

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
Уманський державний педагогічний університет імені Павла Тичини

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E N G L I S H
FOR SPECIFIC PURPOSES
(MATHEMATICS. PHYSICS. INFORMATION TECHNOLOGY.
NATURAL SCIENCES)

(навчальний посібник з англійської мови за професійним спрямуванням
для здобувачів вищої освіти ОС Бакалавр)

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Гут Н. В.

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Навчальний посібник укладено на засадах кредитно-трансферної системи навчання. Мета посібника – навчання різним видам читання та реферування, удосконалення мовленнєвих навичок здобувачів вищої освіти ОС Бакалавр за допомогою створення професійно-орієнтованих ситуацій. Лексичне наповнення текстів відображає сучасні тенденції розвитку як розмовної, так і академічної англійської мови.

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ЗМІСТ

ПЕРЕДМОВА	4
ЗМІСТОВІ МОДУЛІ	
MODULE 1. MATHEMATICS. PHYSICS	
1. MATHEMATICS AND PHYSICS	6
2. CAREERS IN MATHEMATICS AND PHYSICS	15
3. TO BE A GOOD SCIENTIST	22
MODULE 2. INFORMATION TECHNOLOGY	
1. WHAT IS INFORMATION TECHNOLOGY?	32
2. HISTORY OF INFORMATION TECHNOLOGY	41
3. INFORMATION TECHNOLOGY AND EDUCATION	45
MODULE 3. NATURAL SCIENCES	
1. ANCIENT SCIENCE (CHEMISTRY)	56
2. THE SCIENCE OF LIFE (BIOLOGY)	64
3. WHAT IS BIOTECHNOLOGY?	69
МАТЕРІАЛИ ДЛЯ САМОСТІЙНОГО ОПРАЦЮВАННЯ	
Тексти для читання	79
Тексти для анотування	93
ДОДАТКИ	
Додаток 1. Рекомендації до анотування текстів	107
Додаток 2. Рекомендації до написання індивідуальних навчальних та компаративних завдань	109
Додаток 3. Матеріали для обговорення	111
Додаток 4. Information Technology terms	118
АНГЛО-УКРАЇНСЬКИЙ СЛОВНИК	128
УКРАЇНСЬКО-АНГЛІЙСЬКИЙ СЛОВНИК	137
СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ	145

ПЕРЕДМОВА

Навчальний посібник з англійської мови за професійним спрямуванням має на меті вдосконалення і подальший розвиток знань, навичок та вмінь здобувачів вищої освіти ОС Бакалавр у різних видах мовленнєвої діяльності.

Структура навчального видання дозволяє реалізувати вимоги національної кредитно-трансферної системи, запровадженої у вищій освіті як передумови для приєднання України до Болонського процесу.

Змістові модулі курсу є логічно завершеними частинами навчальної дисципліни, орієнтованими на вироблення вмінь у ситуаціях, що є спільними для спеціалістів певного професійного спрямування – вчителів математики, фізики, інформатики та природничих наук. Зміст кожного із 4 модулів відрізняється різноманіттям конкретного наповнення, хоча всі вони викладені за єдиною схемою та на засадах принципу наступності. В основі модуля – тематичний цикл – навчально-методична одиниця, яка включає комплекс базових і додаткових текстів, тренувальних вправ та творчих завдань, об'єднаних за тематичним принципом. Лексичне наповнення текстів відображає сучасні тенденції розвитку як розмовної, так і академічної англійської мови. Кожна тематична частина модуля закінчується вправою, яка спрямована на контроль рівня сформованості вмінь та навичок у певних видах мовленнєвої діяльності.

Навчальний посібник знайомить зі специфікою анотування і правилами роботи з адаптованим джерелом інформації. Аналізуючи готовий зразок, студент повинен зробити висновок щодо порядку, принципів і засобів укладання анотації, перейти до самостійного анотування оригінальних статей. При виборі матеріалів для анотування до уваги бралася тематика, яку студенти вивчають рідною мовою зі спеціалізованих дисциплін, отже, при опрацюванні неадаптованих англійських текстів вони опираються на отримані знання.

Матеріал кожного модуля включає також завдання для індивідуальної роботи студента як невід'ємної частини навчальної діяльності. Короткий тематичний опис, орієнтовне планування кожного завдання допоможуть студентам у підборі матеріалу та написанні творчих, реферативних та компаративних робіт.

Додатки навчального посібника містять основні вимоги щодо укладання анотацій, написання індивідуальних навчально-дослідницьких завдань, а також матеріал, який може бути цікавим для студента під час опрацювання того чи того змістового модуля.

Навчальний посібник має практичне спрямування, що дає змогу студентам набути професійну та функціональну комунікативну компетенцію у володінні англійською мовою. Навчальна діяльність здійснюється шляхом інтеграції мовленнєвих знань, умінь та навичок у рамках тематичного і ситуативного контексту відповідно до академічної і професійної сфер студента.

Опрацювавши матеріал навчального посібника, студенти повинні оволодіти знаннями:

- мовних форм, властивих для офісних та розмовних реєстрів;
- лексичних одиниць (у тому числі термінології), що є необхідними в академічній та професійній сферах;
- лаконічного вираження отриманої із тексту інформації та анотування прочитаних текстів, розуміння та продукування широкого кола текстового матеріалу в професійній сфері.

ДОДАТКИ

ДОДАТОК 1

РЕКОМЕНДАЦІЇ ДО АНОТУВАННЯ ТЕКСТІВ

Анотація слугує для ознайомлення майбутнього читача з метою і низкою проблем, що обговорюються у початковому тексті, книзі або повідомленні; вона може містити деякі примітки або пояснення автора анотації. Анотація має подвійне цільове призначення. По-перше, вона допомагає глибше осмислити і засвоїти основний зміст прочитаного; по-друге, анотація дає читачеві можливість отримати загальне поняття про зміст оригіналу і його інформаційні цінності і прийняти рішення: читати першоджерело чи обмежитись лише знайомством з анотацією.

Як правило, процес навчання анотування включає смисловий аналіз змісту тексту, виділення головного, виключення другорядних фактів і деталей, деяку трансформацію мовного та структурного оформлення речень. Складаючи анотацію, потрібно враховувати такі вимоги:

1. Анотація являє собою конспективний виклад суттєвих положень оригіналу, тобто містить основну інформацію джерела, що реферується.

2. При складанні анотації не ставиться завдання щось довести читачеві або в чомусь його переконати, анотація не містить критичної оцінки, в ній об'єктивно передається зміст прочитаного.

3. Загальні вимоги до анотації: точність, стислість, ясність, простота. Швидкому і точному сприйняттю змісту анотації сприяють прості закінчені речення. Вживати складні речення не рекомендується.

