9

CITY SCHOOLS DIVISION OF DASMARIÑAS

TLE

COMPUTER SYSTEMS SERVICING

SELF-LEARNING MATERIAL

TLE

Computer System Servicing

Development Team of the Module

Authors: JADE ELLONE T. LARA, MALL ZIANNE B. BATAN
Editor:
Reviewers:
Illustrator: Jade Ellone T. Lara, Mall Zianne B. Batan Layout
Artist:
Management Team: Gemma G. Cortez, Ed.D., CID - Chief
Leylanie V. Adao, EPS - LR
Joel D. Salazar, EPS In-charge
SDO Dasmariñas City

Guide in Using Learner's Module

For the Parents/Guardian

This module is designed to assist you as the learning facilitator at home. It provides you with activities and lesson information that the learners need to accomplish in a distance learning modality.

For the Learner

This module is designed to guide you in your independent learning activities at your own pace and time. This also aims to help you acquire the competencies required by the Department of Education at the comfort of your home.

You are expected to answer all activities on separate sheets of paper and submit the outputs to your respective teachers on the time and date agreed upon.

I What I need to know?

Welcome to Lesson 1: Applying Quality Standards!

This lesson consists of (3) three learning outcomes. Each learning outcomes contains activities supported by each performance task and activities. Are you ready to take the challenge?

The module contains the following lessons.

Lesson 1 Applying Quality Standards

Assess quality of received materials

Assess own work

Engage in quality improvement

After going through this module, you are expected to:

1. Introduce the selection of material; and
2. Identify the testing and cost of material.

I What is new?

Hi! You are about to start this module. Before anything else, take this **SELF-ASSESSMENT** survey questionnaire. Answer the table below.

https://forms.gle/MBLu2GDNid4Ka6Wd8

Learning Outcome 1: Assess Quality of Received Materials		
Can I……	**YES**	**NO**
Obtain instruction and work carried out with standard operating procedures		
Received materials are checked based on the workplace standards and specifications		
Identify and isolate defective materials related to work		
Record and report defective materials to the concerned person-in-authority in accordance with workplace procedures		
Observed safety precautions all the time		

Well done! How many of those in the survey are you knowledgeable of the competencies? Do you want to know more about this module? Then let's proceed.

D What I know?

Hello there! This part of the module is about the first learning outcome of the Lesson 1 which is **Assess Quality of Received Materials.** But before anything else, let us talk about quality.

Quality refers to the standard of comparison of a specific product to its kind. It serves as basis for the customer or consumer to choose materials following specifications that may help them in their daily life.

Standard refers to rules or guidelines in pertaining how a material should be use or process.

To further understand quality standard, let us watch the video Video 1:
Discover Quality and Standards with the Kiang Family:
https://www.youtube.com/watch?v=pfp7U0Qajgo

D What is in?

Activity 1:
Direction: Answer the following questions.

Quiz

1. What are the factors to be considered in choosing the right material?
2. Give three characteristics of materials to be used for specific project?
3. What is quality standard?

D What is it?

CHARACTERISTICS OF MATERIALS USED IN SPECIFIC PROJECTS
https://drive.google.com/file/d/1gGGuxObry2iOqNloeqVgR9xGKhVBnuJ8/view?usp=sharing

SELECTION OF MATERIAL

- most common tasks for design engineering
- crucial for reliable performance
- buyers are also considering the label or name of the company which is producing great quality materials and are known in the market
- Examples:
- Brand of printer: HP
- Computer Hardware: INTEL

TESTING OF MATERIAL

- key to obtaining data for a project, performing failure analysis, or understanding material interactions
- provides information on the quality of incoming and outgoing products
- Inspection test equipment and techniques are demonstrated for a wide range of materials and assemblies during the class
- provides the participants with both knowledge of the common failure modes

COST OF MATERIAL

- amount may vary but never taken for granted the quality and the reliability of the material
- Will you buy material which is less expensive but of the worst quality?
- Will you buy material which you cannot afford?
- People look for places which can meet their standards and right cost for materials to buy.

Characteristics of common materials for increased security is also a great factor in the design and planning process.

- Evaluation of longevity criteria and assessment of site environmental factors are vital to project planning.
- Specific knowledge about the project and general common sense must dictate design and material selection.
- Although many materials can offer enhanced protection, often the most cost-efficient and readily available material that provides reasonable life expectancy for the project must be considered.

Before planning and designing takes place, you should evaluate the material options and system requirements. Teachers should add several useful reference manuals to their libraries such as installation of hardware, networking, troubleshooting as well as basic PC Operation and Internet for additional information that the students may use in their projects.

THE CHARACTERISTIC OF THE MATERIALS TO BE USED FOR SPECIFIC PROJECT MUST BE:

of good quality

- most important factor when choosing materials to buy
- long-lasting and safe to use because you know that it follows certain standards before being commercialized

reliable

- perform its function well, will operate safely and will give the best it could give

suitable for the application/purposes

- necessary to make the project possible
- Making a list of products/materials to buy is a good trait of a wise consumer.
- Products which are not to be used must be crossed out.

low cost

- afford to buy the materials without hurting your pocket and assure better quality

What is more?

Now that you are familiar with characteristics of materials used in specific projects, take this **SELF-ASSESSMENT** survey questionnaire. Answer the table below. Or

answer the link below. https://forms.gle/MBLu2GDNid4Ka6Wd8

Learning Outcome 1: Assess Quality of Received Materials		
Can I……	**YES**	**NO**
Obtain instruction and work carried out with standard operating procedures		
Received materials are checked based on the workplace standards and specifications		
Identify and isolate defective materials related to work		
Record and report defective materials to the concerned person-in-authority in accordance with workplace procedures		
Observed safety precautions all the time		

E What I can do?

Activity 2:
Direction:
You do now understand how important is choosing the right material or equipment in a specific project pertaining to a computer system.

These are the things to be considered when:

A. Receiving Materials:
1. Match the packing slip to the items received and ensures that the materials are destined on tour department.
2. That you are receiving the materials indicated on the purchase order with regard to quantity and discount.
3. That the materials are in acceptable condition.
4. That terms regarding installation and/or set-up of equipment are met.

B. Receiving Reports
Whenever goods are received:
1. The person receiving the goods must document, using the administrative software, that all goods were received for each requisition before any payment can be made to the vendor.
2. Any exceptions must be noted so that partial payments can be processed or defective goods can be returned.

C. Return of Merchandise
When merchandise is received which is incomplete or defective, the supervisor will return the materials to the supplier or to the store where it was bought and make arrangements with the vendor for replacement.

D. Make an Inventory Report of the Materials
All materials received must be listed and be reported to monitor how many materials are already on hand, purchased or damaged.

Effective management checks are an important means of providing assurance of the integrity and security of the benefit processes. They are also useful in identifying training needs; indicating possible weaknesses in procedure and ensuring the section meets its accuracy target set for Best Value Performance Indicators purposes.
The teacher will be the assessor. Students will be randomly assigned that will: 1.) act as Quality Checker; 2.) responsible for monitoring and coordinating the checking arrangements and; 3.) must generate reports when receiving the equipment.

The Quality checker will record the date of receipt, name of the materials purchased, quantity, and official receipt number, signature of the person who bought the materials and signed his name afterwards. The Quality checker will identify if the materials are in good condition or damage and /or needing for replacements. This will also be recorded on his report. Feedback

Once the Quality checker has completed all the reports, the assessor will check if the Quality Checker provides all the data needed in the report.

Example of Log Report (to be completed by the Quality checker)

Date Received	O.R. #	Item Name	Quantity	Signature	Quality Checker

Example of Assessment of Materials Received (to be completed by the Quality checker)

Quality Checker:			Date:
Item Name	Total no. in Good Condition	Total no. of Errors	Comments

E What else can I do?

Activity 2: **TODAY I'LL BE A….**

Task: You are assigned to be the Quality checker for the Month of May. Make a Log Report, and Assessment Report using the following data below. Make sure you will record all the items listed and if they were in good condition or not.
Download Template Here

1. September 9, 2020
5 Hard disk drive, 2 4GB DDRAM memory chips
Received from John Dela Cruz (PC Express), OR #201235
Found out that 1 Hard disk has error need for replacement

2. September 15, 2020
Refill ink cartridge from Dasma Ink Shop, OR# 35468

3. September 20, 2020
10 PS/2 keyboards, 10 wireless mouse, 2 power supply unit
Received from Allan Rivera (Octagon), OR#21400
3 defective keyboards need replacement

4. September 28, 2020
2 DVD-ROM drive
Received from John Dela Cruz (PC Express), OR#263574

Instructions:

a. Click **Add a New DiscussionTopic**.
b. On the Subject field, enter the topic "**Log Report and Assessment Report**"
c. On the Message field, type your message as:
Sir/Ma'am:

Good day!
This is to submit the Log and Assessment Report of _____.

d. Attached files.
e. Click **Post to Forum**.

LOG REPORT AND ASSESSMENT REPORT

Date Received	O.R. #	Item Name	Quantity	Signature	Quality Checker

Quality Checker:			Date:
Item Name	Total no. in Good Condition	Total no. of Errors	Comments

A What I have learned?

Activity 3: FROM HERE TO THERE

Task: Create your own log and assessment report of at least five (5) materials in your home that you can assess if it is good or in bad condition. Cite at the bottom of the table your reason why you choose that product and how can you relate it to computer systems servicing?

Example:

Quality Checker: Juan Dela Cruz			**Date:** 09/23/2020
Item Name	**Total no. in Good Condition**	**Total no. of Errors**	**Comments**
Airconditioner	1	0	The appliance is working properly

Quality Checker:			Date:
Item Name	Total no. in Good Condition	Total no. of Errors	Comments

Notes :

_____

_____

_____

_____

_____

_____

_____

Rubrics:
Content - 5
Accuracy – 5

Answer

What's New

***Answers may vary**

Learning Outcome 1: Assess Quality of Received Materials		
Can I……	YES	NO
Obtain instruction and work carried out with standard operating procedures		
Received materials are checked based on the workplace standards and specifications		
Identify and isolate defective materials related to work		
Record and report defective materials to the concerned person-in-authority in accordance with workplace procedures		
Observed safety precautions all the time		

What is In

***Answers may vary**

What is More

***Answers may vary**

What can I do

***Answers may vary**

What else I can do

***Answers may vary**

What I have learned

***Answers may vary**

Reference

Additional Resources

Department of Education (May 2016). Computer Systems Servicing Curriculum Guide p. 9

Technical Education Skills Development Authority (December 2013) Computer Systems Servicing Training Regulations p.14

References

Hofer,K.E (n.d.).Materials testing. Retrieved from https://www.britannica.com/technology/materials-testing

Laboratory Testing Inc. (2020). WHY IS MATERIALS TESTING PERFORMED? Retrieved from https://www.labtesting.com/why-is-materials-testing-performed/

School of Materials Science and Engineering (n.d.). Materials Testing. Retrieved from http://www.materials.unsw.edu.au/tutorials/online-tutorials/1-materials-testing

Intertek (n.d.). Materials Testing. Retrieved from https://www.intertek.com/testing/materials/

Bragg, S. (2018, October 16). Material Cost. Retrieved from https://www.accountingtools.com/articles/2017/5/9/material-cost

Web Finance Inc. (2020) Material Cost. Retrieved from http://www.businessdictionary.com/definition/material-cost.html

Kartalopoulos, S. (2003) Fault Detection and Reporting Strategy. Retrieved from https://www.globalspec.com/reference/21564/160210/chapter-4-7-fault-detection-and-reporting-strategy

Mohamed, A. (2009) Fault Detection and Identification in Computer Networks: A soft Computing Approach Retrieved from https://www.semanticscholar.org/paper/Fault-Detection-and-Identification-in-Computer-A-Mohamed/556173e89e9564fda333938c63161b70672ab4cf#citing-papers

Videos

Gnbsgy. (2016, July 2). Discover Quality and Standards with the Kiang Family. Retrieved from https://www.youtube.com/watch?v=CAQG5EqsHAM

Hernandez, E. April 2015, Receiving Goods. Retrieved from https://www.youtube.com/watch?v=J7RmD2K8-p8

Stellietech (2015). Goods Received Note. Retrieved from https://www.youtube.com/watch?v=mdMAY5aU-Rs

I What I need to know?

You are now in the learning outcome 2 of Lesson 1 which is **Assess Own Work**. In this module you are able to understand more about workplace procedures and safety done in Computer Systems Servicing.
All is set! Let's Go.

Lesson 1 Applying Quality Standards

Assess quality of received materials

Assess own work

Engage in quality improvement

After going through this module, you are expected to:

1. Determine workplace procedures;
2. Identify types and work-related errors; and
3. Apply work behavior result in performance problems.

I What is new?

Hi! You are about to start this module. Before anything else, take this SELF-ASSESSMENT survey questionnaire. Take time to answer the table below.

Learning Outcome 2: Assess Own Work	YES	NO
Identify work performance in accordance with workplace procedures		
Checked completed work against workplace standards		
Identify and Correct Errors		
Documented and reported case of deviation from specific quality standards, causes in accordance with the workplace standard operating procedures.		

D What I know?

Hi! You are about to start this module. Before anything else, watch the video clip below.

Video 1: Safe Work Practices and Safe Job Procedures: Differences & Similarities
https://www.youtube.com/watch?v=D5IL8c5IU-A

Safe Work Practices	Safe Job Procedures
- Over-all expectation or precautions to consider before carrying out any task - vital when it comes to day to day operation at any work site or facility - set of guidelines or do's or don'ts that outline that how to perform a specific a job or task - summarize any required workers responsibilities and resources - develop to ensure there is minimal risk to people, equipment, materials and environment - made available to all of the workforce - are made during orientation and safety meetings	- lay out what step to take to safety perform a specific job or task - new workers who performing high hazard task - use to assess workers competence

D What is in?

Activity 2:
Let's Watch This

Video 2: Computer Safety Procedures -
https://www.youtube.com/watch?v=RQqKOb-9vzA

1. Remove all power sources before working
2. Never touch anything if you are not sure
3. Do not remove ground connection to avoid electric discharge
4. Removed jewelry, badge, neck strap
5. Lift with your legs, not your back
6. Do not carry overweight items- use equipment
7. Do not use foam or water when electric fire
8. Use carbon dioxide, FM-200 and other dry chemicals from fire extinguisher
9. Use cable or Velcro to avoid trip hazards
10. Use safety goggles when you are doing printer repairs
11. Use air filter when you're doing computer and printers with toner
12. Dispose old batteries and CRT tube with lead properly.
13. Recycle toner cartridge and return to its manufacturer for reuse.
14. Keep your workplace hazard free
15. Follow building and electrical codes for running cables
16. Follow environmental regulation regarding waste disposal.

