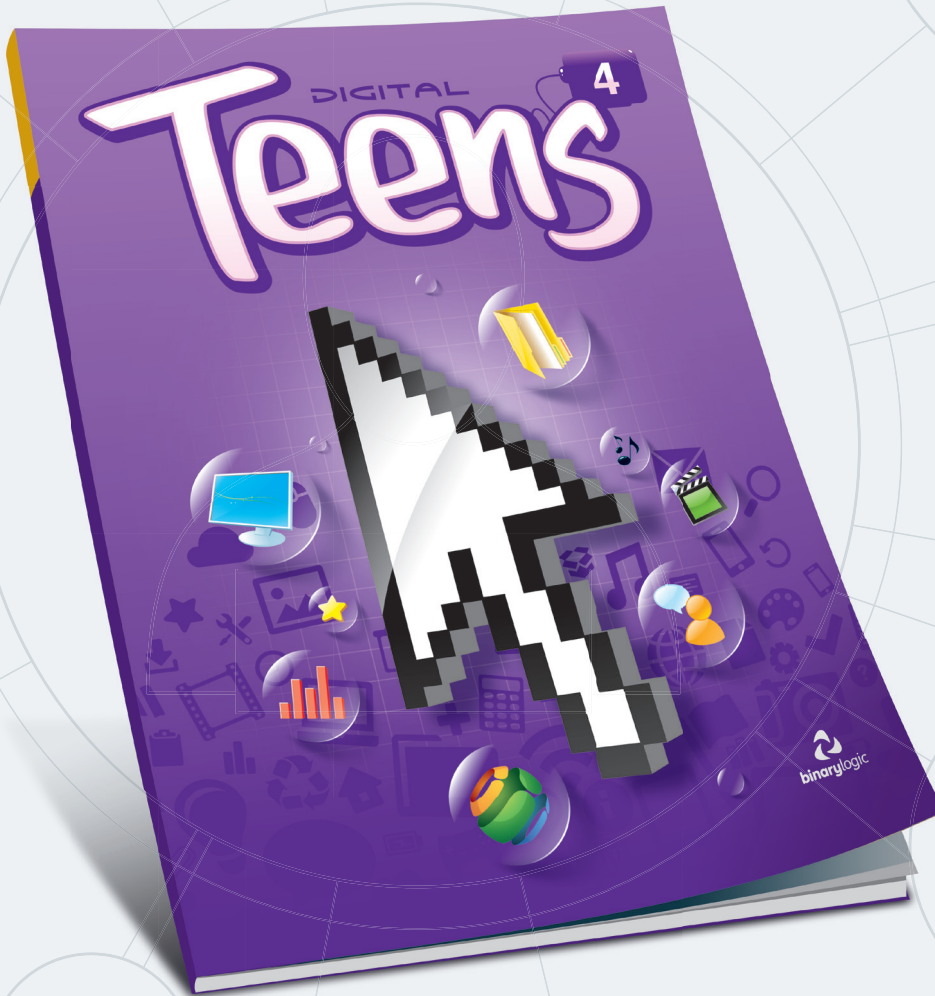
Fill in the underlined blanks with the proper word/phrase

- 1. core
- 2. create
- 3. vision
- 4. Kodu
- 5. intuitive
- 6. free
- 7. programming language
- 8. hearing
- 9. creating games
- 10. behavior
- 11. simple
- 12. direct
- 13. icon-based
- 14. time



Online Teaching Resources

Digital Teens 4



Samples of

- > Lesson Plans
- > Activity Worksheets
- > Self-Evaluation Sheets

Syllabus

Computer science basics

1. Data manipulation
2. Computer architecture
3. Operating systems
4. Network fundamentals
5. Computers in society
6. Project

Working online

1. Working with documents online
2. Online meetings
3. Presentation broadcasting
4. Notes management
5. Mind mapping
6. Project

Advanced imaging

1. Image essentials
2. Layers
3. Image adjustments
4. Retouch and enhance
5. 2D animation creation
6. Project

Desktop Publishing

1. From etching to DTP
2. Basic Tools
3. Single-page design
4. Multi-page document I
5. Multi-page document II
6. Project

Developing applications

1. Programming concepts
2. Decisions and repetition
3. Database management
4. Classes, objects and inheritance
5. User interface and testing
6. Project

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OVERVIEW

Use Office programs online, like OneDrive (former SkyDrive) and Google Drive, in order to create, edit, share or collaborate on documents with friends, using any Web browser.

OBJECTIVES

- To understand that by using the OneDrive Office Online Application you can have access to your documents anywhere that has an Internet connection.
- To be able to share documents with others.
- To be able to collaborate with others online.
- To understand that online Office Applications are similar to Microsoft Office programs on the desktop and have the same basic controls and functions.
- To collaborate with others using OneDrive in order to edit files.
- To understand that Google Drive is an alternative cloud storage service with integrated online capabilities.
- To understand that Google Drive allows multiple people in different locations to collaborate simultaneously on the same file from any computer with Internet access.