4. Текст анотації не має абзаців, розділів, рубрик. В анотації використовуються перерахування, узагальнення, науково забарвлені вирази.

План анотування тексту та вирази для анотування

- | | |
|--------------------------------------|--|
| 1. The title of the text (abstract). | The text is headlined ...
The headline of the text I have read is ... |
| 2. The main idea of the text. | The main idea of the text is ...
The text is about ...
The text is devoted to ...
The text deals with ...
The text is concerned with...
The text touches upon ...
The text dwells upon...
The text highlights...
The text discusses... |

- The text presents...
- The purpose of the text is to give the reader some information on ...
- The intention of the text is...
- The subject of the text is...
- The text is devoted to the problem of...
- The aim of the text is to provide the reader with some material (data) on ...
3. The contents of the text, problems raised in it. Some facts, names, figures.
- a) The author starts by telling the reader that ...
At the beginning of the text the author describes (dwells on, touches upon, explains) that...
- b) The author writes (states, stresses, describes, thinks, points out) that ...
The author also provides the information on...
The problems of... are considered
... are covered.
... are formulated.
... are also presented.
... are studied.
- Thereafter, ...
- The text describes ...
- It was noted...
- The second part is concerned with...
- c) According to the text ...
Further the author reports (says) ...
First,...second,...
- Then (after that, further on, next) the author passes on to, goes on to say that..., gives a detailed (brief) analysis (description).
- The text goes on to say that...
- d) In conclusion ...
The author comes to the conclusion that ...
The general consideration are supported by...
The text ends with...
- The text ends with the depiction (analysis) of...
The text is interesting, useful for (students, pupils, scientists etc).
4. Target group.

РЕКОМЕНДАЦІЇ ДО НАПИСАННЯ ІНДИВІДУАЛЬНИХ НАВЧАЛЬНИХ ТА КОМПАРАТИВНИХ ЗАВДАНЬ

ІНДЗ (індивідуально навчально-дослідне завдання) включає такі види завдань, спрямованих на відтворення інформації тематичного змісту та розвиток комунікативних компетенцій студентів:

I. Укладання рефератів у межах тематики змістового модуля.

Технічне оформлення: Обсяг тексту – до 25 тис. др. знаків (10-15 ст. друкованого тексту). Текст набирається шрифтом “Times New Roman”, розмір – 14 пт, міжрядковий інтервал – 1,5, відступ абзацу – 1,25. Параметри сторінки: всі поля – 2 см. Додається електронний варіант реферату, збережений на електронному носіїві.

Структурне оформлення:

1) Титульна сторінка:

Ministry of Education and Science of Ukraine

Pavlo Tychyna Uman State Pedagogical University

Foreign languages department

.....

(тема реферату)

Materials for presenting project paper

Prepared by

Olexandr Ivanov

Group 4

Department of Physics, Mathematics
and Informatics

2) Зміст (Planning).

3) Вступ (Introduction).

4) Текст реферату (кожна структурна частина тексту пишеться із нової сторінки і відповідає зазначеним пунктам плану).

5) Список використаної літератури та електронних джерел (Literature).

Посилання на використану літературу обов'язкові, оформлюються за загальними вимогами до такого виду досліджень, наприклад: [1, 5], де 1 – номер джерела у списку літератури, а 5 – номер сторінки, якщо така є.

Захист реферату здійснюється у формі усної презентації укладеного матеріалу в обсязі 150-200 слів.

Перелік тем рефератів з дисципліни:

1. Outstanding mathematicians and physicists.
2. Famous prizes in Mathematics and Physics.

3. Mathematics / Physics associations.
4. Information technology in the 21st century.
5. Information technology of future.
6. Information technology and other sciences.
7. Why Chemistry Is Important?
8. UNESCO prizes and awards in science
9. Three Branches of Natural Science: Physical, Earth & Life

II. Компаративне завдання (порівняльна характеристика психологічних явищ, феноменів тощо). Творче завдання підвищеної складності, що базується на попередній підготовці матеріалу пізнавального характеру з подальшим компаративним аналізом визначених аспектів (в межах тематики змістового модуля).

Технічне оформлення: Презентація, виконана у Microsoft Power Point, збережена на електронному носіїві. Обсяг – до 30 слайдів.

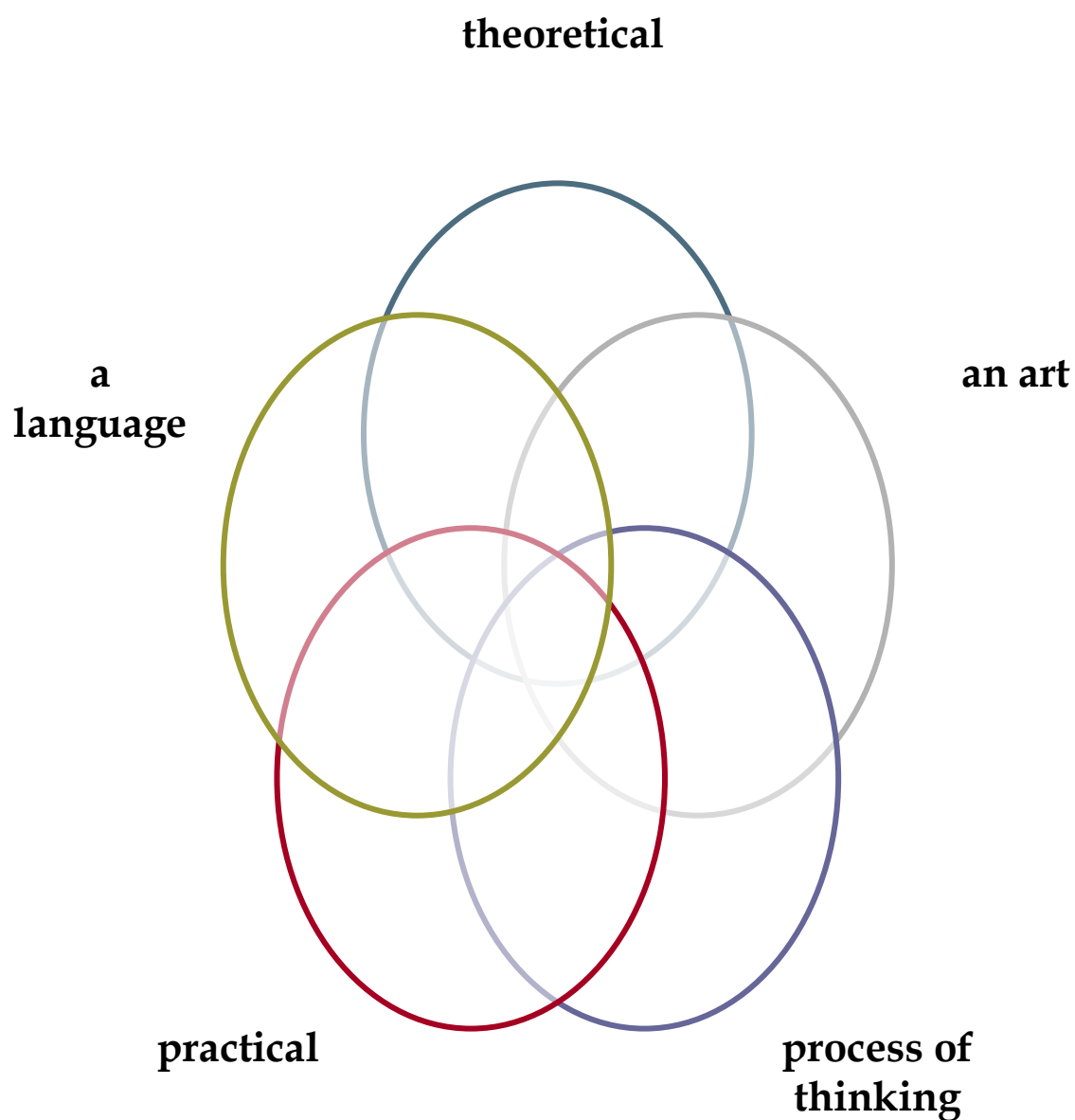
Захист компаративного завдання здійснюється у формі усної презентації укладеного матеріалу.