D What is it?

Lecture 1: **Workplace Procedures**

Workplace Procedure is a set of written instructions that identifies the health and safety issues that may arise from the jobs and tasks that make up a system of work.

A safe working procedure should be written when:

- ✓ designing a new job or task
- ✓ changing a job or task
- ✓ introducing new equipment
- ✓ reviewing a procedure when problems have been identified, example from an accident or incident investigation

The safe working procedure should identify:

- ✓ the teacher for the task or job and the students who will undertake the task
- ✓ the tasks that are to be undertaken that pose risks
- ✓ the equipment to be used in these tasks
- ✓ the control measures that have been formulated for these tasks
- ✓ any training or qualification needed to undertake the task
- ✓ the personal protective equipment to be worn
- ✓ action to be undertaken to address safety issues that may arise while undertaking the task

Following certain procedures is very important to perform a given operation. The table below shows different elements and their corresponding performance criteria to be able to identify occupational health and safety hazards, and assess risk, as well as follow instructions and procedure in the workplace with minimal supervision. The students will also be capable of participating and contributing to OHS management issues.

TYPES AND WORK-RELATED ERRORS

A. Quantity of work (untimely completion, limited production)

1. Poor prioritizing, timing, scheduling
2. Lost time
   - ✓ Tardiness, absenteeism, leaving without permission
   - ✓ Excessive visiting, phone use, break time, use of the Internet
   - ✓ Misuse of sick leave
3. Slow response to work requests, untimely completion of assignments
4. Preventable accidents

B. Quality of work (failure to meet quality standards)

1. Inaccuracies, errors
2. Failure to meet expectations for product quality, cost or service
3. Customer/client dissatisfaction
4. Spoilage and/or waste of materials
5. Inappropriate or poor work methods

Work Behavior Which Result in Performance Problems

A. Inappropriate behavior (often referred to as "poor attitude")

- ✓ Negativism, lack of cooperation, hostility
- ✓ Failure or refusal to follow instructions
- ✓ Unwillingness to take responsibility ("passing the buck")
- ✓ Insubordination
- ✓ Power games

B. Resistance to change
- ✓ Unwillingness, refusal or inability to update skills
- ✓ Resistance to policy, procedure, work method changes
- ✓ Lack of flexibility in response to problems

C. Inappropriate interpersonal relations
- ✓ Inappropriate communication style: over-aggressive, passive
- ✓ Impatient, inconsiderate, argumentative
- ✓ Destructive humor, sarcasm, horseplay, fighting
- ✓ Inappropriate conflict with others, customers, co-workers, supervisors

D. Inappropriate physical behavior
- ✓ Smoking, eating, drinking in inappropriate places
- ✓ Sleeping on the job
- ✓ Alcohol or drug use
- ✓ Problems with personal hygiene

Threatening, hostile, or intimidating behavior

What is more?

Now that you are familiar with assessing your own workplace, take this **SELF-ASSESSMENT** survey questionnaire. Answer the table below.

Learning Outcome 2: Assess Own Work	**YES**	**NO**
Identify work performance in accordance with workplace procedures		
Checked completed work against workplace standards		
Identify and Correct Errors		
Documented and reported case of deviation from specific quality standards, causes in accordance with the workplace standard operating procedures.		

E What I can do?

Tasks/Activities (HP5) Drag and Drop

Activity 1: Quality or Quality
Write QN if the statement affects the quantity of work and QL if the statement affects the quality of work.

_____1. Poor scheduling of work
_____2. Failure to meet expectations for product quality, cost or service
_____3. Customer/client dissatisfaction
_____4. Preventable accidents
_____5. Misuse of sick leave
_____6. Tardiness
_____7. Slow response to work requests
_____8. Break time
_____9. Excessive visiting
_____10. Spoilage and/or waste of materials

E What else can I do?

Lecture 2: **Quality Standards**

Standards
- are sets of rules that outline specification of dimensions, design of operation, materials and performance, or describe quality of materials, products or systems
- should cover the performance expectations of the product for particular applications
- provide at least minimum quality, safety or performance specifications so as to ensure relatively uniform products and performance
- following standards may reduce the risk of error in working

Specific quality standards for:

1. Hardware
The durability of the work depends on the quality of its component parts and the assembly skills of those who install it. If the best-quality products or hardware are used but are installed incorrectly, the system will be a failure. The application of suitable hardware and products must be supported by adequate levels of training of person who use them so that they can identify and use only appropriate products. In judging a product or hardware, the person must consider factors such as the following:

- ✓ Is the product or hardware under consideration suitable for the application or purpose?
- ✓ Will it be harmful to the health of the community in its normal use?
- ✓ Is there a risk of this hardware being released into the environment (e.g. the water) in the

first instance or after the working life of the product or hardware has expired?

2. Production Process

In production process, checking of quality assurance must be highly considered. Quality assurance covers all activities from design, development, production, installation, servicing and documentation. This introduced the rules: "fit for purpose" and "do it right the first time". It includes the regulation of the quality of raw materials, assemblies, products and components; services related to production; and management, production, and inspection processes.

A. FAILURE TESTING

A valuable process to perform on a whole consumer product is failure testing, the operation of a product until it fails, often under stresses such as increasing vibration, temperature and humidity. This exposes many unanticipated weaknesses in a product, and the data is used to drive engineering and manufacturing process improvements.

B. STATISTICAL CONTROL

Many organizations use statistical process control to bring the organization to Six Sigma levels of quality, in other words, so that the likelihood of an unexpected failure is confined to six standard deviations on the normal distribution. Traditional statistical process controls in manufacturing operations usually proceed by randomly sampling and testing a fraction of the output. Variances of critical tolerances are continuously tracked, and manufacturing processes are corrected before bad parts can be produced.

C. COMPANY QUALITY

The company-wide quality approach places an emphasis on three aspects:

1. Elements such as controls, job management, adequate processes, performance and integrity criteria and identification of records
2. Competence such as knowledge, skills, experience and qualifications
3. Soft elements, such as personnel integrity, confidence, organizational culture, motivation, team spirit and quality relationships.

The quality of the outputs is at risk if any
of these three aspects are deficient in any way.

D. TOTAL QUALITY CONTROL

Total Quality Control is the most necessary inspection control of all in cases where, despite statistical quality control techniques or quality improvements implemented, sales decrease.

As the most important factor had been ignored, a few refinements had to be introduced:

1. Marketing had to carry out their work properly and define the customer’s specifications.
2. Specifications had to be defined to conform to these requirements.
3. Conformance to specifications i.e. drawings, standards and other relevant documents, were introduced during manufacturing, planning and control.
4. Management had to confirm all operators are equal to the work imposed on them and holidays, celebrations and disputes did not affect any of the quality levels.
5. Inspections and tests were carried out, and all components and materials, bought in or otherwise, conformed to the specifications, and the measuring equipment was accurate, this is

the responsibility of the QA/QC department.
6. Any complaints received from the customers were satisfactorily dealt with in a timely manner.
7. Feedback from the user/customer is used to review designs.
8. Consistent data recording and assessment and documentation integrity.
9. Product and/or process change management and notification.

To conclude, the above forms are the basis from which the philosophy of Quality Assurance has evolved, and the achievement of quality or the “fitness-for-purpose” is “Quality Awareness” throughout the company.

4. Final Product

Table 1.2.1 shows the Quality System Elements required by ISO 9000 in the making of the final product.

Quality System Requirements		Contents
	Management responsibility	Define and document commitment, policy and objectives, responsibility and authority, verification resources and personnel. Appoint a management representative and conduct regular reviews of the system.
	Quality system	Establish and maintain a documented quality system ensuring that products conform to specified requirements
	Contract Review	Ensure that customer's contractual requirements are evaluated and met
	Product development	Plan, control and verify product development to ensure that specified requirements are met
	Document control	System for control and identification of all documents regarding quality, e.g. procedures, instructions, and specifications
	Purchasing	Ensure that purchased products conform to specified requirements
	Product identification and traceability	System to identify and control traceability of product at all stages from raw materials through production to the final product as delivered to the customer
	Process control	Ensure and plan the control of production which directly effects quality by documented work instructions, monitoring and control of processes
	Inspection and testing	Inspect and test incoming products, intermediate and final product; establish product conformance to specified requirements and identify non-conforming products; maintain inspection and test records

	Inspection, measuring and test equipment	Selection and control of equipment to ensure reliability and accuracy in measuring data
	Inspection and test status	For the whole process the products shall be identified and clearly marked concerning test status, including indication of conformance or non-conformance
	Control of nonconforming products	Identification, documentation, evaluation, isolation (if possible) and disposition of non-conforming products
	Corrective actions	Prevention of reoccurrence of failures (non-conformance)
	Handling, storage packaging and delivery	Protection of the quality of the product during hand-ling, storage, packaging and delivery
	Quality records	Records, including those which demonstrate that the specified requirements have been met, shall be control-led and maintained
	Internal Quality Audits	Regular, planned internal audits shall be carried out, documented and recorded to verify the effectiveness of the quality system
	Training	Training requirements at all levels shall be identified and the training planned, conducted and recorded
	Cleaning and Disinfection	Although not required by the ISO 9000 standards, these two points should be given special attention in all food companies
	Personal hygiene	

4. Customer Service

-the assistance and advice provided by a company to those people who buy or use its products or services

Activity 3: True or False
Write T if the statement is correct and F if the otherwise. **(H5P)**

_____1. Standards are set of rules that describe quality of materials, product or system.
_____2. Quality assurance does not cover all the activities from design, development, up to documentation.
_____3. Customer service is a series of activities designed to enhance the level of customer satisfaction.
_____4. Customer service is not important in the company's customer value proposition.
_____5. The durability of the work does not depend on the skills of those who install it.

Congratulations! You may now proceed to the next activity.

D. Engagement (Performance Task) (Mix and Match)

Activity 4: Use a T-Chart to compare and contrast the activities of a student against workplace procedure. Write your answer on a sheet of paper.

Similarities	Differences
e.g. schedule of subject area activities	academic application of activities

A What I have learned?

Activity 6: Let's Do it Your Way

Scenario: You are at home right now, how can you apply safe work procedures in your actual settings at home and how can relate that to computer system servicing?

Answer

What's New

***Answers may vary**

Learning Outcome 2: Assess Own Work	YES	NO
Identify work performance in accordance with workplace procedures		
Checked completed work against workplace standards		
Identify and Correct Errors		
Documented and reported case of deviation from specific quality standards, causes in accordance with the workplace standard operating procedures.		

What is More

***Answers may vary**

What can I do

***Answers may vary**

What else I can do

TRUE OR FALSE

1. T
2. F
3. T
4. F
5. F

What I have learned

***Answers may vary**

Reference

Additional Resources

Department of Education (May 2016). Computer Systems Servicing Curriculum Guide p. 9

Technical Education Skills Development Authority (December 2013) Computer Systems Servicing Training Regulations p.14

References

Health and Safety Authority (n.d.) Safety and Health Management System. Retrieved from https://www.hsa.ie/eng/Topics/Managing_Health_and_Safety/Safety_and_Health_Management_Systems/

University of Minnesota (n.d.) Dealing with Performance Problems. Retrieved from https://humanresources.umn.edu/performance-management/performance-problems

Infrastructure Health and Safety Association (n.d.) Safe Work Practices /Safe Job Procedures. Retrieved from https://www.ihsa.ca/resources/safe_practices_procedures.aspx

Industrial Development Fund, (n.d.) SAFE WORK PROCEDURES. Retrieved from http://idfnsw.org.au/safe-work-procedures

https://www.merriam-webster.com/dictionary/standard

Santa Clara University, (n.d.) Computer Hardware Standards.Retrieved from https://www.scu.edu/technology/computing-services--support/support-standards/computer-hardware-standards

Graphic Product Staff (n.d.) QUALITY CONTROL IN MANUFACTURING Retrieved from https://www.graphicproducts.com/articles/quality-control-in-manufacturing/

Taekuchi H. et al (2020). Quality Is More Than Making a Good Product. Retrieved from https://hbr.org/1983/07/quality-is-more-than-making-a-good-product

Science Direct ,(2020). Product Quality Standards. Retrieved from https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/product-quality-standards

WHAT IS FAILURE TESTING; WHY IS IT IMPORTANT? Retrieved from http://businessknowledgesource.com/manufacturing/what_is_failure_testing_why_is_it_important_026277.html

Sharma, L. (2019, September 16). Error, Defect, and Failure. Retrieved from https://www.toolsqa.com/software-testing/istqb/error-defect-failure/

American Society for Quality (n.d). WHAT IS STATISTICAL PROCESS CONTROL? Retrieved from https://asq.org/quality-resources/statistical-process-control

InfinityQS (n.d.). What is Statistical Process Control (SPC)? Retrieved from https://www.infinityqs.com/resources/what-is-spc

Gurau,A. et al, (2015, February 7) Why is Quality so important for an organization? Retrieved from https://www.cmc-global.org/content/why-quality-so-important-organization

Srinivasan,A et al (April 2014) Creating a Culture of Quality Retrieved from https://hbr.org/2014/04/creating-a-culture-of-quality

Dean, E. (n.d.) Total Quality Control from the Perspective of Competitive Advantage. Retrieved from http://spartan.ac.brocku.ca/~pscarbrough/dfca1stmods/dfc/tqc.html

https://www.britannica.com/topic/Total-Quality-Control

American Society for Quality (n.d). WHAT IS THE ISO 9000 STANDARDS SERIES? Retrieved from https://asq.org/quality-resources/iso-9000

Dedhia, N. (n.d.) The Basics of ISO 9000. Retrieved from https://www.qualitydigest.com/oct/iso9000.html

Grant, M. (2019, September 10). Customer Service. Retrieved from https://www.investopedia.com/terms/c/customer-service.asp

Videos

ACSASafety, (2017, May 29). Safe Work Practices and Safe Job Procedures: Differences & Similarities? Retrieved from https://www.youtube.com/watch?v=D5IL8c5IU-A

Professor Messer (2013, February 4). Computer Safety Procedures - CompTIA A+ 220-801: 5.1 Retrieved from https://www.youtube.com/watch?v=aaE0ePh7zSo

I What I need to know?