SKILLS

- To start the OneDrive Office Online application.
- To use the Word Online application.
- To use the Excel Online application.
- To use the PowerPoint Online application.
- To upload a document to OneDrive from the computer.
- To download a file from OneDrive.
- To download the OneDrive application on any device.
- To share documents with others safely.
- To start Google Drive.
- To upload a document to Google Drive.
- To create a new file in Google Drive with an available application.
- To share documents with others and collaborate on Google Drive.

WHAT IS NEEDED**Prerequisites**

Basic knowledge of Microsoft Office and Internet Explorer.

Resources

- Digital Teens 4 Student's Book
- T.4.2.1_Worksheet_1.docx
- T.4.2.1_Worksheet_2.docx
- T.4.2.1_Worksheet_3.docx
- T.4.2.1_Evaluation_Sheet.docx
- Folder "T.4.2.1_cmap files"

Tools & Equipment

- Microsoft Office
- Internet Explorer
- Whiteboard

Or a similar program from the list with alternative tools.

LEARNING DIFFICULTIES

Students should be careful with the files they share with web storage services like OneDrive and Google Drive. If they want their friends to be able to edit the shared files, they should select the "Edit" checkbox. Also, if they don't want the shared files to be edited by people other than their friends, they should select the "Require everyone who accesses this to sign in" checkbox.

LESSON DESCRIPTION**A. Preparation**

- Make sure that each team has an account on Google Drive and OneDrive. Otherwise create one for each team. Write the username and password of each team on the whiteboard.
- Create a new blank document in Google Drive called "World Wetlands Day." Share this document with all the teams with the ability to edit enabled.

B. Start – Brainstorming

- To start with, discuss the reasons why we use the Internet. Hand out "T.4.2.1_Worksheet_1.docx" and ask students to read the questions and the first paragraph. Ask students to mention some cases in which they needed to use the Web and what would have happened if they didn't have Internet access.
- Help them by asking more questions like:
 - o Have you ever desperately needed to access a file saved on your computer but were too far away from it?
 - o Is there a way to access your personal files from any computer that has Internet access?
- Introduce the general purpose of the lesson, which is the usage of some web storage services and to help create and edit files from anywhere with Internet access.

C. Investigation of knowledge – Development of knowledge

Then, ask students to read the rest of the worksheet. They have to fill in a concept map. While completing this map:

- They will realize that Google Drive is an alternative cloud storage service that offers them the ability to have real-time collaboration with their friends in different locations.
- They can use Google Drive in order to create a new document, upload files from their computer or edit files online.
- With Google Drive we can create:

Worksheet	Level	4	Module	2	Task	1	Class
	Student(s)						Date

Share your documents

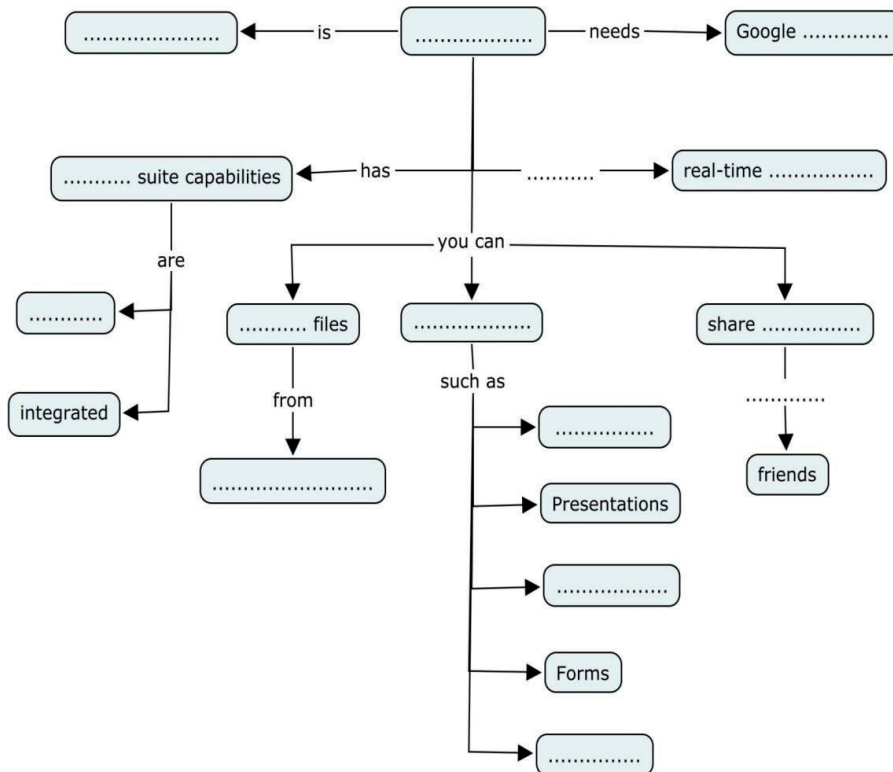
Why do you use the Web?

Can you save your files "somewhere" on the Internet?

We use the Internet mainly to search for information or send emails. But recently, it has become possible to use the Internet to save our files and have access to them from anywhere. We can also edit and collaborate on a file simultaneously with our friends in different locations by using various Web sites. Two Web sites that offer us this ability are **onedrive.live.com** and **drive.google.com**.