Перелік тем компаративних завдань з дисципліни:

1. Theoretical Mathematics / Physics and Applied Mathematics / Physics.
2. A good specialist and a bad specialist.
3. Science Teaching: Yesterday, Today, and Tomorrow.
4. Information technology: advantages and disadvantages.
5. Information technology: yesterday, today, tomorrow.
6. Information technology at school and University.
7. Natural Sciences: Yesterday, Today and Tomorrow.
8. The future of interdisciplinary studies (such as geophysics, marine biology, biochemistry, etc.).
9. Genetically modified products - pros and cons.

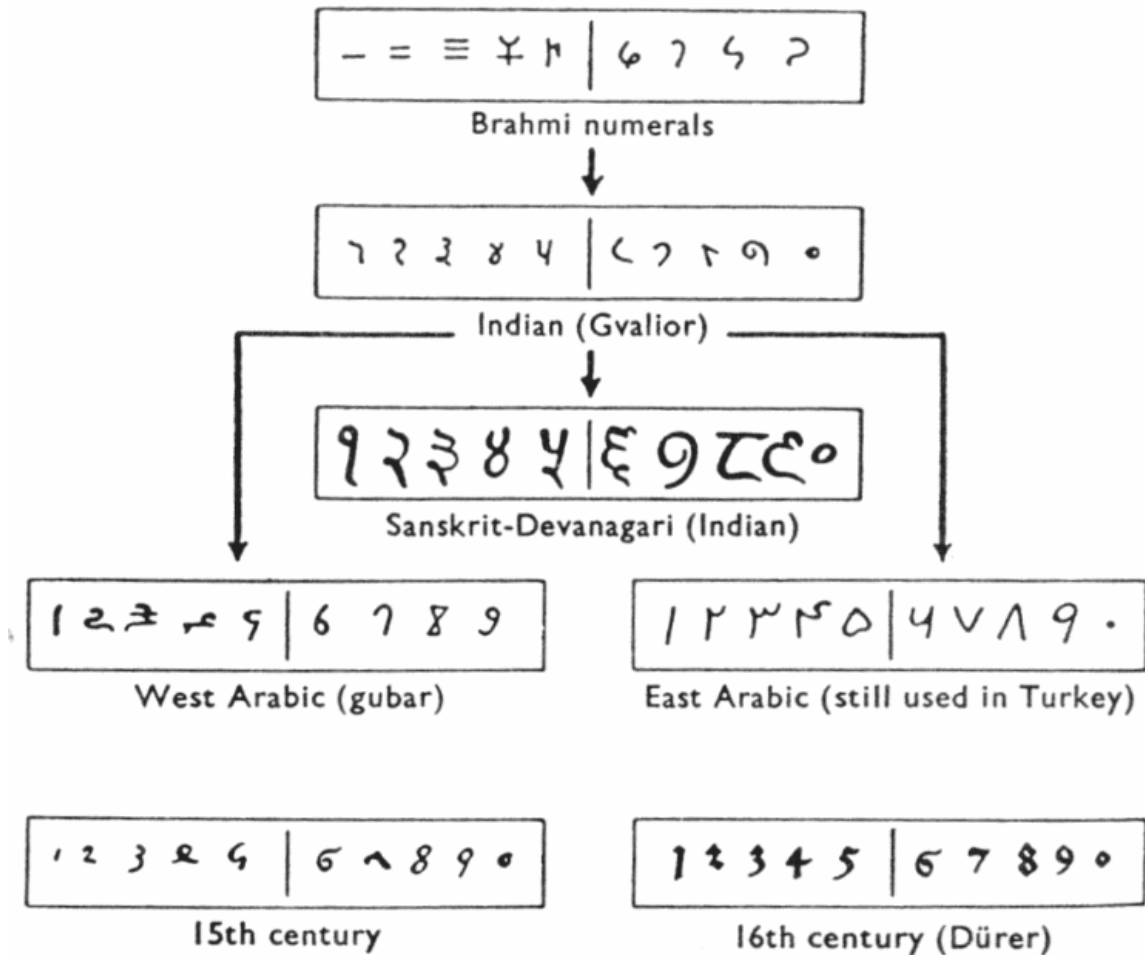
3.1. MATHEMATICS

MATHEMATICS IS...