You are now in the Learning Outcome 3 of Lesson 1 which is **Engage in quality improvement.**

Quality refers to the characteristics of a product or service that bear on its ability to satisfy stated or implied needs. It also refers to a product or service free of deficiencies. The quality of a product or service refers to the perception of the degree to which the product or service meets the customer's expectations. Quality has no specific meaning unless related to a specific function and/or object. Quality is a perceptual, conditional and somewhat subjective attribute.

Lesson 1 Applying Quality Standards

Assess quality of received materials

Assess own work

Engage in quality improvement

After going through this module, you are expected to:

1. Familiarize quality improvement and processes; and
2. Identify quality management terms.

I What is new?

Hi! You are about to start this module. Before anything else, take this **SELF-ASSESSMENT** survey questionnaire.

Learning Outcome 3: Engage in quality improvement	**YES**	**NO**
Carries out work in accordance with process improvement procedures		
Monitor performance of operation or quality of service to ensure customer satisfaction		

D What I know?

Video: Quality Management System:https://www.youtube.com/watch?v=WgtBHMxxEaI

Structured collection of policies, procedures, processes and their associated responsibilities. These are integrated so that working harmoniously within a system to achieve its quality vision, mission of the organization. It is mostly saved into an electronic format.

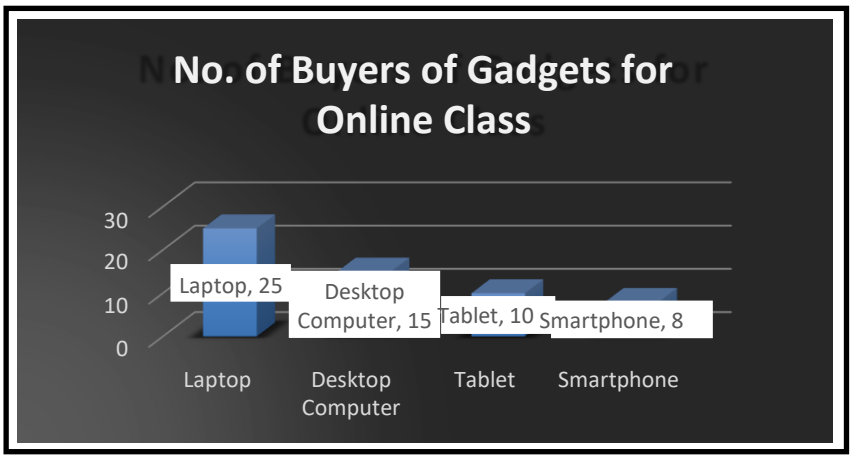
Advantages of QMS

1. Simplify – sites visit, hearing the voice of customers, improve communication, complaint handling
2. Clarify – roles and responsibilities, suppliers, customers – understands internal processes, staff training, continuous improvement
3. Control – linking what the industry aims to achieve, enable to control the process, drives the identification of opportunities for improvement

D What is in?

Activity 1: **CHOOSE THE BEST FOR ME**
Instruction: Create a diagram that will best represent given scenario. Draw the diagram in the box provided.

Example:
Scenario- Number of buyers of gadgets for online class



Scenario 1: Steps in Installing a Software

Scenario 2: List of materials of a Computer System per quantity

Rubrics:

Content – 5
Relativity - 5

D What is it?

Lecture 1: **Quality Improvement**
The dimensions of quality refer to the attributes that quality achieves in Operations Management:

Quality <-> Dependability <-> Speed <-> Flexibility <-> Cost

- ✓ Quality supports dependability
- ✓ Dependability supports Speed
- ✓ Speed supports Flexibility
- ✓ Flexibility supports Cost.

In the manufacturing industry it is commonly stated that "Quality drives productivity." Improved productivity is a source of greater revenues, employment opportunities and technological advances. The best way to think about quality is in process control. If the process is under control, inspection is not necessary. However, there is one characteristic of modern quality that is universal. In the past, when we tried to improve quality, typically defined as producing fewer defective parts, we did so at the expense of increased cost, increased task time, longer cycle time, etc.

Quality Management Terms:
Quality Improvement can be distinguished from Quality Control in that Quality Improvement is the purposeful change of a process to improve the reliability of achieving an outcome.
Quality Control is the ongoing effort to maintain the integrity of a process to maintain the reliability of achieving an outcome.
Quality Assurance is the planned or systematic actions necessary to provide enough confidence that a product or service will satisfy the given requirements for quality.

Quality and Task-Completion Checking

With development teams of two or three in daily contact and frequently exchanging views and criticisms, detailed, written quality and task-completion checking procedures may be felt to be unnecessary. Procedures still need to be agreed and the results need to be documented. The need to check quality and task completion applies at all stages of the development process but is underlined especially during the prototype validation stages.

The importance of documenting checks applies whatever the size of the team and whatever the complexity of the software. In the production of assets, this may involve checking to confirm the following:

- ✓ that all the asset files listed in the product specification document have been produced;
- ✓ that files are correctly named;
- ✓ that files are the correct byte size or near the projected file size (examining the file-sizes in a directory listing can be helpful in identifying problem files which are either much too large or much too small);
- ✓ that files are the correct resolution (screen-size and bit depth in the case of graphics; duration, sampling frequency and bit-depth in the case of sound files);

- ✓ that the quality of files displaying on the target monitor or heard on target listening equipment is acceptable

Quality Improvement Processes

Manufacturers can choose from a variety of tools to improve their quality processes. The trick is to know which tools to use for each situation and increasing the sophistication of the tools in the repertoire.

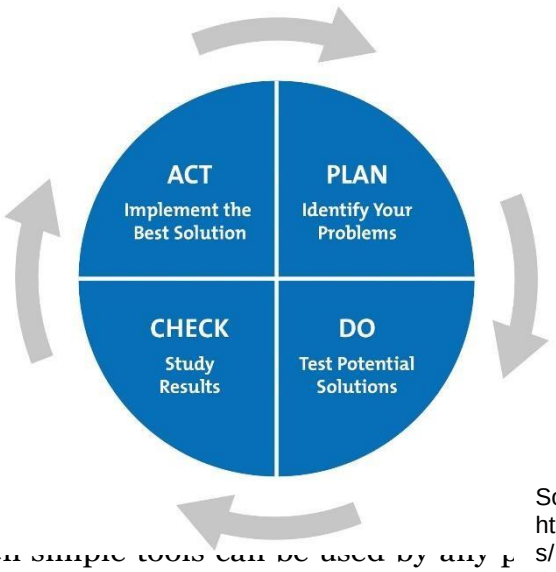
Easy to implement and follow up, the most commonly used and well-known quality process is the plan/do/check/act (PDCA) cycle. Other processes are a takeoff of this method, much in the way that computers today are takeoffs of the original IBM system. The PDCA cycle promotes continuous improvement and should thus be visualized as a spiral instead of a closed circle.

Another popular quality improvement process is the six-step PROFIT model in which the acronym stands for:

P = Problem definition.
R = Root cause identification and analysis.
O= Optimal solution based on root cause(s).
F = Finalize how the corrective action will be implemented.
I = Implement the plan.
T = Track the effectiveness of the implementation and verify that the desired results are met.

If the desired results are not met, the cycle is repeated. Both the PDCA and the PROFIT models can be used for problem solving as well as for continuous quality improvement. In companies that follow total quality principles, whichever model is chosen should be used consistently in every department or function in which quality improvement teams are working.

Figure 1: The Plan-Do-Check-Act Cycle

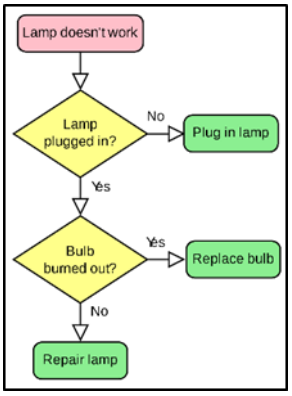


Source: https://www.mindtools.com/media/Diagrams/PDCA2017.jpg

Once the b
the addition of q
systematically. Se
improvement process: flowcharts, check sheets, Pareto diagrams, cause and effect diagrams, histograms, scatter diagrams, and control charts.

The key to successful problem resolution is the ability to identify the problem, use the appropriate tools based on the nature of the problem, and communicate the solution quickly to others. Inexperienced personnel might do best by starting with the Pareto chart and the cause and effect diagram before tackling the use of the other tools. Those two tools are used most widely by quality improvement teams.

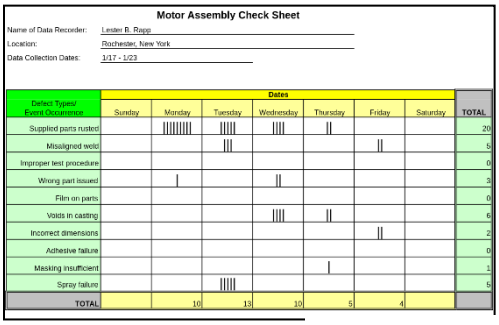
FLOWCHARTS



Flowcharts describe a process in as much detail as possible by graphically displaying the steps in proper sequence. A good flowchart should show all process steps under analysis by the quality improvement team, identify critical process points for control, suggest areas for further improvement, and help explain and solve a problem.

Image Source:
https://upload.wikimedia.org/wikipedia/commons/thumb/9/91/LampFlowchart.svg/1200px- LampFlowchart.svg.png

CHECK SHEETS



Motor Assembly Check Sheet

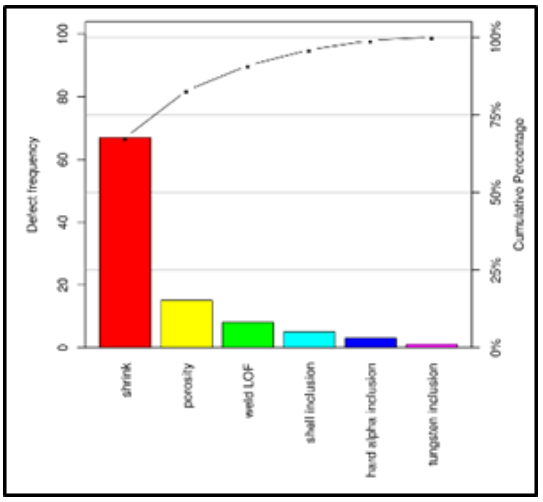
Name of Data Recorder: Lester B. Rapp
Location: Rochester, New York
Data Collection Dates: 1/17 - 1/23

Defect Types/ Event Occurrence	Dates							TOTAL
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
Supplied parts rusted		IIIIIIII	IIII	IIII	II			20
Misaligned weld			III			II		5
Improper test procedure								0
Wrong part issued		I		II				3
Film on parts								0
Voids in casting				IIII	II			6
Incorrect dimensions						II		2
Adhesive failure								0
Masking insufficient					I			1
Spray failure			IIIII					5
TOTAL		10	13	10	5	4		

Check sheets help organize data by category. They show how many times each particular value occurs, and their information is increasingly helpful as more data are collected. More than 50 observations should be available to be charted for this tool to be really useful.

Image Source:
https://upload.wikimedia.org/wikipedia/commons/thumb/3/3a/Check_sheet_for_motor_as

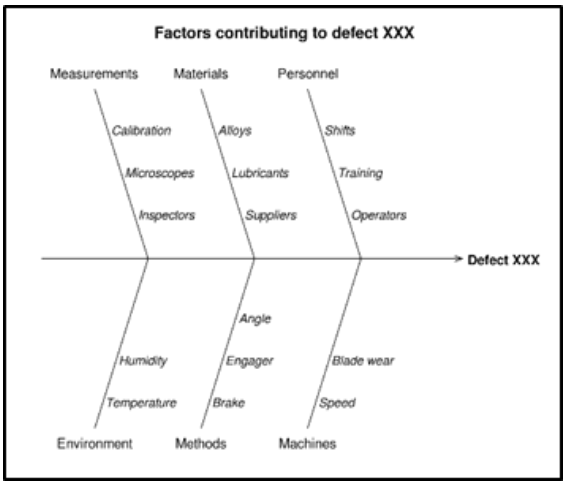
PARETO DIAGRAMS



A Pareto diagram puts data in a hierarchical order which allows the most significant problems to be corrected first. The Pareto analysis technique is used primarily to identify and evaluate nonconformities, although it can summarize all types of data. It is perhaps the diagram most often used in management presentations.

Image Source:
https://upload.wikimedia.org/wikipedia/commons/thumb/9/93/Pareto_chart_of_titanium_investment_casting_defects.svg

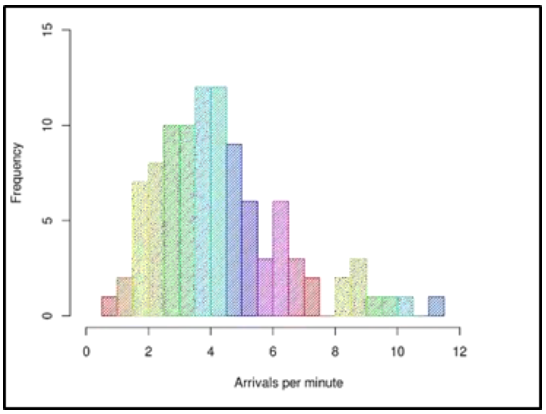
CAUSE AND EFFECT DIAGRAMS



The cause and effect diagram is sometimes called an Ishikawa diagram after its inventor. It is also known as a fish bone diagram because of its shape. A cause and effect diagram describes a relationship between variables. The undesirable outcome is shown as effect, and related causes are shown leading to, the said effect. This popular tool has one severe limitation, however, in that users can overlook important, complex interactions between causes. Thus, if a problem is caused by a combination of factors, it is difficult to use this tool to depict and solve it.

Image Source:
https://upload.wikimedia.org/wikipedia/commons/thumb/a/af/Cause_and_effect_diagram_for_defect_XXX.svg/1200px-

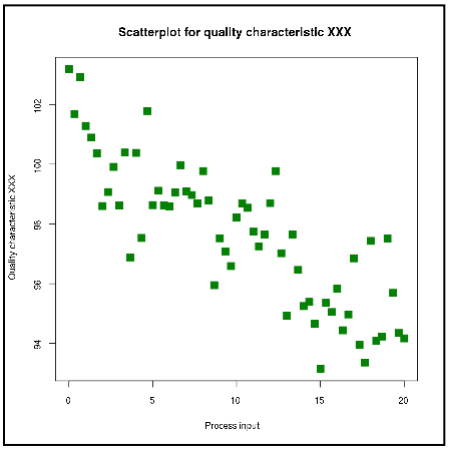
HISTOGRAMS



The histogram plots data in a frequency distribution table. What distinguishes the histogram from a check sheet is that its data are grouped into rows so that the identity of individual values is lost. Commonly used to present quality improvement data, histograms work best with small amounts of data that vary considerably. When used in process capability studies, histograms can display specification limits to show what portion of the data does not meet the specifications.