Fill in the following concept map in order to understand what OneDrive and Google Drive are:

Fill in the underlined blanks with the proper word/phrase



1. office
2. with
3. your computer
4. collaboration
5. create files
6. documents
7. Google Drive
8. offers
9. account
10. Documents
11. storage service
12. upload
13. Spreadsheets
14. Drawings
15. online

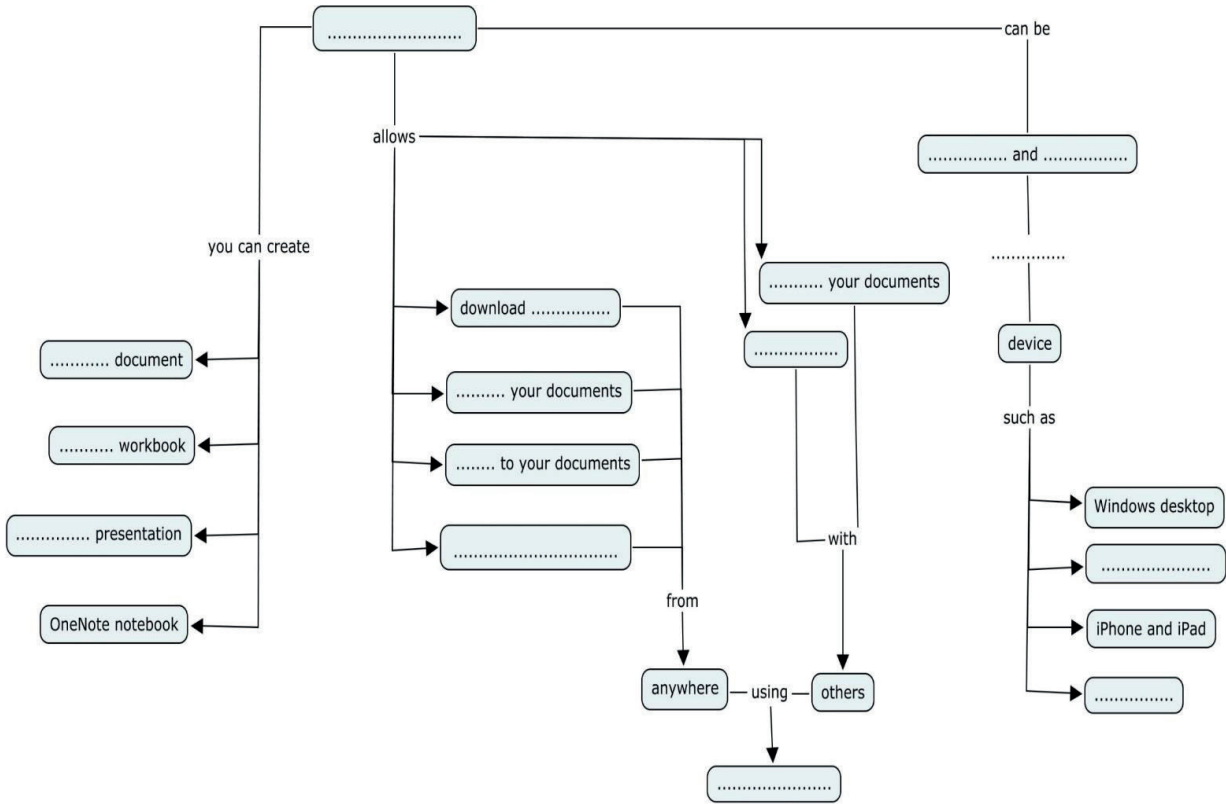
Worksheet	Level	4	Module	2	Task	1	Class
	Student(s)						Date

Share your documents

Fill in the underlined blanks with the proper word/phrase

1. editing your documents
2. sharing
3. upload
4. to any
5. Microsoft OneDrive
6. any browser
7. Android
8. Word

9. downloaded
10. Windows Phone
11. access
12. collaboration
13. documents
14. Excel
15. PowerPoint
16. installed



Worksheet	Level	4	Module	2	Task	1	Class
	Student(s)						Date

Share your documents

- February 2nd is World Wetlands Day. Your Geography teacher has asked you and your classmates to present some files about the Wetlands of the world or your country.

Part 1

- Firstly you should visit **drive.google.com**. Type in your Google email address and password.
- There is a shared file called “World Wetlands Day” that your teacher created. Find and open it (it is in the folder “Shared with me”).
- This document is blank. You will use it in order to chat with the members of the other teams and decide which wetlands you will create a file presentation on. Type your wetlands suggestion, wait and then read the other suggestions. Collaborate simultaneously on the same file and observe the colored tile with the teams’ names that appear on screen when someone is typing something.