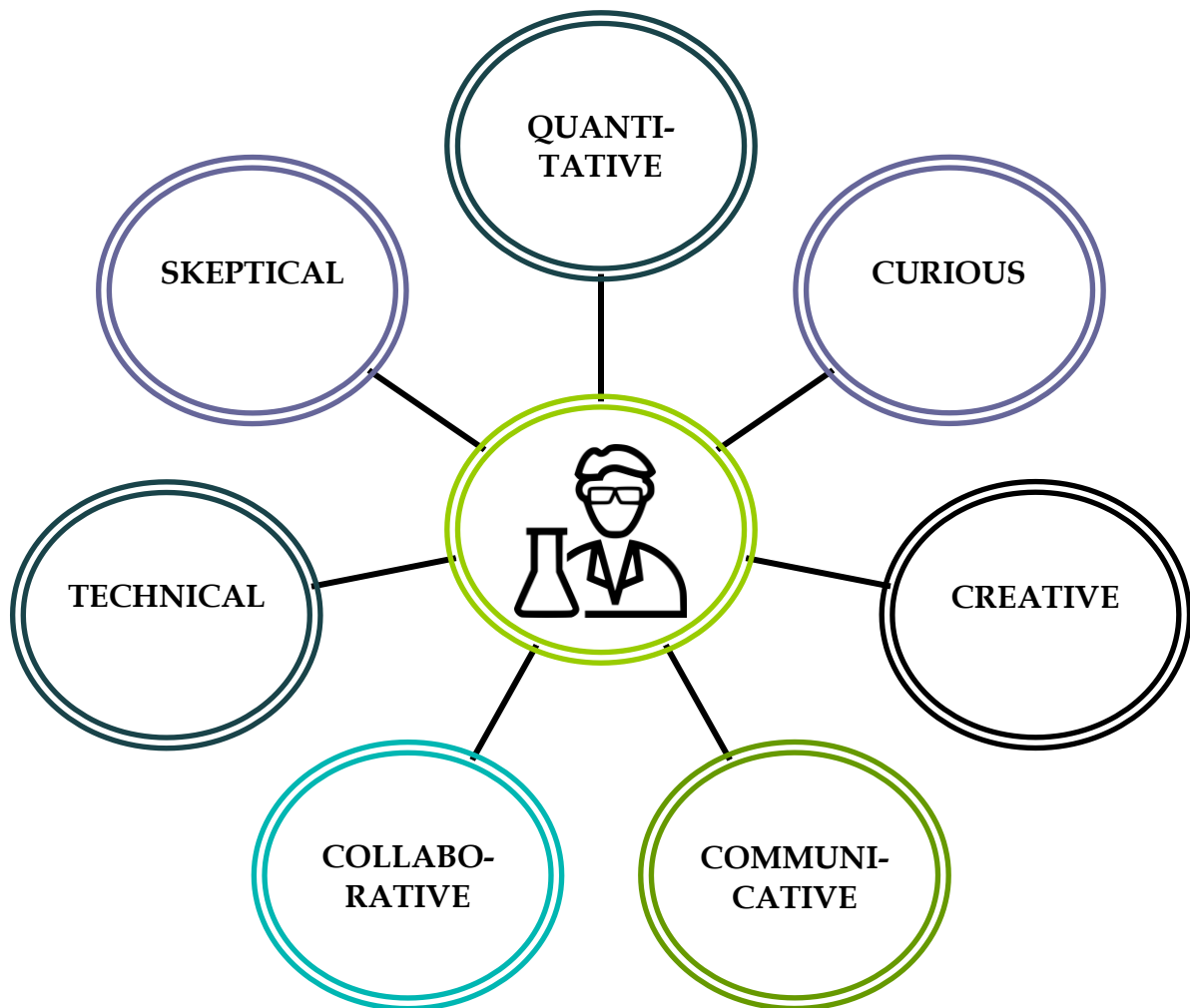
3.2. DEVELOPMENT OF HINDU-ARABIC NUMERALS

Hindu-Arabic numerals are now used in most of the countries of the world. It took more than 1,500 years for numerals to develop their modern shape. People who write in the Arabic alphabet still use an older form of Hindu-Arabic numerals called East Arabic numerals.



See: <https://studycorgi.com/the-history-and-evolution-of-number-systems-and-counting/>

3.3. PROFILE OF SCIENTIST

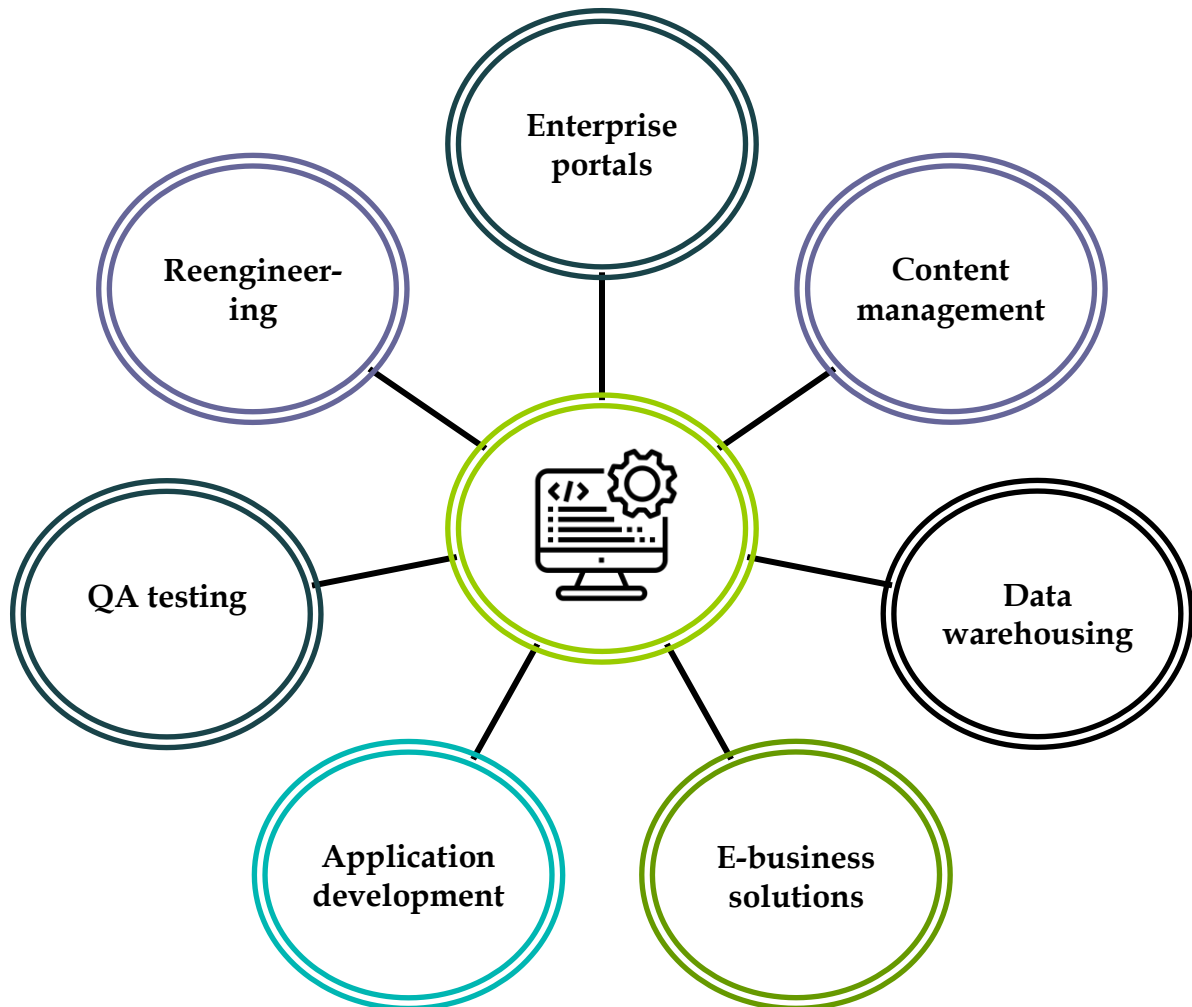


See: <https://www.google.com/search?q=profile+of+scientist+diagrams> =gws-wiz-serp