Image Source:
https://upload.wikimedia.org/wikipedia/commons/thumb/c/c3/Histogram_of_arrivals_per_minute.svg/1200px-

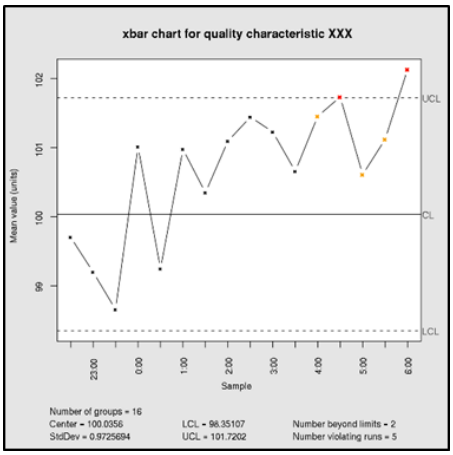
SCATTER DIAGRAMS



A scatter diagram shows how two variables are related and is thus used to test for cause and effect relationships. It cannot prove that one variable causes the change in the other, only that a relationship exists and how strong it is. In a scatter diagram, the horizontal (x) axis represents the measurement values of one variable, and the vertical (y) axis represents the measurements of the second variable.

Image Source:

CONTROL CHARTS



A control chart displays statistically determined upper and lower limits drawn on either side of a process average. This chart shows if the collected data are within upper and lower limits previously determined through statistical calculations of raw data from earlier trials

Image Source:
https://upload.wikimedia.org/wikipedia/commons/thumb/9/93/Xbar_chart_for_a_paired_xbar_and_R_chart.svg/1200px-

E What is more?

Now that you are familiar with the lesson, take this **SELF-ASSESSMENT** survey questionnaire. Answer the table below.

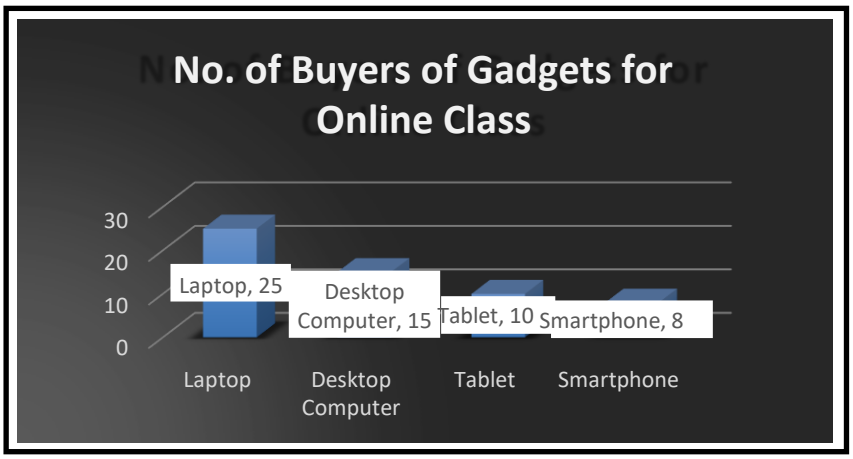
Learning Outcome 3: Engage in quality improvement	YES	NO
Carries out work in accordance with process improvement procedures		
Monitor performance of operation or quality of service to ensure customer satisfaction		

Well done! Let's us proceed to other activities.

E What I can do?

Activity 1: **CHOOSE THE BEST FOR ME**
Instruction: Create a diagram that will best represent given scenario. Draw the diagram in the box provided.

Example:
Scenario- Number of buyers of gadgets for online class



Scenario 1: Steps in Installing a Software

Scenario 2: List of materials of a Computer System per quantity

Rubrics:

Content – 5
Relativity - 5

E What else can I do?

Activity 2: EVALUATE ME

Provided with the needed tools, testing devices and materials in improving quality processes, classify them using a check sheet to determine their condition.

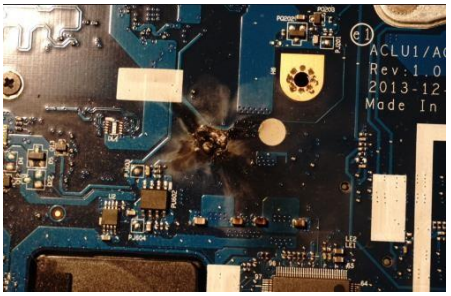
SCREW DRIVER
Image Source:
https://hisandhershomesteading.files.wordpress.com/2011/06/100_1518.jpg

LONG NOSE PLIERS
Image Source:
https://hisandhershomesteading.files.wordpress.com/2011/06/100_1518.jpg

SOLDERING IRON
Image Source:
https://www.build- electronic-circuits.com/wp-content/uploads/2014/04/soldering- iron-red.jpg

MULTITESTER
Image Source:
https://upload.wikimedia.org/wikipedia/commons/d/db/YX360TRF%28Sanwa%29.JPG

LAN TESTER
Image Source:
https://www.fcnet.pl/media/catalog/product/cache/1/thumbnail/800x800/9df78eab33525d08d6e5fb8d27136e95/t/e/tester-okablowania-rj45-rj11-rj12-02.jpg



MOTHERBOARD
Image Source:
https://cdn.mos.cms.futurecdn.net/huPqttWtKcwWXfQPJdRpkQ.jpg

HARD DISK DRIVE
Image Source:
https://i.pinimg.com/originals/b9/91/d3/b991d3d6344a42bc2459d951470d18fc.png

POWER SUPPLY UNIT
Image Source:
https://www.custom-build-computers.com/image-files/failing-power-supply.jpg

	CONDITION	
Tools	Good	Defective
1. 2 3		
Testing devices		
1. 2		
Materials		
1. 2 3		

A What I have learned?

Activity 3: COME BACK HOME

Instruction: Cite tools, materials and equipment available at your home that you can determine its condition and what is its relation of those to computer systems servicing?

Rubrics:

Content – 10
Relativity - 10

Answer

What's New

***Answers may vary**

Learning Outcome 3: Engage in quality improvement	YES	NO
Carries out work in accordance with process improvement procedures		
Monitor performance of operation or quality of service to ensure customer satisfaction		

What is More

***Answers may vary**

What can I do

***Answers may vary**

Reference

Additional Resources

Department of Education (May 2016). Computer Systems Servicing Curriculum Guide p. 9

Technical Education Skills Development Authority (December 2013) Computer Systems Servicing Training Regulations p.14

References

Sondalini, M. (n.d.) What is Quality? What does Quality Mean? How do You Know When You Have Quality? Retrieved from https://www.lifetime-reliability.com/cms/free-articles/work-quality-assurance/what-is-quality/

Sam Houston State University, (n.d.) Lesson 1 The Definition(s) of Quality. Retrieved from https://www.shsu.edu/~mgt_ves/mgt481/lesson1/lesson1.htm

Freeman, G. (2019, February 1). What is Quality Management and Why Does it Matter? Retrieved from https://www.qualitymag.com/articles/95237-what-is-quality-management-and-why-does-it-matter

Health Education England, (n.d.) What is Quality Improvement (QI)? Retrieved from http://www.wessexdeanery.nhs.uk/quality_improvement/what_is_quality_improvement.aspx

American Society for Quality (n.d). QUALITY ASSURANCE & QUALITY CONTROL. Retrieved from https://asq.org/quality-resources/quality-assurance-vs-control

Quality Improvement Processes: The Basics and Beyond (n.d) Retrieved from https://www.smartsheet.com/quality-improvement-process

American Society for Quality (n.d). WHAT IS THE PLAN-DO-CHECK-ACT (PDCA) CYCLE? Retrieved from https://asq.org/quality-resources/pdca-cycle

American Society for Quality (n.d). WHAT IS A FLOWCHART? Retrieved from https://asq.org/quality-resources/flowchart

Lucid Software Inc. (n.d.) What is a Flowchart Retrieved from https://www.lucidchart.com/pages/what-is-a-flowchart-tutorial

Six Sigma Daily, (2013). Check Sheets: Five Basic Types Retrieve from https://www.sixsigmadaily.com/check-sheets-five-basic-types/

American Society for Quality, (n.d). WHAT IS A PARETO CHART? Retrieved from https://asq.org/quality-resources/pareto

Smart Draw (n.d.). Cause and Effect. Retrieved from https://www.smartdraw.com/cause-and-effect/

Math is Fun, (2019). Histograms. Retrieved from https://www.mathsisfun.com/data/histograms.html

American Society for Quality, (n.d). CONTROL CHART. Retrieved from https://asq.org/quality-resources/control-chart

American Society for Quality, (n.d) SCATTER DIAGRAM. Retrieved from https://asq.org/quality-resources/scatter-diagram

Images

Flowchart [Online Image]. Wikipedia. https://upload.wikimedia.org/wikipedia/commons/thumb/9/91/LampFlowchart.svg/1200px-LampFlowchart.svg.png

Check_sheet_for_motor_assembly [Online Image]. Wikipedia. https://upload.wikimedia.org/wikipedia/commons/thumb/3/3a/Check_sheet_for_motor_assembly.svg/1200px-

Pareto_chart_of_titanium_investment_casting_defects [Online Image]. Wikipedia. https://upload.wikimedia.org/wikipedia/commons/thumb/9/93/Pareto_chart_of_titanium_investment_casting_defects.svg

Cause_and_effect_diagram_for_defect_XXX [Online Image]. Wikipedia. https://upload.wikimedia.org/wikipedia/commons/thumb/a/af/Cause_and_effect_diagram_for_defect_XXX.svg/1200px-

Histogram_of_arrivals_per_minute [Online Image]. Wikipedia. https://upload.wikimedia.org/wikipedia/commons/thumb/c/c3/Histogram_of_arrivals_per_minute.svg/1200px-

opx-Scatter_diagram_for_quality_characteristic_XXX [Online Image]. Wikipedia. https://upload.wikimedia.org/wikipedia/commons/thumb/a/af/Scatter_diagram_for_quality_characteristic_XXX.svg/120

Xbar_chart_for_a_paired_xbar_and_R_chart [Online Image]. Wikipedia. https://upload.wikimedia.org/wikipedia/commons/thumb/9/93/Xbar_chart_for_a_paired_xbar_and_R_chart.svg/1200px-

Mind Tools Plan-Do-Check-Act (PDCA) Retreived from: https://www.mindtools.com/media/Diagrams/PDCA2017.jpg
SCREW DRIVER
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LONG NOSE PLIERS

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Image Source:
https://upload.wikimedia.org/wikipedia/commons/d/db/YX360TRF%28Sanwa%29.JPG

LAN TESTER
Image Source:
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Image Source:
https://i.pinimg.com/originals/b9/91/d3/b991d3d6344a42bc2459d951470d18fc.png

POWER SUPPLY UNIT
Image Source: https://www.custom-build-computers.com/image-files/failing-power-supply.jpg

Videos

Quality Management System Retrieved from https://www.youtube.com/watch?v=WgtBHMxxEaI

Srivastava,S. (2016, May 13) Quality Improvement https://www.youtube.com/watch?v=02ndmvYSwNE

I What I need to know?

Welcome to Lesson 2: Performing Computer Operations!
This lesson consists of (6) six learning outcomes. Each learning outcomes contains activities supported by each performance task and activities. Are you ready to take the challenge?

The module contains the following lessons. Lesson

2 Performing Computer Operations

Plan and prepare for the task to be undertaken

Input data into computer

Access information using computer

Produce output/ data using computer system

Use basic functions of a www-browser to locate information

Maintain computer equipment and systems

After going through this module, you are expected to:

1. Introduce the computer system; and
2. Identify the computer parts and its peripherals

I What is new?

Hi! You are about to start this module. Before anything else, take this **SELF-ASSESSMENT** survey questionnaire. Answer the table below.

Learning Outcome 1: Plan and prepare for task to be undertaken		
Can I……..	**YES**	**NO**
Determine requirements of task in accordance with the required output		
Select appropriate hardware and software according to task assigned and required outcome		
Plan a task to ensure that OHS guidelines and procedures are followed		
Follow client-specific guidelines and procedures		
Apply required data security guidelines in accordance with existing procedures		

Well done! How many of those in the survey are you knowledgeable of? Let's know proceed to the video.

D What I know?

Hey! This part of the module is about the first learning outcome of the Lesson 2 which is **Plan and prepare for task to be undertaken.**

Let's Watch This

Video 1: What does what in your computer? Computer parts Explained
https://www.youtube.com/watch?v=ExxFxD4OSZ0

D What is in?

Activity 1: KNOW ME

Direction: Identify the following components of the computer.

1

_____

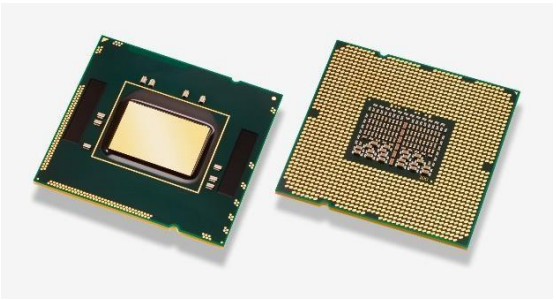
2

_____

3

_____

4



_____

5

6

7

D What is it?