Part 2

- Now find information and download pictures from the Web about the wetlands you have decided to present. Save them in a folder on your desktop and name it appropriately.
- Visit **onedrive.live.com** and sign in using your Microsoft account email and password.
- Create a new file (Word document or PowerPoint presentation). Type the information you found and insert some images about the wetlands. Office online applications have the same basic functions as Microsoft Office programs.
- Upload a picture of the wetlands you chose.
- When you finish your work share your file with the rest of the teams. Adjust the settings so recipients are able to edit the file but if they forward it to someone else then those recipients are unable to open it.
- You will also receive their work. Open, read and type your comments on them.
- Finally open your file, read the comments from the others and make any necessary corrections in order for your file to be presented on February 2nd!
- When all teams have completed their work, download all the files from all the teams and save them in a folder on your desktop.

Self Evaluation	Level 4	Module 2	Task 1	Class
	Student			Date

1. Select the correct answer

1. Microsoft OneDrive offers you the ability to
 - share documents with your friends
 - chat with one friend only
 - open and edit any document that is saved on your computer from any Web browser

2. You can have easy access to your OneDrive files by using
 - a computer
 - an iPhone
 - any smartphone
 - an iPad
 - all of the above

3. With OneDrive you can't create a(n)
 - Word document
 - Access database
 - Excel workbook
 - PowerPoint presentation
 - OneNote notebook

4. On Microsoft OneDrive you can share documents with your friends, but you can't
 - collaborate with them
 - ask them to edit files
 - start a video chat with them

5. In the Word/Excel/OneNote Online you and your friends can edit a document
 - only one minute after you upload it
 - not simultaneously
 - instantly
 - none of your friends can edit your documents

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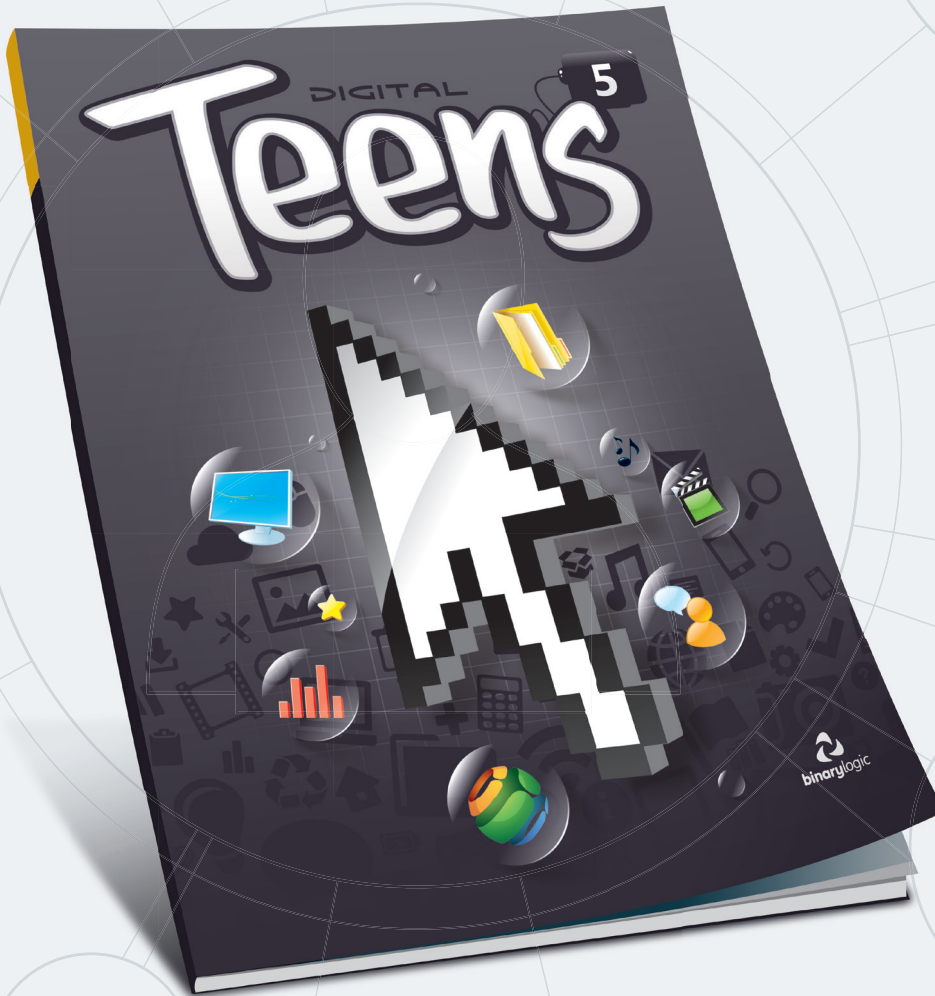
12