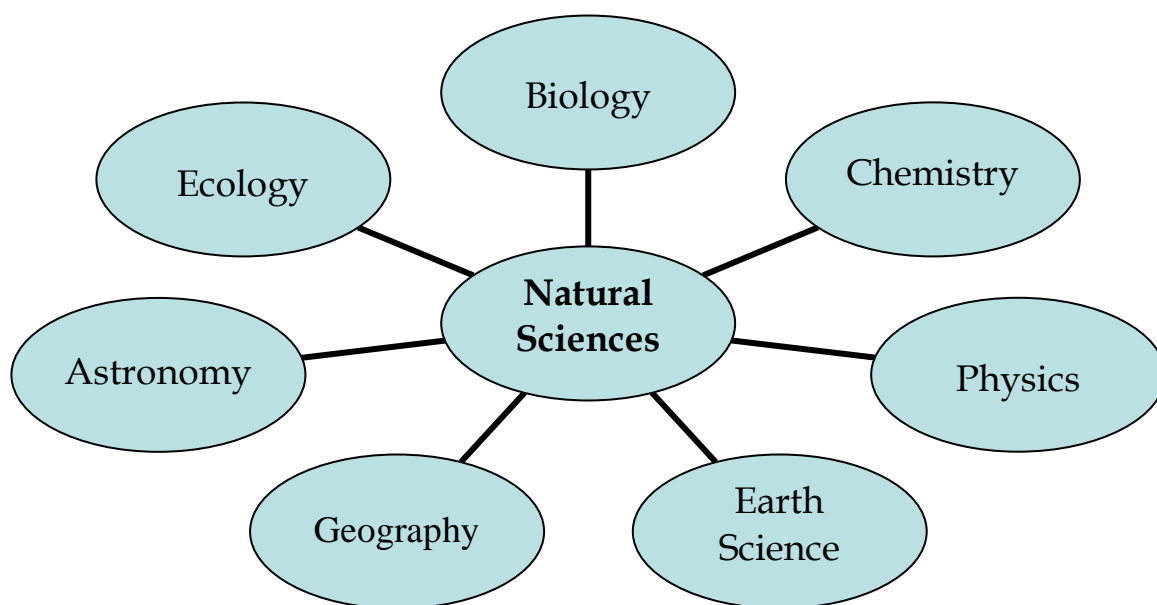
3.4. INFORMATION TECHNOLOGY SERVICES

Information technology services means services designed to provide functions, maintenance, and support of information technology devices, or services including but not limited to computer systems application development and maintenance; systems integration and interoperability; operating systems maintenance and design; computer systems programming; computer systems software support; planning and security relating to information technology devices; data management consultation; information technology education and consulting; information technology planning and standards; and establishment of local area network and workstation

management standards (<https://www.lawinsider.com/dictionary/information-technology-services>).

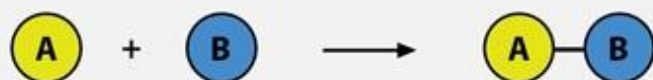


3.5. FIELDS OF NATURAL SCIENCES



3.6. TYPES OF CHEMICAL REACTIONS

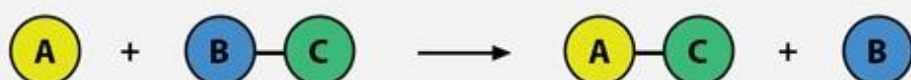
1. Combination or Synthesis Reaction



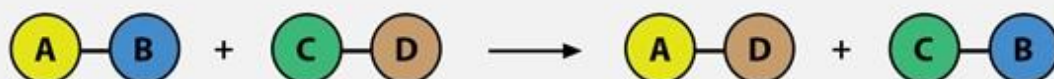
2. Decomposition Reaction



3. Single-replacement Reaction



4. Double-replacement Reaction



5. Combustion Reaction



See: <https://www.chemistrylearner.com/chemical-reactions>

3.7. PERIODIC TABLE OF THE ELEMENTS

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112,411	49	In Indium 114,818	50	Sn Tin 118,710	51	Sb Antimony 121,760	52	Te Tellurium 127,603	53	I Iodine 126,905	54	Xe Xenon 131,293	55	Cs Cesium 132,906	56	Ba Barium 137,327	57-71	Lanthanides	72	Hf Hafnium 178,490	73	Ta Tantalum 180,948	74	W Tungsten 183,848	75	Re Rhenium 186,207	76	Os Osmium 190,230	77	Ir Iridium 192,217	78	Pt Platinum 195,078	79	Au Gold 196,967	80	Hg Mercury 200,590	81	Tl Thallium 204,383	82	Pb Lead 207,200	83	Bi Bismuth 208,980	84	Po Polonium 209,000	85	At Astatine 210,000	86	Rn Radon 222,000	87	Fr Francium 223,000	88	Ra Radium 226,000	89-103	Actinides	104	Rf Rutherfordium 261,000	105	Db Dubnium 262,000	106	Sg Seaborgium 266,000	107	Bh Bohrium 264,000	108	Hs Hassium 277,000	109	Mt Meitnerium 278,000	110	Ds Darmstadtium 281,000	111	Rg Roentgenium 282,000	112	Cn Copernicium 285,000	113	Nh Nihonium 286,000	114	Fl Flerovium 289,000	115	Mc Moscovium 290,000	116	Lv Livermorium 293,000	117	Ts Tennessine 294,000	118	Og Oganesson 294,000	119	Uu Ununennium 295,000	120	Uub 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ДОДАТОК 4