Parts of a Computer System

1. Computer Case – stores all the components of the computer

Image Source:
https://i.pcmag.com/imagery/reviews/03QOR4Is tWhRxYsx4jXS5qh-19.fit_lpad.size_624x364.v_1569476361.jpg

2. Power Supply Unit– gives electricity for the computer system

Image Source:
https://sc02.alicdn.com/kf/HTB1ImrkasfrK1RkSn b4q6xHRFXaw.jpg

3. Motherboard- composed all the circuits and components of the computer system

Image Source:
https://ae01.alicdn.com/kf/H099f4a1e56ed499c ad2f0f2c1807fc84e/ASUS-P7H55-M-LE-original-motherboard-LGA-1156-DDR3-boards- for-I3-I5-I7-16GB-mainboard.jpg

4. Central Processing Unit (CPU) – also called processor
-central part of the computer where the data is processed

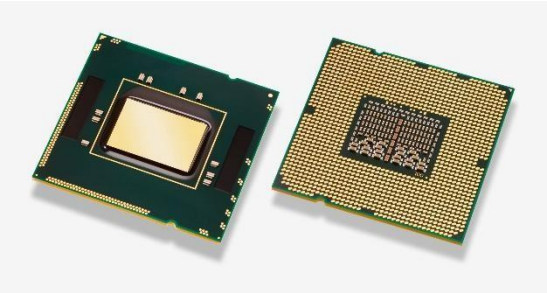


Image Source: https://www.techspot.com/articles-info/2000/images/2020-04-06-image-9.jpg

5. Hard Disk Drive – often called hard drive
-serves as secondary storage for data

Image Source: https://attn.ph/images/thumbnails/1715/1200/detailed/2/wd40purz.jpg

6. Random Access Memory (RAM) – also called memory
- stores data for quick access
- volatile memory which stores data when there is an electricity

Image Source: https://cdn.hswstatic.com/gif/ram-ch.jpg

7. Graphics Card – also called graphics processing unit (GPU)
- connected to the video graphics port on the motherboard where it displays text and on the monitor

Image Source: https://cf.shopee.ph/file/ae356b7ce06f816b568682ee 9a0a35e3

Image Source: https://specials-images.forbesimg.com/imageserve/5d654851fead28 0008924763/960x0.jpg?cropX1=0&cropX2=1500&cropY1=185&cropY2=1310

E What is more?

Now that you are familiar with the different parts of the computer, take this **SELF-ASSESSMENT** survey questionnaire. Answer the table below.

Learning Outcome 1: Plan and prepare for task to be undertaken		
Can I……..	**YES**	**NO**
Determine requirements of task in accordance with the required output		
Select appropriate hardware and software according to task assigned and required outcome		
Plan a task to ensure that OHS guidelines and procedures are followed		
Follow client-specific guidelines and procedures		
Apply required data security guidelines in accordance with existing procedures		

Well done! Let's us proceed to other activities.

E What I can do?

Activity 2: **CONNECT ME!**
Direction: Draw a specific item in your house the best describes the following given components of the computer system.

Computer Parts	Item/Equipment inside your house
e.g. Keyboard	Typewriter
Motherboard	
Hard Disk Drive	
Random Access Memory (RAM)	
System Case	
Central Processing Unit (CPU)	
Motherboard	
Graphics Card	

A What I have learned?

Activity 3: ITS ABOUT ME

Direction: Based from the Activity 2: Connect Me! what is the most important part of the computer system? How will you relate the function of your chosen component of the computer to your experience as a computer system servicing student? Present your answer inside the box.

Rubrics
Relativity - 5
Content - 5
Creativity - 5

Answer

What's New

***Answers may vary**

Learning Outcome 1: Plan and prepare for task to be undertaken		
Can I……..	**YES**	**NO**
Determine requirements of task in accordance with the required output		
Select appropriate hardware and software according to task assigned and required outcome		
Plan a task to ensure that OHS guidelines and procedures are followed		
Follow client-specific guidelines and procedures		
Apply required data security guidelines in accordance with existing procedures		

What is In

1. **Computer case**
2. **Power supply**
3. **Motherboard**
4. **Central Processing Unit**
5. **Hard Disk Drive**
6. **Random Access Memory**
7. **Graphics Card**

What is More

***Answers may vary**

What can I do

***Answers may vary**

Reference

The Computer System. Retrieved from https://peda.net/kenya/ass/subjects2/computer-studies/form-1/the-computer-system

The Window Club (2020, March 8) What are the main components of a Computer system?. Retrieved from https://www.thewindowsclub.com/what-are-the-main-components-of-a-computer-system/

I What I need to know?

You are now in the learning outcome 2 of Lesson 2, which is **Input data into computer**.
In this module you are able to understand more about workplace procedures and safety done in Computer Systems Servicing. All is set! Let's Go.

Computer software a program that enables a computer to perform a specific task, as opposed to the physical components of the system (hardware). This includes application software such as a word processor, which enables a user to perform a task, and system software such as an operating system, which enables other software to run properly, by interfacing with hardware and with other software.

Lesson 2 Performing Computer Operations

Plan and prepare for the task to be undertaken

Input data into computer

Access information using computer

Produce output/ data using computer system

Use basic functions of a www-browser to locate information

Maintain computer equipment and systems

After going through this module, you are expected to:

1. Know relevant information about system software;
2. Recognize the characteristics of a typical user interface of GUI; and
3. Understand the basic features of system software.

I What is new?

Hi! You are about to start this module. Before anything else, take this SELF- ASSESSMENT survey questionnaire.

Learning Outcome 2: Input data into computer	**YES**	**NO**
Enter the data into the computer using appropriate program/application in accordance with company procedures		
Check the accuracy of information and save the information in accordance with standard operating procedures		
Store inputted data is in storage media according to requirements		
Perform work within ergonomic guidelines		

D What I know?

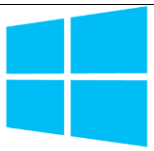
Hey! This part of the module is about the second learning outcome of the Lesson 2 which is **Input data into computer.**

Let's Watch This

Types of Software: https://www.youtube.com/watch?v=HkQKTkw6-Rw

D What is in?

Activity 2: Classify me
Instruction: Identify the following whether SYSTEM SOFTWARE OR APPLICATION SOFTWARE.

 1. _____	 2. _____	 3._____	 4. _____
 5._____	 6._____	 7. _____	 8. _____

D What is it?

Common Types of Computer Software

Computer Software is the languages of the computer. And like the human languages, there are many different computer languages. Essentially, Computer software can be divided into three main groups depending on their use and application these are:

1. System software or Operating System software

These are software used by the computer to translate inputs from various sources into a language a machine can understand. Basically the System software or the operating system software coordinates the different hardware components of a computer. There are many OS in the market. The most popular OS are from the stable of Windows, Microsoft has migrated to Vista, its latest offering in the market. It may come as a surprise to some that there are other operating systems used by others. Among these UNIX is use for large office setups with extensive networking.

2. Application software

- use to interact with computer.

-Popular example of application software are the Microsoft office suite which include word, excel, and PowerPoint. We have use this application extensively. Internet explorer, Mozilla Firefox is two applications software used to access the internet.

-also provides support to the physical components of computers. System software coordinates all external devices of computer system like printer, keyboard, displays etc.

- used for commercial purpose

-widely used in educational, business and medical fields. Computer games are the most popular forms of application software. Industrial automation, databases, business software and medical software prove to be of great help in the respective fields.

Educational software is widely used in educational institutes across the globe

E What is more?

Now that you are familiar with the common types of computer software, take this **SELF- ASSESSMENT** survey questionnaire. Answer the table below.

Learning Outcome 2: Input data into computer	**YES**	**NO**
Enter the data into the computer using appropriate program/application in accordance with company procedures		
Check the accuracy of information and save the information in accordance with standard operating procedures		
Store inputted data is in storage media according to requirements		
Perform work within ergonomic guidelines		

E What I can do?

Activity 2: What is your USE?
Direction: Write the use of the following software.

Software	Use
1. Google Chrome	
2. Microsoft Office	
3. Avast Antivirus	
4. Adobe Photoshop	
5. Microsoft Windows	

A What I have learned?

Based from the activity you have accomplished for this module, what is the most familiar to you? How will you apply it to your life as a computer system servicing student?

Rubrics
Content – 5
Relativity - 5

Answer

What's New

Answers may vary

Learning Outcome 2: Input data into computer	YES	NO
Enter the data into the computer using appropriate program/application in accordance with company procedures		
Check the accuracy of information and save the information in accordance with standard operating procedures		
Store inputted data is in storage media according to requirements		
Perform work within ergonomic guidelines		

What is In

1. **Microsoft Windows**
2. **Adobe Photoshop**
3. **Mozilla Firefox**
4. **Android OS**
5. **Microsoft Office**
6. **Google Chrome**
7. **Avast Antivirus**
8. **Apple IOS**

What is More

Answers may vary

What can I do

Answers may vary

Reference

Additional Resources

Department of Education (May 2016). Computer Systems Servicing Curriculum Guide p. 9

Technical Education Skills Development Authority (December 2013) Computer Systems Servicing Training Regulations p.14

References

Singh, Vi. (2020, Different Types of Software with Examples. Retrieved from: https://squareboat.com/blog/different-types-of-software-with-examples

Thakur, Dinesh (n.d.) What is System Software? – Definition Retrieved from: https://ecomputernotes.com/fundamental/disk-operating-system/system-software?

I What I need to know?

You are now in the Learning Outcome 3 of Lesson 2 which is **Access information using computer.**

Files plays an important part in the computer system. The user cannot access, retrieve or save a document without a file.

Lesson 2 Performing Computer Operations

Plan and prepare for the task to be undertaken Input data into computer

Access information using computer

Produce output/ data using computer system

Use basic functions of a www-browser to locate information

Maintain computer equipment and systems

After going through this module, you are expected to:

1. Explain what is a file, filename and folder; and
2. Organize files, and folders.

I What is new?

Hi! You are about to start this module. Before anything else, let have first a open- group discussion

Learning Outcome 3: Access information using computer	**YES**	**NO**
Select correct program/application based on job requirements		
Access program/application containing the information required according to company procedures		
Select, open, and close desktop for navigation purposes		
Carry out keyboard techniques in line with OHS requirements		

D What I know?

Hey! This part of the module is about the third learning outcome of the Lesson 2 which is **Access information using computer**

Let's Watch This

Video: Computer Skills Course: File Management, Part 1

https://www.youtube.com/watch?v=k-EID5_2D9U

D What is in?

Activity 2: **Familiarize Me!**
Direction: Group each file given to its respective folders.

Music	Photo	Video	Document
			

ClimateChange.docx Avenger.mp4 MoreandMore.mp3 Sana.jpg

Birthday.psd Final.xls Maria.wma Rooftop.png Avatar.avi

D What is it?

What is a file?

A file can be a word processing document, photo, video, audio clip, etc.

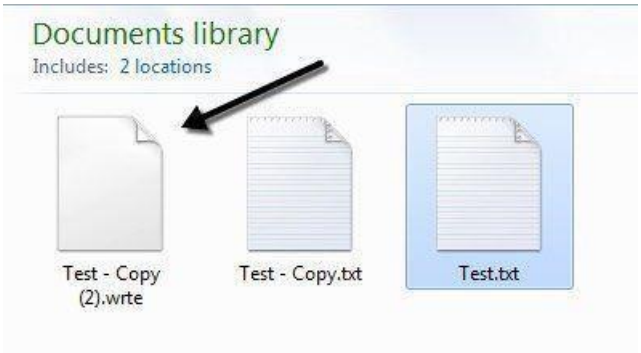


Image source: https://www.online-tech-tips.com/wp-content/uploads/2008/05/generic-icon.jpg.optimal.jpg

What is a File name?

File name helps the user identify the content of a file. File name contains file extension. File extension are letter and number refers to the type of file the computer understand.

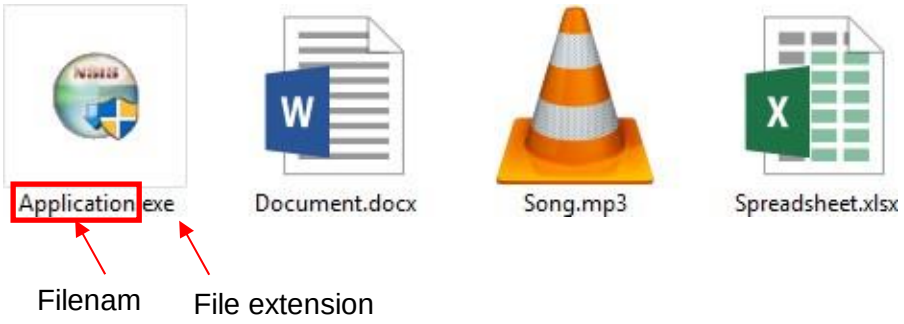


Image source: https://www.howtogeek.com/wp-content/uploads/2017/03/img_58b8a4f84142d.png

AUDIO	VIDEO	IMAGES	DOCUMENTS	OTHER
.MP3	.MP4	.JPG	.DOCX	.ZIP
.M4A	.MOV	.PNG	.PPTX	.RAR
.AAC	.AVI	.TIF	.XLSX	.DMG
.WMA	.MPG	.GIF	.PDF	.EXE
.OGG	.WMV	.BMP	.TXT	.HTML
.WAV	.MKV	.PSD	.RTF	.PHP
.PCM	.FLV		.CSV	
.FLAC	.MTS			

Screenshot from the video: https://www.youtube.com/watch?v=k-EID5_2D9U

What is a folder?

A folder is used to organize the files. Also refer as directory.

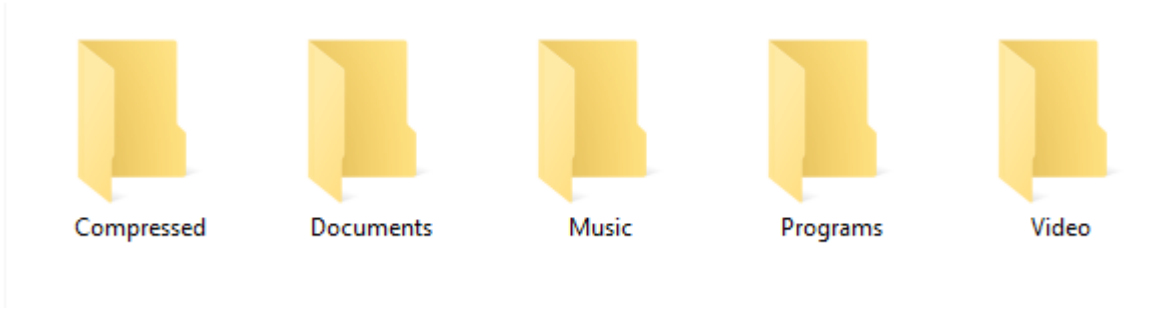


Image Source: Screenshot from Laptop using Snipping Tool (Jade Lara)

E What is more?

Now that you are familiar with folders and files, take this **SELF-ASSESSMENT** survey questionnaire. Answer the table below.

Learning Outcome 3: Access information using computer	**YES**	**NO**
Select correct program/application based on job requirements		
Access program/application containing the information required according to company procedures		
Select, open, and close desktop for navigation purposes		
Carry out keyboard techniques in line with OHS requirements		

E What I can do?

Activity 2: **Familiarize Me!**
Direction: Group each file given to its respective folders.

Music	Photo	Video	Document
			

ClimateChange.docx
Birthday.psd
Final.xls

Avenger.mp4
Maria.wma

MoreandMore.mp3
Rooftop.png

Sana.jpg
Avatar.avi

A What I have learned?