2. Select the correct answer

- | | |
|--|--|
| 1. Google Drive is a | <input type="radio"/> Web browser
<input type="radio"/> storage service
<input type="radio"/> social networking site
<input type="radio"/> chat room
<input type="radio"/> text editor |
| 2. Google Drive offers you the ability to | <input type="radio"/> create documents
<input type="radio"/> edit documents
<input type="radio"/> share documents
<input type="radio"/> collaborate on documents
<input type="radio"/> all of the above |
| 3. You can use Google Drive if you already have a | <input type="radio"/> Facebook account
<input type="radio"/> Gmail account
<input type="radio"/> Yahoo account
<input type="radio"/> Skype account |
| 4. In order to collaborate at the same time with many people in real-time, you should check the following selection when you share the document: | <input type="radio"/> "Can edit"
<input type="radio"/> "Can comment"
<input type="radio"/> "Can view" |
| 5. Your ability to use Google Drive to create a virtual chat is due to | <input type="radio"/> simultaneous processing of two or more documents by one person
<input type="radio"/> simultaneous processing of one document by many people
<input type="radio"/> sequential processing of one document by many people
<input type="radio"/> sequential processing of two or more documents by one person |

Online Teaching Resources

Digital Teens 5



Samples of

- > Lesson Plans
- > Activity Worksheets
- > Self-Evaluation Sheets

Syllabus

Building a website

1. Design a web page
2. Web hosting and SEO
3. HTML and CSS
4. Insert content
5. Web forms
6. Project

Graphics design

1. Vector graphics
2. Coloring and shaping
3. Adding text and reshaping
4. Making curves
5. More design tools
6. Project

Interactive applications

1. Getting started
2. Designing the UI
3. Animating objects
4. Adding interactivity
5. Working with sound and video
6. Project

Advanced multimedia

1. Video shooting
2. Video editing
3. Visual effects
4. The final touch
5. 3D animation
6. Project

Project management

1. What is a project?
2. Organizing tasks
3. Create a Gantt chart
4. Create a diagram
5. Changing colors and fonts
6. Project

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OVERVIEW

To insert images, sound and photos on a web page, but also to create a navigation bar with links to other web pages.

OBJECTIVES

- To realize that a navigation bar helps us move from one page to another on a website.
- To be able to add an image to a website from the computer or the Web as a hyperlink.
- To search for “free photo gallery for website” in order to find detailed instructions on how to include photos on web pages.
- To understand the steps that need to be taken in order to create a photo gallery on a web page.

SKILLS

- To create a navigation bar.
- To add images to a web page.
- To change the image’s dimensions on a web page.
- To add sound to any web page.
- To create a photo gallery to display photos on a web page.

WHAT IS NEEDED

Prerequisites

Create and upload a web page to a free web hosting service.

Resources

- Digital Teens 5 Student’s Book
- T.5.1.4_Worksheet_1.docx
- T.5.1.4_Worksheet_2.docx
- T.5.1.4_Evaluation_Sheet.docx

Tools & Equipment

- Adobe Dreamweaver
 - Internet Explorer
 - Firefox Mozilla
- Or similar programs from the list with alternative tools.

LEARNING DIFFICULTIES

- Sometimes students get confused when they see code in HTML language. Tell them that they can work in Split view in order to see the code and the results next to it.

LESSON DESCRIPTION

A. Preparation

Install Dreamweaver on each computer.

B. Start-Brainstorming

- At the beginning, have a discussion with students about the web page they created in the previous lesson. Ask them to find and open it using the proper program (Dreamweaver). Then they should describe the elements they have inserted.
- Hand out the “T.5.1.4_Worksheet_1.docx”. Ask

students to read the first paragraph: There are some questions that students have to answer.

- Help them, asking questions such as:
 - o Can you add audio and pictures to a web page?
 - o How many pictures or photos you can add into a website?
 - o Do you know what the navigation bar is?
- Explain that in this lesson they will learn how to insert images, sound and photos onto a web page, but also how they can link web pages and move from one to other page.

C. Investigation of knowledge – Development of knowledge

- Then ask students to read and complete the activity of the worksheet. There is HTML code on the worksheet. They should look at it carefully and recognize the tags. The correct tags have been written down in the following table:

Write down the tags of the:	
Navigation toolbar	<nav> ... </nav>
Title	<title> ... </title>
Video	<video controls> ... </video>
Image	
Sound	<audio controls> ... </audio>
Links	“http:// ... ”
List	 ...
CSS rule	Body { ... }

- Tell them to consult the Student’s Book if necessary. Explain that each tag performs a specific task.

D. Implementation

Then, hand out the “T.5.1.4_Worksheet_2.docx”. In this activity students will create a complete web page with content:

- First they have to download the pictures and sound file(s) that they want to add to their web page. You can download the national anthem of your country and paste it in My Documents on each computer.
- Then ask them to open Dreamweaver and create a new HTML file with the files they downloaded. They can format it as they have learned in the previous lessons. Urge them to discuss and decide how to format the file.
- The third step is to make a connection between the two files. Mention that they should have the files in the same folder and rename the starting page as “index.html.” The navigation bar will help them make this connection. Tell students to consult the Student’s Book, if necessary. They have to create two links on the navigation bar.
- Remind them to save their files any time they