INFORMATION TECHNOLOGY TERMS

4.1. INFORMATION TECHNOLOGY ACRONYMS

AND	Advanced Digital Network
ADSL	Asymmetric Digital Subscriber Line. A line with a slower upload speed and higher download speed, e.g. downloads at up to 1.544 megabits per second and uploads at, 128 kilobits per second. Theoretically speeds could be much higher.
Affiliate	A web publisher who promotes a product in between the merchant and the end customers to earn a commission for referring clicks, leads, or sales.
Anonymous FTP	Logging in to a site to transfer files without supplying a specific username and password.
Applet	A small program, written in Java, that is inserted in an HTML page. Applets, unlike full Java programs, can't use the local computer's files, modems, printers, etc. or communicate with other computers - only the computer which sent the applet.
Application Server	Software run from a Server to manage how other software is made available on a network. This enables more efficient use of resources e.g. memory and database access.
ASCII	The American Standard Code for Information Interchange is the commonly accepted standard for representing the numbers used by computers for all Latin letters, numbers, punctuation, etc. The 128 standard ASCII codes can be represented by a binary number from 0000000 to 1111111.
ASP - Application Service Provider	The organisation which operates one or more computer services (called applications) on their own server and charges others a fee to use those services. The applications which are provided may include organizational or collaborative applications which require significant computing power.
Auto-Responder	An email feature that automatically sends an email message to anyone who sends it a message.
Bandwidth	The amount of data bits which can be sent through a connection in a specified time, measured in bits-per-second (bps.) English text converts to about 16,000 bits and dial-up modems push up to 57,000 bits through per second. Video may need about 10,000,000 bits-per-second.
Baud	A standard measure of the speed of a modem. Usually defined as the number of bits it transfers per second. Technically, a 1200 bit-per-second modem runs at 300 baud, moving 4 bits per baud (1200 bits per second).
Blog - web LOG	A diary or journal on an Internet site. The focus may range from the blogger's life to any subject which they are interested in. Blogs require regular updating to continue to hold the interest of visitors. Since the explosive growth in blogging and consequent interest from companies interested in promoting their products and services to people that maintain or visit blogs, many companies have started their own blogs.
Blogger	Someone who maintains and is responsible for the content of a blog.
Blogo-sphere	An ever-changing 'world' composed of blogs and those who are

or Blogsphere	interested/involved with them.
Broadband	Internet connections which allow transfers at much higher rates than through dial-up modems by accessing more bandwidth. They include DSL and Cable-TV connections.
Browser	Short for Web Browser; it's the tool (program) that allows you to surf the web. You probably used your Web Browser to locate this page. The most popular Web Browsers right now are Netscape Navigator and Internet Explorer.
CGI - Common Gateway Interface.	Rules which define that way that communication between a Web Server is done. Any software which handles complies with this CGI standard may be a CGI program.
Chat Room	An Internet site (or part of a site) where people "chat" with other people in the room. There are thousands of Chat Rooms, usually organized by topic.
Conversion Rate	Percentage of clicks that result in a commission-able activity (sale or lead).
Cookie	A "cookie" is an Internet site's way of keeping track of you. It's a small program built into a web page you might visit. Typically you won't know when you are receiving cookies. Ideally a cookie could make your surfing easier by identifying you, tracking sites you visit, topics you search, and get a general feel for your preferences. It can also be used to collect your e-mail address for marketing purposes. You may use your (advanced) browser settings to warn you before you accept cookies or to reject them all. Keep in mind that some secure sites, such as stock trading sites, won't work if you don't accept their cookies.
Counter	A number on many web pages that will count the number of hits or count the number of times the page has been accessed. Basically, it counts the number of people that have visited that page.
Cyber-space	Term used to describe the Internet and related networks; the term was coined by science-fiction novelist William Gibson in 1984 in Neuromancer.
Digerati	People that consider themselves as knowledgeable about, or connected to, the cutting edge of every part of the digital world.
DNS	Domain Name System. The Domain Name System is how Internet domain names (such as 'mydomain.com') are converted to IP numbers by the DNS Servers.
DSL	Digital Subscriber Line - a circuit, connecting specific locations, which supports moving data over regular phone lines faster than a regular phone connection. This is like, but not the same as, a leased line.
E-mail - Electronic- mail	This tool is usually provided by your ISP. It allows you to send and receive mail (messages) over the Internet. Through e-mail you can write your friends, ask your ISP a technical question about your service, or even receive an Internet birthday card.
eZine	Short for electronic magazine. Some e-zines are simply electronic versions of existing print magazines, whereas others exist only in their digital format.
FAQ	An acronym for Frequently Asked Questions. This is a list of Questions

	that are Frequently Asked, with the answers. This mini-help file saves time because clients can get the information they need without support personnel having to repeatedly send the same information to different clients.
Forum	Section of a web site where people can discuss topics related to the subject which the site is focused on. Some Forums have paid or restricted Membership. Even the free Forums usually require you to register with a confirmed email address.
FTP	File Transfer Protocol - a program to move files over the Internet between your computer and a web site, uploading to the site and downloading from the site to your computer.
Gateway	Hardware or software which transfers and translates data between different Internet Protocols (such as different email formats). Also used to describe sites or services which give people easier entry to particular areas of the Net or the Internet itself.
Hacker	Also known as a "Cracker", a Hacker is a person who breaks into a site through a computer's security.
Home Page	The web page which your browser shows when you open it to start surfing. Also refers to the main page of a web site which is reached by typing in the site's domain name.
Host	The computer where the files which make up one (or many) web sites are physically located.
Internet	Originally called ARPANET after the Advanced Research Projects Agency of the U.S. Department of Defense. This electronic network connects the hosts together so that you may go from one web page to another efficiently. The electronic connection began as a government experiment in 1969 with four computers connected together over phone lines. By 1972, universities also had access to what was, by then, called the Internet.
Keyword	A word you might use to search for a Web site. For example, searching the Web for the keyword "Dictionary" or "Terms" might help you find this site.
LAN	Local Area Network - a computer network which may spread over several floors of a building but has a central control in the same building.
Logging In	Connecting with a username and password to a website or a special area on a site, such as a Forum or download area.
Laptop	A computer small enough to sit on your lap. The laptop computer's small size allows you to take it almost anywhere and access the Internet. Great if you travel a lot and don't want to go too long without your e-mail.
Link	A link is text or an image on a web page which you click your mouse on. Code associated with the text or graphic will direct you to another location on a different page of that site or even a different site. Text links are usually underlined and a different color to the other text on the page.
Location	An Internet address. In your browser you will see a box at the top of the page with a title such as "location". That's where you will see the location of whatever web page is open in your browser. The address you type in the location bar must be an exact match for the page you want.
Login	The name and password needed to access a computer system or restricted web site (or the act of accessing the system or site).