Activity 3: Organize or Disorganize
Direction: From your house settings, create a table wherein you are able to show the application of folder and files.

For example:

School Files	Personal Files	House Files

Rubrics
Content – 10
Relativity–10

Activity 4: STEP ONE, STEP TWO
Direction: Based from your Activity 3: What is the most essential part of organizing file and folders?Draw your step by step procedure of applying it at home.

Rubrics
Content – 10
Relativity –10

Answer

What's New

Answers may vary

	Learning Outcome 3: Access information using computer	YES	NO
	Select correct program/application based on job requirements		
	Access program/application containing the information required according to company procedures		
	Select, open, and close desktop for navigation purposes		
	Carry out keyboard techniques in line with OHS requirements		

What is In

Music	Photo	Video	Document
			
Avenger.mp4 MoreandMore.mp3	Rooftop.png Sana.jpg	Maria.wma Avatar.avi	ClimateChange.docx Birthday.psd Final.xls

What is More

Answers may vary

What can I do

Answers may vary

Reference

Additional Resources

Department of Education (May 2016). Computer Systems Servicing Curriculum Guide p. 10

Technical Education Skills Development Authority (December 2013) Computer Systems Servicing Training Regulations p.14

References

Definition - What does File mean? (n.d.) Retrieved from https://www.techopedia.com/definition/7199/file

Folder Terminology (Directories) (n.d.) Retrieve from https://www.pcmag.com/encyclopedia/term/folder

I What I need to know?

You are now in the Learning Outcome 4 of Lesson 2 which is **produce output/ data using computer system.**

Storages are peripherals that you could use to keep or save those work or information that you have done on the computer.

Lesson 2 Performing Computer Operations

Plan and prepare for the task to be undertaken Input data into computer

Access information using computer

Produce output/ data using computer system

Use basic functions of a www-browser to locate information

Maintain computer equipment and systems

After going through this module, you are expected to:

1. Know the most common output devices and other peripherals;
2. Compare the main types of memory storage devices; and
3. Work with programs.

What is new?

Hi! You are about to start this module. Before anything else, let have first a open- group discussion

Learning Outcome 4: Produce output/ data using computer system	**YES**	**NO**
Process entered data using appropriate software commands		
Print out data as required using computer hardware/ peripheral devices in accordance with standard operating procedures		
Transfer files and data between compatible systems using computer software, hardware/peripheral devices in accordance with standard operating procedures		

D What I know?

Hey! This part of the module is about the fourth learning outcome of the Lesson 2 which is **Produce output/ data using computer system**

Let's Watch This

Video: Basic Computing Skills
https://www.youtube.com/watch?v=DwsKeoXOa9I

Video: Basic Output and Storage Devices
https://www.youtube.com/watch?v=74YuS4IuywQ

D What is in?

Activity 2: **Familiarize Me!**

Direction: Write the missing letters in the box.

1. These are peripherals used to store or keep your work done in the computer.

S	T		R			E	S

2. These are objects connected to the computer that performs other work that basic parts can not handle.

P	E		I	P		E			L	S

3. This_____disk drive device allows you to insert and remove a floppy disk.

F		O	P		

4. It transfers graphics and text from your computer to paper. It is also an output device.

	R	I			E	R

5. It is similar to the floppy diskette, it also stores data and you can retrieve data from it. It has more storage area compared to floppy disks.

C	D			

6. It holds the operating system for the computer (like Windows 95/98), programs (like Microsoft Word), and documents.

	A	R		D	I		

7. It allows you to listen to sounds or music on the computer.

S		E		K		

D What is it?

PERIPHERALS

There are other parts or devices that can be connected to the computer. These other devices are called **peripherals**. A **peripheral** is an object attached to a computer to help it perform some necessary work which other part can not handle. Peripherals also form the hardware component.

STORAGES

Storages are peripherals that you could use to keep or save those work or information that you have done on the computer. Storages come in different kinds whether in sizes or in its capacity to hold big information.

Floppy Disk

One of the objects the computer stores information on is called a **floppy disk**. This consists of a plastic casing enclosing a thin piece of plastic. The plastic has a coating of magnetic particles onto which the information is written in magnetic code.

For this reason, it is important to keep all disks away from magnets and magnetic devices.

CD-ROM Disc

A compact disc (CD) is similar to the floppy diskette, it also stores data and you can retrieve data from it. CD has more storage area compared to floppy disks.

Hard Disk

The hard disk and the hard disk drive are packaged as a unit and are usually referred to as the "hard drive." They are permanently placed **inside** the computer.

The hard disk holds the operating system for the computer (like Windows 95/98), programs (like Microsoft Word), and documents.

The hard drive stores many more times the amount of information than can be stored on a CD or floppy disk.

DRIVES

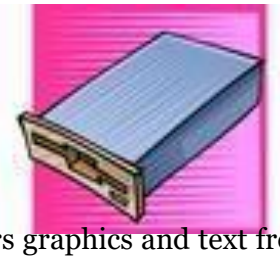
Drives are also peripherals that are commonly used as tools to store data and information. It is also called **input and output devices.** Drives help the in inputting your work and also displaying it on other devices.

CD – ROM Drive

The **CD-ROM drive** is an optical drive that reads information from a compact disc.

Floppy Disk Drive

A **floppy disk drive** is a common tool on your computer. It allows you to insert and remove a floppy disk, which is a magnetic medium used for storing data.



PRINTERS

A printer is also a peripheral connected to the computer. A printer transfers graphics and text from your computer to paper. It is also an **output device**.

SPEAKERS

Aside from the printer, drives and storages another peripheral that can be connected to the computer is the speaker. It allows you to listen to sounds or music on the computer. A speaker is also an **output device**.

Saving and Opening a File

Figure 0-1

The Save As dialog box

Figure 0-2

The Open dialog box

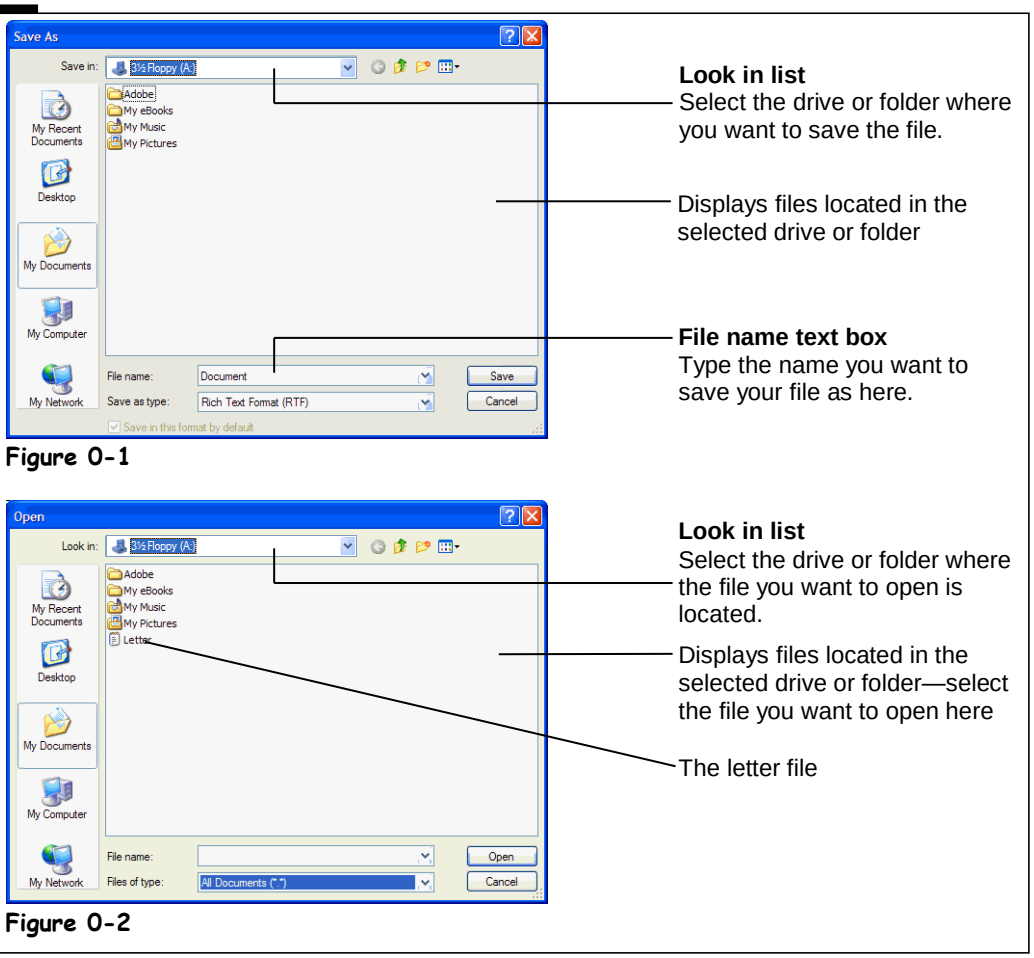


Figure 0-1

Figure 0-2

Once you have created something in a program, you must *save* the file if you ever want to use it again in the future. When you save a file, you're transferring it from your computer's memory (which is erased when you close the program) to the computer's local disk (which is permanent and not erased when you close the program). In this lesson, you will learn how to save a file and then open, or retrieve it from the local disk.

Save button

Other Ways to Save:

- Select **File** → **Save** from the menu.

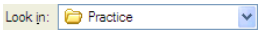
1. Click the Save button on the Standard toolbar.

   The Save As dialog box appears, as shown in Figure 0-1. You must give your file a name and specify where you want to save it. First, tell the computer you want to save the file in your Practice folder.

2. Navigate to and open your practice folder or floppy disk.

   Your computer stores information in files and folders, just like you store information in a filing cabinet. To open a file, you must first find and open the folder where it's saved.

   The Save dialog box has its own toolbar that make it easy to browse through your computer's drives and folders. Two controls on this toolbar are particularly helpful:

   - 

Look In List: Click to list the drives on your computer and the current folder, then select the drive and/or folder whose contents you want to display.
   -  **Up One Level button:** Click to move up one folder.

   If necessary, follow your instructor's directions to select the appropriate drive and folder where your practice files are located.

   Next, you need to give your file a name.

3. Click the File name text box.

   The File name box is where you give your file a name.

Close button

   NOTE: Filenames can be up to 255 characters long and contain letters, numbers, and some symbols. You can't use the symbols " \ / : * | < > in a file name.

4. Type **Letter** in the File name text box.

   This will save the document you created in a file named "Letter" in the floppy disk.

5. Click Save to save your document to the floppy disk.

   The floppy disk hums as your computer saves the Letter file to it.

   NOTE: You can also save any files you've created to your computer's local disk—which is normally where most people save their files, instead of a floppy disk.

py disk.

Now that you've saved the file to a disk, you can safely close WordPad or even turn off the computer, knowing that your WordPad "Letter" file is stored and can be retrieved whenever you want to work on it again.

Open button

Other Ways to Open a File:

- Select **File** → **Open** from the menu.

6. Close the WordPad program by clicking its Close button.

   The WordPad program closes. Now, make sure the Letter document you created and saved in WordPad is still there.

7. Start the WordPad program again.

   Once you have started WordPad, you will need to open the Letter document you saved.

8. Click the Open button on the Standard toolbar.

   The Open dialog box appears, as shown in Figure 0-2. The Open dialog box is very similar to the Save dialog box—except you specify the name and location of the file you want to open.

9. If necessary, navigate to your practice folder or floppy disk.

   The Open dialog box will display any WordPad files that have been saved in the practice folder or floppy disk. Here's how to select a file you want to open.

10. Click the Letter file.

    Shading appears over the Letter file, indicating it is selected.

11. Click the Open button to open the selected file.

    The Letter document appears in the WordPad window.

When you open a file, instead of selecting a file and clicking the Open button, you can save a half-second or so by simply double-clicking the file you want to open.

Printing a File

Figure 0-3

The Print dialog box

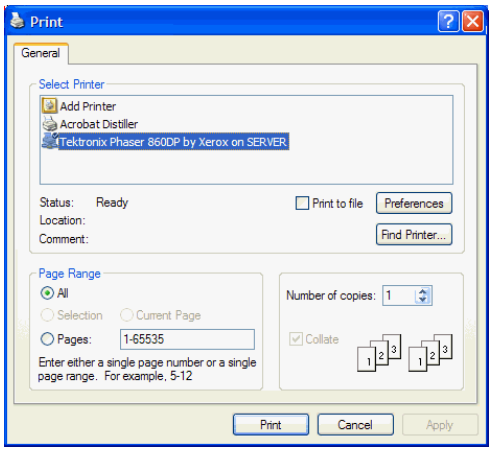


Figure 0-3

This lesson will show you how to send whatever you're working on to the printer. Printing is one of the easiest things to do in Windows.

Other Ways to Print:

- Click the **Print button** if it appears on the toolbar.
- Press **<Ctrl>** + **<P>**.

1. Select File → Print from the menu.

The Print dialog box appears,

as shown in Figure 0-3. The Print dialog box may differ depending on the program you're using, but it should usually contain the options listed in ***Error! Reference source not found.***.

2. **Click OK.**

Windows sends the document to the printer.

E What is more?

Now that you are familiar in producing output and data, take this **SELF-ASSESSMENT** survey questionnaire. Answer the table below.

Learning Outcome 4: Produce output/ data using computer system	**YES**	**NO**
Process entered data using appropriate software commands		
Print out data as required using computer hardware/ peripheral devices in accordance with standard operating procedures		
Transfer files and data between compatible systems using computer software, hardware/peripheral devices in accordance with standard operating procedures		

E What I can do?

Activity 2:
Direction: Identify if the given device is used for outputting or storing. Put on the table according to their categories.

OUTPUT	STORAGE

C.P.U.
printer
hard disk
keyboard
CD Rom
mouse
diskette
monitor
speaker

A What I have learned?

Activity 3: Identification
Fill in the blanks.

1. Storages, drives, printers and speakers are_____.
2. A peripheral is an object connected to the_____.
3. A_____transfers graphics and text from your computer to paper.
4. Printers and speakers are_____device.
5. _____are called input and output devices.
6. _____allows you to listen to music or sounds on the computer.
7. The_____is an optical drive that reads information from a compact disc.
8. A_____prints result on a paper.
9. _____is a storage that is placed permanently inside the computer.
10. _____allows you to insert and remove floppy disk.