Worksheet	Level	5	Module	1	Task	4	Class
	Student(s)						Date

A completed website

It's time to insert new content on your web page

- In the previous lesson you created a web page that contains text (in paragraphs and lists), links and a video. Now, you will add images and sound to your web page. Follow the instructions and make your web page more appealing!
 - Download two images of your town from the Web and save them on your desktop with the names "my_town1" and "my_town2". Also, search for and download the national anthem of your country, unless your teacher has already saved it in My Documents.
 - Open Dreamweaver and create a new HTML file called "Photos of my town". Add the header "Photos" and below it add the images you downloaded. Change the images' dimensions from the **Properties** panel in order to fit onto the page.
 - Now add your national anthem below the images.
 - Customize the web page as you like. You can add a background color or add **ids** and **classes** to format each element separately.
 - Save the web page as "Photos.html" in the same folder you saved the web page of your town in the previous lesson. Rename the web page of your town to "index.html."
 - Now you will link the two pages. Open "index.html" and below the header add a navigation bar. Create the links "Photos" and "Contact me".
 - Connect the link "Photos" with the new web page "Photos.html" you created.
 - Preview your page in a browser to see how it looks. Upload both files to your web hosting service.
 - Your website is ready!

Worksheet	Level	5	Module	1	Task	4	Class
	Student(s)						Date

A completed website

➤ Up until this point you’ve learned how to create a single web page. But how many web pages could a website consist of? What elements can you add to a web page? Let’s investigate these questions.

Let’s recognize tags

➤ In the following script you can see the HTML code of a web page. Can you recognize the different tags? Look at it carefully and then fill in the table:

```
<title>Internet evolution</title>
<style type="text/css">
body {
    background-color: #0CF;
}
</style>
</head>

<body>

<h1>The Internet evolution</h1>

<nav><a href=
"http://www.cyberethics.info/cyethics1/index.php?option=com_content&view=article&id=186&Itemid=83&lang=en">
Benefits</a> | <a href="http://www.internetworldstats.com/stats.htm"> Statistics</a></nav>

<p></p>

<p>The available:</p>

<ul>
<li>material</li>
<li>progrmas</li>
<li>website</li>
<li>other services</li>
</ul>

<p>of the Internet are multiplied every day, revolutionizing the technology beign used. Its applications grow
exponentially and it would be impossible to outline everything in this booklet. The most important aspect of the
Internet evolution however, is that its exponential growth allows it to ease and tranform people's life and
increase their knowledge.</p>

<video controls>
<source src="internet.mp4" type="video/mp4">
</video>

<audio controls>
<source src="T.5.1.4 - L.12.3.4/help/web.mp3" type="audio/mp3">
</audio>
</body>
</html>
```

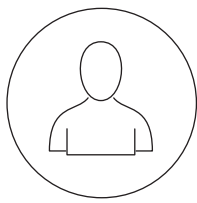
Worksheet	Level	5	Module	1	Task	4	Class
	Student(s)						Date

Write down the tags of the:	
Navigation toolbar	
Title	
Video	
Image	
Sound	
Links	
List	
CSS rule	

Self Evaluation	Level 5	Module 1	Task 4	Class
	Student			Date

1. Select the correct answer

1. On a web page you can insert
- images
 - videos
 - audio
 - all of the above
-
2. In order to move between the pages of a website we should create
- an unordered list
 - a navigation toolbar
 - a header
-
3. The tags of a navigation toolbar are:
- <h1> ... </h1>
 - <p> ... </p>
 - <head> ... </head>
 - <body> ... </body>
 - <nav> ... </nav>
 - <tag> ... </tag>
-
4. You can add an image
- only under the page's title
 - only on pages with the name "photo.html"
 - anywhere on a web page
-
5. In order to create a photo gallery in your web site you have to
- upload many pictures from your computer to the web page
 - follow some instructions on how to include it in your web page
 - create a subfolder named "photos" in the folder with the web page