Mailing list	The list of people who have voluntarily subscribed to a particular publication.
Mirror	Generally speaking, "to mirror" is to maintain an exact copy of something. Probably the most common use of the term on the Internet refers to "mirror sites" which are web sites, or FTP sites that maintain copies of material originated at another location, usually in order to provide more widespread access to the resource. For example, one site might create a library of software, and 5 other sites might maintain mirrors of that library.
Modem	Modulator-demodulator. Device attached between a computer and a phone to convert data from the form which the computer uses to a form suitable for transmission through the phone and the Internet and convert data which comes to it from the phone (and the Internet) back in to a form which the computer can use.
Netizen	A citizen of the Internet or, more plainly, an Internet user.
Network	Two or more computers connected together and probably sharing resources such as printers etc.
Node	A computer which is connected to a network. More particularly, one that distributes material received from other parts of the network to computers which may have slower network connections than it does.
Online	Being connected to the Internet.
Password	A secret string of characters which identify an authorized user when they try to log into a system or web location.
PDF	Portable Document Format - a file format, developed by the Adobe Corporation and based on their Postscript document-description language which allows consistent viewing and printing of digital documents with the fonts, images and layout on any computer system.
Plug-in	Software which enhances the usability or features of a more complex program. For instance, WordPress Blogs, graphics programs and web browsers use plug-ins.
Port	Physical or software connection where data is transferred to and from computers.
Portal	A web site that offers information and links intended to help people with limited experience of the Internet or, alternatively, with extensive information and links (including related advertising) about one particular topic to encourage people who share that interest to use the site to begin each of their Internet sessions.
Router	A dedicated computer or program which manages the traffic of packets through connections between Packet-Switching networks.
Scroll	Using the vertical bar at the right of your browser window or the middle button (or wheel) of your computer mouse to move up or down a web page or other document on your monitor.
SEO	Search Engine Optimization. Designing web pages with the goal of attaining high ranking listings in your results from search engine queries by potential customers.
Server	A dedicated computer or a program which supplies service(s) to other computers. For instance, a WWW server which is used to host web sites or an email server which processes e-mail between its client computers and

	the Internet.
Servlet	A small program which enhances the capabilities of server software.
Site	A place on the Internet. Every web page has a specific location which is its site with an address, usually beginning with "http://"
Spyware	Software introduced covertly to a computer and which secretly monitors its use. It may send information such as keystrokes, including passwords, to other places on the Net without the owner of the computer being aware or giving permission.
Surfing	Looking around the Internet for business or pleasurable purposes.
Sysop	System Operator. Person in charge of a computer system or network's operations or resources.
Telnet	A program which may be used to connect from an Internet site to another.
Terminal Server	A dedicated computer with several modems connected to it and connected to a LAN or host. Terminal servers provide PPP or SLIP services to the Internet.
Trojan Horse	Like the Trojan horse of mythology, Trojan horse viruses pretend to be one thing when in fact they are something else. Typically, Trojan horses take the form of a game that deletes files while the user plays.
Unix	A computer operating system for servers on the Internet which can have many concurrent users. It includes TCP/IP.
Upload	The process of transferring information from your computer to another computer or a web site through the Internet.
Usenet	A collection of ongoing discussion groups for people on the Internet who share a mutual interest. They rarely have anything to do with news.
Viral Marketing	The rapid adoption of a product or passing on of an offer to friends and family through word-of-mouth (or word-of-email) networks. Any advertising that propagates itself the way viruses do.
WAN- Wide Area Network	A network which has parts that are not all in the same building or other physical location.
Website	The web pages and multimedia files etc are located at the same domain
Wi-Fi	Wireless Fidelity - a type of wireless data communication, more correctly described as Wireless Ethernet.
Worm	A computer virus designed to affect or destroy files on your computer, or secretly install other nasty programs. It spreads of itself to all other computers which it can reach.
XPFE	Cross Platform Front End - a group of technologies, including Javascript, Cascading Style Sheets and XUL, for making applications that operate similarly and have the same look on varied computer operating systems. A popular XPFE application is the Mozilla web browser.
XUL	eXtensible User-interface Language - a markup language based on XML resembling HTML.

(<http://www.stevofreemanonline.com/welcome/internet-glossary-a-beginners-guide/>).

4.2. TECHNOLOGY TERMS EVERYONE SHOULD KNOW

Server hosting

Servers are devices that support a company's computer and Internet networks. Servers are typically owned by Internet service providers (ISPs), who lease out server space in addition to providing customers with Internet connectivity. ISPs "host" a company's information – its website, email, data, etc. – on their servers. Some servers are located in ISP data centers, while others are leased directly to businesses.

Data center

A data center is a facility that houses computer and data storage systems, including servers. Many data centers are owned by ISPs or large companies, like Google or Amazon.

Cloud hosting

Companies that don't lease servers may instead pay for their data to be stored on virtual servers. These servers are said to be based in the cloud if they can be accessed with only an Internet connection. Businesses typically access cloud-based servers through a software interface specific to their cloud hosting service provider.

Web hosting

Web hosting, or website hosting, is a specific kind of server hosting service. Single-page websites typically don't need to use a Web hosting service, but more complex sites require such services to be able to edit content, enable forums or provide a secure e-commerce platform.

CMS

Content management systems (CMSs) are used to manage the content of a website. They usually include a Web-based publishing feature, which allows for editing and formatting of content without the use of Web coding language, like HTML. Many CMSs also feature one-to-one marketing tools that enable targeted advertising.

E-commerce

E-commerce is short for electronic commerce, or business that is conducted by transferring data electronically over the Internet. E-commerce is popular in part because of the widespread use of PCs and mobile devices.

Linux hosting

Linux is an open-source operating system that can be installed on Web hosting servers. Many servers run Microsoft operating systems, but some businesses believe that Linux is a more secure and reliable option and prefer to choose a Web hosting service that runs Linux.

Virtual merchant

A virtual merchant is a merchant that uses a website as a platform for selling goods and services. Virtual merchants engage in e-commerce, accepting electronic payments from customers online. Some virtual merchants also maintain brick-and-mortar retail stores.

Cloud backup

Data backed up in the cloud is transferred from a business to the data storage provider's servers over the Internet. Cloud backup, also called online backup, can be set up to occur automatically, making it a convenient data storage option. It's also an affordable service because it does not require the use of any additional hardware on the part of the business.

Email marketing

Email marketing is the promotion of products and services via email. Businesses can get creative with their emails by including images, videos and other exciting content that customers will be more likely to read.

POS

A point of sale (POS), or checkout, is the place in a retail establishment or virtual store where transactions are completed. Customers can usually pay at a POS with cash, credit or debit cards and increasingly, their smartphones. Most POS systems also include tools for tracking inventory and sales volume.

Merchant account

Merchant accounts are agreements with banking institutions necessary for businesses accepting credit and debit card transactions. In exchange for converting credit card payments into cash, banks charge merchants interchange fee as well as other fees.