Answer

What's New

***Answers may vary**

Learning Outcome 4: Produce output/ data using computer system	YES	NO
Process entered data using appropriate software commands		
Print out data as required using computer hardware/ peripheral devices in accordance with standard operating procedures		
Transfer files and data between compatible systems using computer software, hardware/peripheral devices in accordance with standard operating procedures		

What is In

1. **STORAGES**
2. **PERIPHERALS**
3. **FLOPPY**
4. **PRINTER**
5. **CDROM**
6. **HARD DISK**
7. **SPEAKER**

What I can do

OUTPUT	STORAGE
speaker	diskette
monitor	CD Rom
printer	C.P.U.
monitor	hard disk

What I have learned?

1. **Peripherals**
2. **Computer**
3. **Printer**
4. **Output**
5. **Drives**
6. **Speakers**
7. **CD drive**
8. **Printer**
9. **ROM memory**
10. **Floppy drive**

Reference

Additional Resources

Basic Concepts in IT). ECDL Approved Courseware Syllabus Version 3.0 p. 9-10, 19

Microsoft® Computer Basics Student Edition Advanced, Center for Integration of Technology in Education p.9

I What I need to know?

You are now in the Learning Outcome 5 of Lesson 2 which is **use basic functions of a www-browser to locate information.**

Unless you've been living on a deserted island for the past five years, you already know that the Internet is the biggest thing to happen to computers since… well, computers! You can't ignore it—the Internet is not going away and it's already changing the world we live in. Fortunately, for the most part, the Internet is incredibly easy to use. Even the most computer-phobic users seem to feel right at home on the Internet.

This chapter explains the ins and outs of the Internet. If you've ever spent a sleepless night wondering exactly what the Internet is and how it got started, you'll finally learn it all. Then you'll learn how to get your computer connected to the Internet and how to surf the Web using the Windows XP Internet Explorer.
You'll also learn some useful tips like how to search for information, how to save your favorite Web pages so that you can easily come back to them later, and how to change the Web page that first appears when you connect to the Internet.
Finally, you'll learn how to download software, and send and receive e-mail.

Lesson 2 Performing Computer Operations

Plan and prepare for the task to be undertaken

Input data into computer

Access information using computer

Produce output/ data using computer system

Use basic functions of a www-browser to locate information

Maintain computer equipment and systems

After going through this module, you are expected to:

1. Understand the concept of internet;
2. Connect and find a specific web page; and
3. Browse and search the web.

What is new?

Hi! You are about to start this module. Before anything else, answer the **SELF-ASSESSMENT** survey questionnaire.

Learning Outcome 5: Use basic functions of a www-browser to locate information	**YES**	**NO**
Establish information requirements for internet search		
Launch browser		
Load search engine		
Enter appropriate search criteria/ or URL of site		
Follow relevant links to locate required information		
Bookmark useful pages and print as required		

D What I know?

Hey! This part of the module is about the fifth learning outcome of the Lesson 2 which is **Use basic functions of a www-browser to locate information**

Let's Watch This

Video: What is a website?
https://www.youtube.com/watch?v=vzdA66d6xDs

Video: What is Internet?
https://www.youtube.com/watch?v=Dxcc6ycZ73M

Video: Computer Basics: Connecting to the Internet
https://www.youtube.com/watch?v=hMX6dVa61t0

Video: Browser Basics
https://www.youtube.com/watch?v=FxirRVJWUTs

Video: How to use the internet
https://www.youtube.com/watch?v=-Q08tftUJ30

D What is in?

Activity 2: **Answer Me!**

Direction: Choose the correct answer.

1. **A Web server is:**
   A. The world's largest supercomputer that contains and runs the Internet.
   B. A computer that stores Web pages and that is always connected to the Internet.
   C. A computer that acts as a gateway between your office network and the Internet.
   D. A waiter at a restaurant for spiders.

2. A Home page is the first Web page you see when you connect to the Internet. (True or False?)

3. **Which button on Internet Explorer's toolbar brings you back to the page you last viewed?**
   A. Home
   B. Stop
   C. Refresh
   D. Back

4. Which of the following statements is NOT true?
   A. Internet Explorer keeps a history of visited Web pages for 20 days.
   B. A search engine lets you search for Web pages for topics that interest you.
   C. Eudora is an e-mail program that comes with Windows XP.
   D. You can download and save images from a Web page onto your computer.

5. When you've finished writing a letter in Outlook Express, clicking the Send button on the toolbar will instantly send the message to its destination (True or False?)

6. **Which of the following statements is NOT true?**
   A. When you reply to a message, Outlook Express includes the content of the original message to make it easy for the recipient to know which message you're replying to.
   B. E-mail messages can contain files, such as pictures and word processing documents called *attachments*.
   C. You can send anonymous e-mail using the Blind Carbon Copy (Bcc) field.
   D. You can save a list of Web pages you visit frequently in Internet Explorer's Favorites list.

D What is it?

Introduction to the Internet

Figure 0-1

The Internet is the largest network in the world, consisting of millions of computers, all over the world, all connected together.

Figure 0-2

Web pages are stored on Web servers—computers that are permanently connected to the Internet.

Figure 0-1

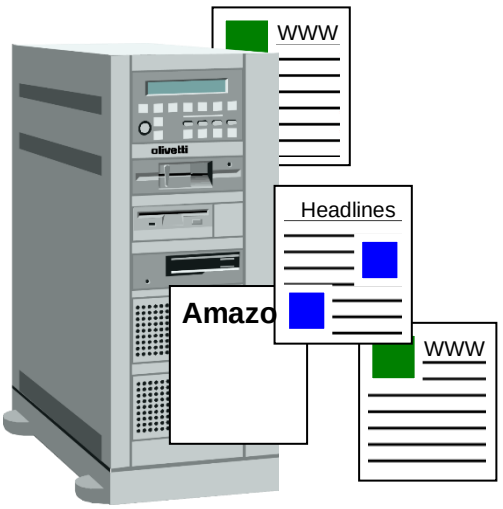


Figure 0-2

The Internet is the largest computer network in the world. It consists of millions of computers all over the planet, all connected to each another.

Terminology and Concepts

World Wide Web (WWW) vs. the Internet

- The World Wide Web (WWW) is just a small part of the Internet as a whole. The Internet relates to all the hardware and software involved, and as well as including the WWW, also includes FTP (File Transfer Protocol), email and newsgroups.

  The WWW is basically the text and pictures that you can view using a Web Browser, such as Microsoft Internet Explorer.

HTTP (Hypertext Transfer Protocol)

- HTTP stands for Hypertext Transfer Protocol. This is the language your Web Browser uses to request pages & graphics from the Web server. You do not need to worry about the details; it is just useful to know what this is. You can see that your Web Browser is using the HTTP protocol when it is shown at the start of a Web address such as **http://www.google.com**

HTML

- Short for Hypertext Markup Language. This is a format used by many web sites and can be used to display and format text and pictures on the web.

URL (Uniform Resource Locator)

- The URL (Uniform Resource Locator) is just another name for a Web address. The URL consists of the name of the protocol (usually HTTP or FTP) followed by the

address of the computer you want to connect to, e.g. a URL of **http://www.microsoft.com** would instruct your Web Browser to use the HTTP protocol to connect to the Microsoft Web site.

Hyperlinks

- A hyperlink is a piece of text (or a picture) on a Web page, which when clicked on will automatically:-

  - Take you to a different part of the same page
  - Take you to a different page within the Web site
  - Take you to a page in a different Web site
  - Enable you to download a file
  - Launch an application, video or sound

  Text which is underlined normally indicates a hyperlink. By default these text links are normally displayed in blue.

- When you move the mouse pointer over a hyperlink, it changes to the shape of a hand.

ISP (Internet Service Provider)

- If you want to connect to the Internet, you need to subscribe via an Internet Service Provider. The ISP gives you a connection to the Internet either via your telephone line or via a special digital high speed line. An example of a popular ISP is AOL (America On-Line).

FTP (File Transfer Protocol)

- FTP is just a way of transferring data from one place to another over the Internet. It is often used for downloading large files from a Web site. You do not really need to know anything about how it works, in most cases you will click on a link within a Web page, and your Web Browser (such as Microsoft Internet Explorer) will take care of the FTP transfer for you, all you have to decide is where to store the file that you wish to download.

  In many cases people who write and maintain Web sites will use an FTP program to send the data which makes up a Web site, from the hard disk on which it was created, to a Web server computer.

  There any many FTP programs available such as Cute FTP, an evaluation copy of which can be downloaded from **www.cuteftp.com**

Web sites and URLs

- A Web site is simply data which is stored on a WWW server and which can be freely accessed by people 'surfing the Web'. For instance, Microsoft has a Web site, from which you can download information and software. The trouble is that you need to know the address of the Web site; in much the same way as if you want to phone someone you have to know his or her phone number. The address of a Web site is given by something called its URL (Uniform Resource Locator). The structure of the URL is very precise. For instance, if you wish to use your Web

Browser to visit the Microsoft Web site you would have to use the URL:
http://www.microsoft.com

Thus if you wish to visit the Web site of the company that produced this training material you would use the URL:
http://www.cheltenhamcourseware.com

Due to the very large number of organizations who now have Web sites, you can also use a search engine, in which you can enter a word or phrase connected with what you wish to find and it will then display sites which match the information which you have entered. The results can be overwhelming, however. A recent search using the search words "PC courseware" displayed a list of a million sites containing these words!

Web Browser

- Web browsing applications include 'Internet Explorer' (from Microsoft) and 'Netscape Navigator/Communicator'. In both cases there are many different versions, and you will find that the later versions offer much more versatility, as well as a better range of built-in features. The Web Browser allows you to view Web pages.
  More information about search engines: http://www.searchenginewatch.com

Cookies

- Some Web sites can store hidden information about you on your hard disk using cookies. This information is stored in small text file. Cookies can be useful, for instance, a site may store your preferences about a Web site, so that when you re- visit the site your preferences can be accessed automatically. Cookies are used by some Web sites to identify you; this saves you having to "log in" to the Web site each time you visit.

  More information: http://www.cookiecentral.com

Internet cache

- Each time you display a Web site within your Web Browser, a copy of the information (both text and pictures) is saved on your hard disk. The reason for this is that the next time you want to re-visit the site; the information is quickly loaded from the copy on your hard disk, rather than slowly from the actual Internet site.

As pictures are stored in the cache, if you are visiting a site which has many separate Web pages, with say a company logo on each page, then all subsequent pages from that site will load a little faster as the logo graphics will load from the cache, not via the Internet.

Internet Search Engines

To search the Internet, you use what are called Internet search engines. These are easily accessed via your Internet browser (i.e. Microsoft Internet Explorer or Netscape Navigator/Communicator). Within the search engine, you enter a word or phrase and it will retrieve documents from the Internet based on the information you typed in.

International search engine examples include:

Alta Vista http://www.altavista.com
Excite http://www.excite.com
HotBot http://www.hotbot.com
Infoseek/GO http://www.go.com/
Lycos http://www.lycos.com
MetaCrawler http://www.metacrawler.com
MSN Internet Search http://search.msn.com
Web Crawler http://www.webcrawler.com
Yahoo http://www.yahoo.com

UK specific search engine examples include:

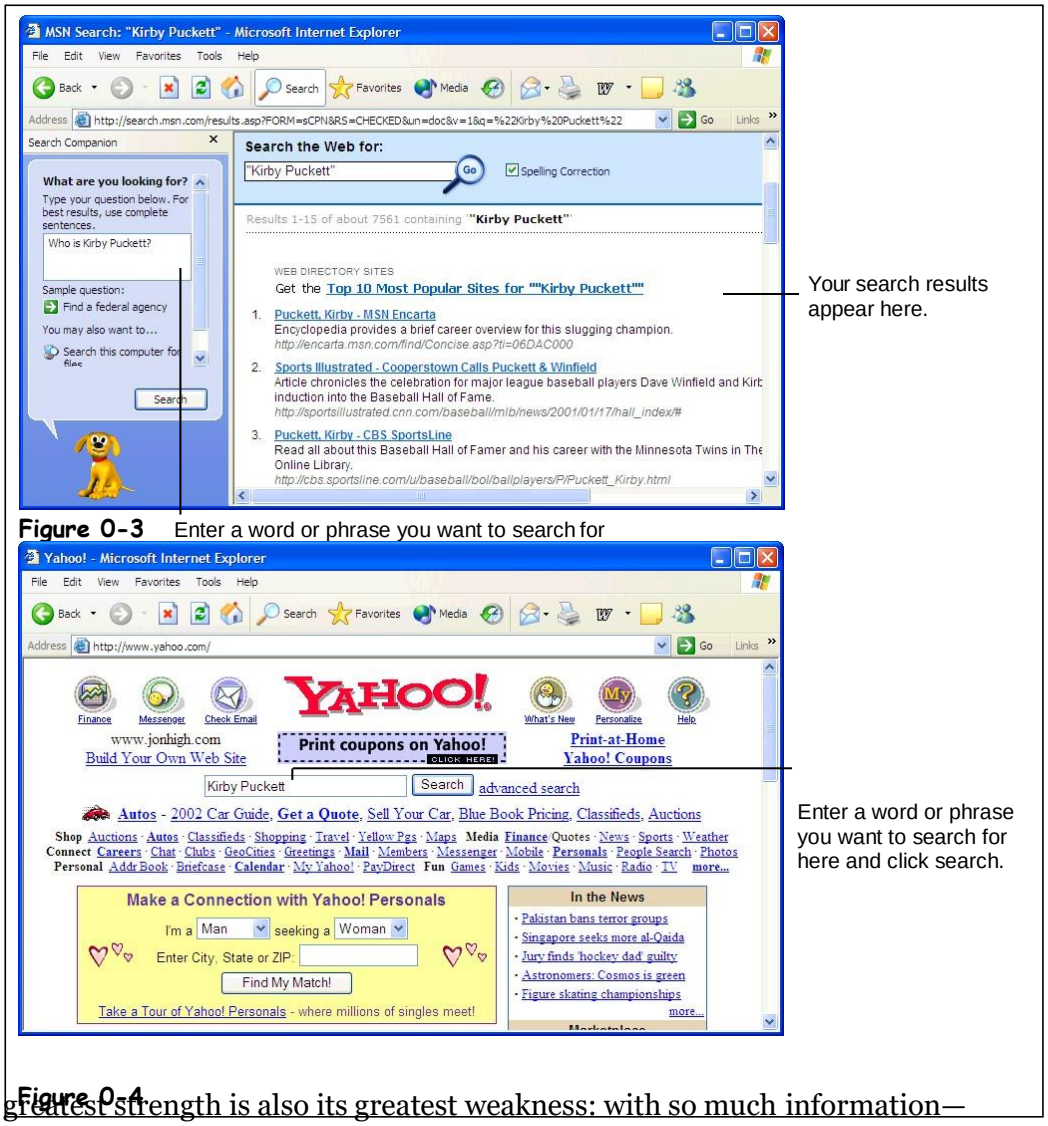
The UK Index http://www.ukindex.co.uk/uksearch.html
UK Plus http://www.ukplus.co.uk
Yell - UK Yellow Pages http://www.yell.co.uk
G.O.D. a UK Search Engine http://www.god.co.uk
Lycos UK http://www.lycos.co.uk
Infoseek UK http://www.infoseek.co.uk

Figure 0-3

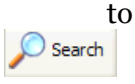
You can search the Web with Internet Explorer's integrated search function.