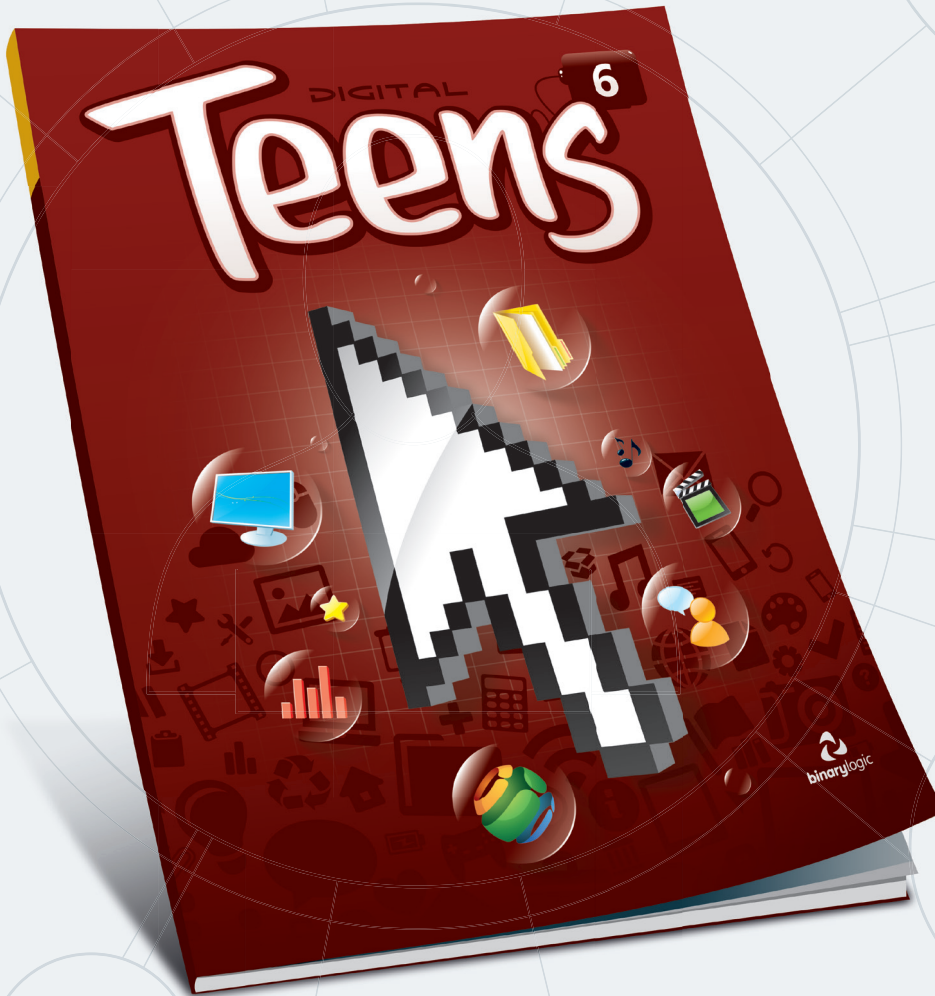


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Digital Teens 6

> Practice your ICT skills through
real-life projects



Syllabus

Teacher

The gradebook
A school event
A topic presentation
A school trip
The school newspaper
The school blog

Sales manager

Make a proposal
Daily report
Sales notebook
Sales reports
A new product
A customer database

Digital marketer

Plan your marketing strategy
Email marketing campaign
A brand blog
Create blog content
Blog and social media
Social media audit

Web designer

A web designer
Newsletter template
Code an email newsletter
Design a one column website
Code a one column website
Design a two column website
Build a two column website

Application developer

Organize the data
Handling a database
Start building your app
Images and videos
Add a new record
Search with a filter

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Project 1 Plan your marketing strategy

If you are interested in marketing and you like using digital technologies, being a Digital Marketer could be the career for you. You will promote brands, build preferences and increase sales through various digital marketing techniques. Your main responsibilities are to manage work activities like search engine optimization (SEO), search engine marketing, content marketing, social media marketing and email marketing campaigns.

The scenario
You are a digital marketer in a company that promotes solutions and products for musicians and art galleries. Your boss has assigned you to develop a marketing strategy that includes an email marketing campaign.

The suggested way
You should create a workflow diagram to represent the actions that will be included in your email marketing campaign. Start by writing down your thoughts about the contents of this diagram. Continue building it and finally present it to the people that have to approve the marketing campaign.

1a. Plan a workflow diagram
Start your marketing strategy by planning the structure of the workflow diagram.
 > First define your goal. Set the aims and objectives you expect from your email marketing campaign.
 > Think of the purpose for your workflow diagram. Analyze the entire process and define the possible problem areas and bottlenecks.
 > Try to identify clear start and end points for the process. Plan your thoughts on paper drawing out the series of steps that will take you from the start point to the end point of the process.

1b. Start the workflow diagram
Now you have to create the workflow diagram to provide a general overview of your email marketing campaign:
 > Use Microsoft Visio or a similar application to create a step-by-step flowchart.
 > Select the proper type of diagram based on the marketing strategy you are going to follow. It is important for you to create a strategy according to your strengths and capabilities.
 > Add the start/end points and text near where needed.

2a. Gather contact information
The first task of your process is the gathering of customer information, organizing and storing them for easy access.
 > Use subpages to provide solutions for this stage like:
 > gathering info from different email clients or handheld devices into a spreadsheet.
 > use certain techniques to export contact information in a format that an email client can recognize.

2b. Build a list of email addresses
The second task of your process is to build a sizable email list. Think of clever ways to find email addresses for potential customers.
 > Use subpages to describe how you can use the company's database to gather email addresses.
 > ask from your website visitors to reveal their name and email address.
 > provide a contact form for their name and plenty of room for long email addresses.
 > write a privacy statement that communicates to your website visitors how your company will use their personal information and ask for permission to use their email address for marketing purposes. Suggestion: never give a mailing list to someone outside your company.

3. Digital marketer / Plan your marketing strategy



COMPUTING AND ICT
Online Teaching Resources
SAMPLER

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Project 1 Make a proposal

If you are good at selling and want to manage a team, Sales Management could be the career for you. As a sales manager you would organise, coach and lead a team of sales people, playing a pivotal role in achieving the sales targets and eventually generate revenue for the organization.

The scenario
Due to the economic crisis your boss assigned you to propose some solutions against the financial decline your company suffers from.

The suggested way
First, you need to organize your ideas and your proposal creating workflow diagrams. Then you have to make a presentation based on these diagrams including also information from other files, such as an Excel worksheet.

1a. Plan your content
Before starting creating the workflow diagram that you will include in your presentation, you should plan the content of your presentation first.
 > Always plan your thoughts on paper. Draw your ideas, link relationships between concepts, and create a storyboard.
 > Think about the purpose of your presentation. Analyze the entire process and define problem areas and bottlenecks.
 > Prepare for the type of the audience who will be attending your presentation.

1b. Create workflow diagrams
Now you have to create a workflow diagram with your strategy and your plan. A suggested way to work is to create a step-by-step flowchart using the Microsoft Visio tool.
 > Select the proper type of diagram you want to use and then define a clear start and end point for the process.
 > Create the process placing the proper shapes. Make sure that every step integrates into the diagram.
 > Continue with making your diagram more vivid by changing the default colors and fonts. Try your diagram to be attractive, easy-to-read and simple.
 > Finally, save your diagram as an image, so order to use it later.

2. Analyze numerical information
Open Microsoft Excel to analyze data about products and their sales.
 > Format your data as a table to organize them.
 > Focus on your statistics. For example you can use functions to calculate revenues per month or per year. Use the proper type of charts to display sales trends and, if needed, illustrate comparisons between different products.
 > Finally, compare all the data and draw conclusions about the economic decline.

3. Create a new presentation
Finally, using Microsoft PowerPoint, present your topic including slides to explain your thoughts and suggestions and mention how these can be profitable for the business.
 > Import data from the spreadsheet you created previously to your presentation, adding the corresponding charts.
 > Add the workflow diagram that you created before.
 > Make your presentation more appealing adding animation and transition effects to your slides. But not too much. You don't want to distract your audience.

SMART TIP
When you make a change that affects the entire team, explain why you're making the change and why you think the new approach will work better.

2. Sales manager / Make a proposal

Produced in the EU



<http://binary-academy.com/dnld>
Download the sample pages of the Student's Books

Project 1 Organize the data

If you like programming and want to turn your ideas to applications that your friends and other people can use, you can start coding your own app.

The creation process for desktop applications
When building a Windows desktop application there is a specific process that most developers use. This process covers all the steps from defining the goal of an application to building it and putting them in real use. "in production" as developers call it. The diagram below presents these steps.

1. Define your goal
2. Start sketching
3. Create a wireframe and a storyboard
4. Define the back end of your desktop app
5. Test your prototype

The scenario
You are a Windows application developer and you have to build a movie database application. Your customer, owner of a video club, wants through this app to be able to search, edit and add new movies, based on breaking down your work into smaller tasks, your task in the beginning is to organize the video club's movies data into a spreadsheet table.

The suggested way
As a general practice, a programmer's duty is a detailed check of data that will be entered into a database. So, supposing that your customer has a spreadsheet file with movie data available for you, you then have to make this scenario realistic, creating an initial spreadsheet table with records of some of these movies. Next, you will add new fields to your table and you will apply the proper operations in order to check this data for any issues like duplicates.

1. Plan your content
Before you start creating your project, draw your ideas about the basic structure of your application on paper, or on your tablet.
 > First, define your goal. Set aims, expectations and design specifications.
 > Questions like "what do you want a user to do with this application?" or "which are the basic functions this application will perform?" will help you in order for your content to drive the design. Always remember that your application is created to solve everyday problems.
 > Next, start sketching. Link relationships between concepts and create a wireframe and storyboard.
 > Finally, think and plan the back end of your desktop application.

2. Start your project creating a dataset table
Now, start your project by creating a spreadsheet table with movies. You will later import it into the movie's database.
 > First, search for some movies of your choice that you would like to store into your spreadsheet table. You can find info about movies on the IMDb website: <http://www.imdb.com>.
 > Next, create a data set table using Microsoft Excel. In each column type the field names as headers: Title, Director, Studio, Year, Genre, Actors, Plot, IMDb, Rating, Trailer.
 > Fill in the records of these movies as you can see in the example below. Suppose that for the field "Genre" you can use one of the following as values: "Action", "Drama", "Crime", "Comedy".

Title	Director	Studio	Year	Genre	Actors	Plot	IMDb Rating	Trailer
Heat	Michael Bay	Warner Bros	2003	Action	Al Pacino, Val Kilmer, Ice Cube	Two Los Angeles police officers team up to take down a professional bank robber.	6.8	Heat (2003) Trailer
Die Hard	John Wood	Twentieth Century Fox	1988	Action	Bruce Willis, Alan Rickman	A New York City police officer is stranded in a skyscraper during a Christmas Eve holiday and must fight his way through a team of terrorists.	7.8	Die Hard (1988) Trailer
Die Hard 2	Tom Mann	Twentieth Century Fox	1990	Action	Bruce Willis, Anthony Quinn	A New York City police officer is stranded in a skyscraper during a Christmas Eve holiday and must fight his way through a team of terrorists.	7.2	Die Hard 2 (1990) Trailer

> Add a duplicate record to your table in order to remove it later. This is a common problem a developer has to take care of.
 > Create a folder and save the posters of these movies as images in order to use them later in your application.

5. Application developer / Organize the data



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