Figure 0-4

You can search the Web with Yahoo.



The Internet's greatest strength is also its greatest weakness: with so much information—literally millions of Web pages—it can be extremely difficult to find what you're looking for. Fortunately, there are many search engines that catalog the millions of Web pages on the Internet so that you can find Web pages on topics that interest you. There are many search engines available on the Internet—you've probably heard of some of the more popular ones, like Yahoo, Excite, and HotBot. In this lesson, you'll learn how you can search the Web to find information on the topics you specify.



Search button

1. Make sure your Web browser is open so you are connected to the Internet.

2. Click the Search button on the toolbar.

A Search pane appe

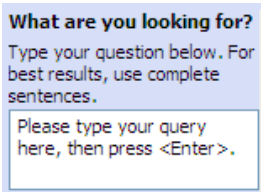
ars on the left side of Internet Explorer, as shown in Figure 0-3. This is where you specify what you want to search for.

3. **Click the Search box and type in the word or phrase you want to search for.**
   For better search results, use complete sentences or several keywords that describe what you're looking for. For example, typing "Where can I find a good oyster restaurant in Chicago?" would yield better results than simply "oysters".

4. Click Search.

   The Security Alert dialog box may appear (it appears any time you send information over the Internet, unless you check the "In the future do not show the warning" check box). If it does, you can safely click OK.

   Microsoft Internet Explorer returns a list of Web pages, ranked by relevance, that contain the word or phrase you specified. You may have to scroll down to view the entire list.



Search Box

5. Click the Web page you want to view.

   Are you finding mostly irrelevant information in your search results? Then you may have to refine your search. For example, a search on the word "Windows" may result in links to "Anderson® Windows," "Stained Glass Windows," and "Microsoft Windows", while a search on the phrase "Microsoft Windows" will result in links to "Microsoft Windows." Some search engines will let you search within your results. For example, you could do a search for "Microsoft Windows" and then further refine your search by searching the results for the word "Networking."

6. Click the Search button to close the search panel.

   You don't have to click Microsoft Internet Explorer's search button to look for information on the Web—you can also go directly to a search engine's Web site and specify what you want to look for there. Table 0-1: *Popular Search Engines on the Web* is by no means a definitive inventory of the dozens of search engines that are currently available on the Web, but it lists the best and most popular Web search engines and their Web addresses.

Table 0-1: Popular Search Engines on the Web

Site	*Web Address*	*Description*
AltaVista	www.altavista.com	Operated by Digital, AltaVista claims to catalog and index more Web pages than any other search engine.
Excite	www.excite.com	Excite has a powerful, highly rated search engine, and it also has one of the best customizable home pages on the Internet.

Google	www.google.com	Google is consistently ranked as the best and most relevant search engine. However, it doesn't contain many other features other than search.
Hotbot	www.hotbot.com	Though not as popular as some of the others, HotBot consistently ranks as one of the best, most relevant search engines.
Lycos	www.lycos.com	Lycos is another powerful search engine, especially if you're looking for information in formats other than Web pages, such as MP3 sound files.

Site	*Web Address*	*Description*
Yahoo	www.yahoo.com	The mother of all Web pages, Yahoo is actually more of a directory service than a search engine, but it makes it very easy to find topics, especially if you're new to the Internet.

E What is more?

Now that you are familiar with the internet, take this **SELF-ASSESSMENT** survey questionnaire. Answer the table below.

Learning Outcome 5: Use basic functions of a www-browser to locate information	**YES**	**NO**
Establish information requirements for internet search		
Launch browser		
Load search engine		
Enter appropriate search criteria/ or URL of site		
Follow relevant links to locate required information		
Bookmark useful pages and print as required		

E What I can do?

Activity 2:
Direction: Answer the following questions. Give at least 1-2 sentences only.

1. What is the term WWW short for?
2. What is the Internet and how is it useful?
3. What is the difference between the Internet and the WWW?
4. What is an Internet search engine?
5. List examples of commonly used search engines.

A What I have learned?

Activity 3: Do It!

Table1: What Can I do on the Internet?

Task	*Description*
Send and Receive E-mail	Exchanging electronic mail (or e-mail) is the most used and most popular feature on the Internet. Just like regular paper mail, you can send and receive e-mail with people around the world, as long as they have access to a computer and the Internet. Unlike regular paper mail, e-mail is usually delivered to its destination almost instantly.
Browse the World Wide Web	The World Wide Web is what most people think of when then think of the Internet—although it's really only a part of the Internet. The World Wide Web is an enormous collection of interconnected documents stored on Web servers all over the world. The World Wide Web has information on every subject imaginable.
Join online discussions with newsgroups	Newsgroups are discussion groups on the Internet that you can join to read and post messages to and from people with similar interests. There are thousands of newsgroups on topics such as computers, education, romance, hobbies, politics, religion, and more.
Chat with other online users	Chatting lets you communicate with people on the Internet instantly—no matter how far away they are! Most chats are text- based, meaning you have to type when you converse with people on the Internet. A growing number of chats have voice and even video capabilities—all without having to pay long distance changes.
Download software	You can download pictures, demo programs, patches and drivers for your computer, and many other types of files and save them to your computer.
Listen to music and watch videos	You can listen to sound on the Web, such as radio stations, or music by your favorite artists.

Answer

What's New

**Answers may vary*

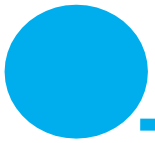
Learning Outcome 5: Use basic functions of a www-browser to locate information	YES	NO
Establish information requirements for internet search		
Launch browser		
Load search engine		
Enter appropriate search criteria/ or URL of site		
Follow relevant links to locate required information		
Bookmark useful pages and print as required		

What is In

1. **B.**
2. **TRUE**
3. **BACK**
4. **B.**
5. **TRUE**
6. **D.**

What I can do

****Answers may vary***



Reference

Additional Resources

Basic Concepts in IT). ECDL Approved Courseware Syllabus Version 3.0

Microsoft® Computer Basics Student Edition Advanced, Center for Integration of Technology in Education

I What I need to know?

You are now in the Learning Outcome 6 of Lesson 2 which is **maintain computer equipment and systems.**

The most important thing that you store on your computer is information. Often the contents of a hard disk can represent years of work. If the hard disk stops working one day you could lose all those years of work. For this reason it is VITAL that you take regular backups of the information that is stored on the computer.

Lesson 2 Performing Computer Operations

Plan and prepare for the task to be undertaken

Input data into computer

Access information using computer

Produce output/ data using computer system

Use basic functions of a www-browser to locate information

Maintain computer equipment and systems

After going through this module, you are expected to:

1. Know the purpose of backing up computer files; and
2. Protecting your computer.

What is new?

Hi! You are about to start this module. Before anything else, let have first an open- group discussion

Learning Outcome 6: Maintain computer equipment and systems	**YES**	**NO**
Implement procedures for ensuring security of data, including regular backups and virus checks in accordance with standard operating procedures		
Implement basic file maintenance procedures in line with the standard operating procedure		

D What I know?

Hey! This part of the module is about the 6th learning outcome of the Lesson 2 which is **Maintain computer equipment and systems**

Let's Watch This

Video: 10 Tips for Basic Computer Maintenance and Security

https://www.youtube.com/watch?v=9aFVjvCJcbk

D What is in?

Activity 2: **Familiarize Me!**

Direction: Answer the following questions. Write at least 1-2 sentences only.

- What are computer viruses?
- How do viruses infect PCs?
- How might you protect your PC against virus threats?

D What is it?

Security

Organizing your computer for more efficient backups

When you think about it you have a computer containing many programs and also a large amount of data that you have created, then it is only the data that really needs to be backed up. If you create a folder structure that contains only data then only this directory (plus any sub-directories of this directory) needs to be backed up.

Beware of 'open files'

You should perform backups at night. If you backup your computer during the day (when you are using programs on the computer) then any program or data files that are in use at the time of the backup will not be backed up. The backup program will skip these 'open'
files.

Passwords

If your computer has a password that prevents other users from accessing it then do NOT give this password to anybody else. Do not write the password on a card and prop this up next to the monitor and above all do not attempt to hide your access passwords on the underside of your desk (this is the first place most criminals would look if trying to break into your system). Make sure you do not forget
your passwords; in many cases, data cannot be recovered once the password is lost.

The Importance of shutting down your computer

When you are using a Windows based system it is important to remember that just switching off the computer or losing power due to a power cut (power outage) can cause loss of data. To protect against this, you should save your work regularly. Many programs have a facility that automatically saves your work, say every 10 minutes (or any time interval that you specify).

Some operating systems, such as the later versions of Windows 95 and also Windows NT have a facility that will automatically detect that the computer was not properly shut down the last time it was used. If this situation is detected, then a special recovery program will be run that will attempt to fix any damage caused by the power cut.

You MUST always use the shutdown command (located on the Start menu) to close down the operating system, before switching off the

power.

Things computers like	• Good ventilation • Clean environment • Stable, vibration free surface
Things to avoid	• Dust • Drinking and eating over the keyboard • Heat, Cold • Moisture • Do not move the system while its switched on, doing so could damage the hard disk inside the machine. • Do not just switch the computer off at the mains! Follow the correct shutdown procedure or data could be lost. • Do not place objects on top of monitors. This could block the ventilation holes and cause it to overheat. • Do not place floppy disks near monitors. Monitors produce a strong electromagnetic field, which can damage floppy disks
What to do if the computer breaks down	If you are working within a large organization, you should be aware of the company's policy if the computer suddenly breaks down. Many large companies has a special computer support department and you should make sure that you know how to contact them in case of emergency. In many smaller organizations, the situation is much less formalized. If you are not qualified to make repairs on the computer, do NOT attempt to open the computer case and investigate. This is especially true of the computer monitor, inside which, are many components operating at VERY HIGH VOLTAGES, which can kill! If in doubt, get a qualified technician to fix the problem. Prior to contacting your computer support staff you may (if authorized by your organization) check that the various external components, such as the mouse, keyboard, monitor and network connections are in fact properly connected to the back of the computer. A very common complaint to support groups is that the screen is not working. You may wish to check that someone has not inadvertently switched off the screen, prior to ringing the support group! One of the more common reasons for a network not working is that someone (maybe an overnight cleaner) has accidentally pulled the network cable out of the back of a computer.

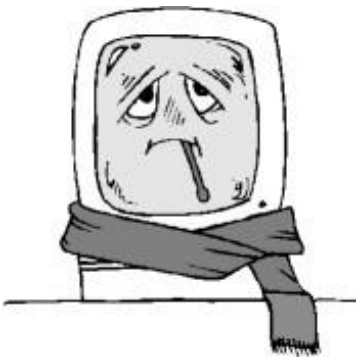
Computer Viruses

What are computer viruses?

Viruses are small programs that hide themselves on your disks (both diskettes and your hard disk). Unless you use virus detection software the first time that you know that you have a virus is when it activates. Different viruses are activated in different ways. For instance, the famous Friday the 13th virus will activate only when it is both a Friday and the 13th of the month. **BEWARE**: Viruses can destroy all your data.

How do viruses infect PCs?

Viruses hide on a disk and when you access the disk (either a diskette or another hard disk over a network) the virus program will start and infect your computer. The worst thing about a computer virus is that they can spread from one computer to another, either via use of infected floppy disk, or over a computer network.



The Internet allows you to access files from all over the world and you should never connect to the Internet unless you have a virus-checking program installed on your computer.

It is vital to keep your virus monitoring software up to date. Many such as Norton Anti-Virus allow you to update the program so that the program can check for recently discovered viruses.

More Information:
Macfee anti virus software http://www.mcafee.com
Norton Anti-virus software
http://www.symantec.com/avcenter DR Solomon anti-virus software http://www.drsolomon.com

How to prevent virus damage

There are a number of third party anti-virus products available. Most of these are better than the rather rudimentary products available within DOS and Windows, but of course, you do have to pay for them! The main thing about your virus checker is that it should be kept up to date. Many companies supply updated disks on a regular basis or allow you to receive updates through an electronic, on-line bulletin board.

To password protect your computer	You can set a power-on password on your computer. The mechanism for setting this will vary from one computer to another, and is determined by the makers of the computer, rather than by DOS. The advantage of a power-on password is that the computer will not boot to DOS until you supply the correct password. This means that no one else can play around with your computer and in the process accidentally infect it with a virus.

E What is more?

Now that you are familiar with maintaining your computer, take this **SELF-ASSESSMENT** survey questionnaire. Answer the table below.

Learning Outcome 6: Maintain computer equipment and systems	**YES**	**NO**
Implement procedures for ensuring security of data, including regular backups and virus checks in accordance with standard operating procedures		
Implement basic file maintenance procedures in line with the standard operating procedure		

E What I can do?

Activity 2: **Draw your idea**
Direction: Answer the question, then draw your answer inside the box. Write a simple explanation below your output.

Why might electrical surge protection for your computer be a good idea?

Explanation:

Rubrics:
Originality – 5
Content – 5

A What I have learned?

Activity 3:
List down the main points of the lesson. Give only (5) five. 1.

Answer

What's New

Answers may vary

Learning Outcome 6: Maintain computer equipment and systems	**YES**	**NO**
Implement procedures for ensuring security of data, including regular backups and virus checks in accordance with standard operating procedures		
Implement basic file maintenance procedures in line with the standard operating procedure		

What is In

Answers may vary

What I have learned?

Answers may vary

Reference

Additional Resources

Basic Concepts in IT). ECDL Approved Courseware Syllabus Version 3.0

Microsoft® Computer Basics Student Edition Advanced, Center for Integration of Technology in Education