Mobile application development

Mobile applications are popular with both businesses and consumers. The process of creating apps that can be used on mobile devices, such as smartphones or tablets, is known as mobile application development.

Custom software development

Some businesses require custom, or tailor-made, software for their daily operations. Instead of using mass-produced software packages, such businesses use programs created by software development companies or in-house software development groups.

ERP software

Enterprise resource planning (ERP) software allows a company to manage various aspects of a business – such as accounting, inventory and human relations – in one place. Companies purchase the enterprise software modules that are relevant to their business and use the ERP software to view all the data collected by these modules in a uniform manner.

Project management software

Project management software lets companies plan how to best complete a project in an organized, efficient way. This allows them to come up with accurate estimates and bids before beginning a project. Most project management software includes modules for scheduling, estimating, budgeting and resource allocation.

SaaS

Software as a Service (SaaS), or "software on demand," is a term associated with cloud computing. SaaS is a way of delivering business software via the Internet. SaaS usually can be paid for on a monthly basis, making it more affordable than other software options.

Business intelligence software

Business intelligence (BI) is the information a business collects about itself and can include a very broad swath of information, which is why businesses often need business intelligence software. Business intelligence software lets companies keep all their BI data in one place so that it is easier to access and analyze.

Contract management software

Many businesses operate on the basis of contracts made with customers, vendors and employees. Contract management software helps businesses keep track of all aspects of their contracts, from initial negotiations to monthly billings.

Performance management software

Human resources professionals often rely on performance management software to keep track of employee performance. Large amounts of data can be organized and analyzed more efficiently with the use of this software.

Practice management software

This type of software is used in medical offices and is designed to process day-to-day operations, such as billing data and insurance payer information, appointment scheduling and, in some cases, electronic medical records.

Customer management software

Customer management is the term used for the way a business collects and manages data about its clients. Companies use customer management software to keep track of all the information they collect on clients, such as service calls made or previous products purchased. This helps them close future deals and grow relationships with customers.

Learning management system

Learning management systems are used by businesses training employees. Such systems help human resource departments plan, implement and assess the training process. Videoconferencing, discussion forums and other interactive features are usually included within a learning management system's software.

Document management

Document management refers to the system of creating, sharing, organizing and storing documents within an organization. Document management software can be used to help facilitate the document management process.

Managed services

Many day-to-day business activities can be outsourced as a means of cutting costs and increasing overall efficiency within a company. Such a practice is known as managed services. Human relations activities and information technology activities are two common areas of expertise often subjected to this practice (<http://www.businessnewsdaily.com/4684-technology-terms-for-small-business.html>)

4.3. ESSENTIAL TECHNOLOGY TERMS FOR TEACHERS

Adaptive Learning

This is an educational practice which uses computers as interactive instructional devices. The programs adapt the difficulty and/or style of educational material according to the particular needs of each student (determined by their responses to questions and tasks in the program). For example, a math application that detects when some students are having trouble with division and then has those students spend more time reviewing it would be considered adaptive.

Asynchronous Learning

A traditional classroom is an example of "synchronous learning," where all students learn the same things at the same time and in the same place. Asynchronous learning is the opposite of that. Using the power of the Internet, students can now learn different things whenever they want and wherever they want, hence the term "asynchronous."

AUP

Short for "Acceptable Use Policy." The AUP is a document most likely produced by the school's Board of Education. It specifies what a district's staff and students may or may not do on the school's network. Students (and often their parents as well) are usually required to sign one of these at the start of every school year.

Blended Learning

Blended learning is exactly what it sounds like: a teaching method that combines traditional classroom instruction with online or mobile learning activities.

Cloud

“The cloud” is not one single device or location. Rather, it is a metaphor for on-demand storage space or computing power managed by a third party. Dropbox’s syncing application is a good example of a “cloud” service, since your files are copied up to their servers and then back down to all of your devices with Dropbox installed.

CMS

CMS stands for Content Management System. CMS’s are essentially software or web applications that allow you to publish and edit content from one central interface. They also usually allow for collaborative editing, standalone pages, and other features. WordPress, the open-source blogging software, is a popular CMS.

Differentiated Learning

Differentiated learning is a teaching method that adjusts the presentation of the instructional material to better suite each individual student. While the learning goals are the same for all, some students learn differently than others, and so differentiated learning seeks to meet each student halfway, as it were, rather than force all the students to learn via the same method.

Digital Citizenship

Digital citizenship means making good use of the Internet and having knowledge of how to operate web-connected devices safely while online. It also means that you can effectively use technology to interact responsibly with others to engage in society, politics, or other public discussion

Digital Divide

The term digital divide is used to refer to a large gap in technology use between two groups. The two groups can be divided along economic, racial, age, or even gender lines. For example, Americans 55 and older report using the Internet the least out of all age groups, while those 18-24 report using the Internet the most [source]. This could be said to be a “digital divide.” In education specifically, the “digital divide” most often refers to a divide in technology use along economic lines.

Digital Literacy

Digital literacy is the ability to effectively and critically navigate, evaluate, and create information using a range of digital technologies. For example, you know your Aunt Sue who always forwards you those emails because she thinks she’d be cursed otherwise? She wouldn’t exactly be digitally literate. On the other hand, someone who knows not to trust everything they read online or who knows how to edit an article on Wikipedia might be called digitally literate.

Flipped Classroom

A “flipped classroom” is one in which teachers do not simply lecture to students for the entire class period. Rather, teachers work with students to solve problem sets or otherwise directly interact with the students. What would traditionally be a face-to-face lecture is then (at least in many cases) recorded and posted online for the students to watch as “homework.” Thus the traditional-lecture-at-school-and-do-problems-at-home model is inverted, or “flipped.”

GAFE

This acronym stands for “Google Apps for Education,” a popular Internet-based suite of applications designed specifically for schools. It features email, document creation and collaboration, and many other tools that districts find useful.

Gamification

Gamification, while it may be somewhat of a mouthful, is actually a pretty simple concept: it’s the making of boring, everyday, or ordinary activities into a game-like activity. iCivics

is a perfect example of gamification; they've taken something many students would bristle at (learning about the federal budget) and made it into a fun and educational game.

LMS

LMS is short for Learning Management System. An LMS is a piece of software that is capable administering, documenting, and tracking classroom activities. Teachers and staff often use LMS's to make their work more efficient, as well as to increase student engagement. Schoology is one example of an LMS.

M-Learning

Short for "mobile learning", m-learning simply means any learning activity that takes place on a mobile device. The word "mobile" is also relative; it could mean a laptop, a tablet, or something even smaller and more mobile, like a cellphone.

MOOC

MOOC stands for "Massively open online course." These are becoming more and more popular lately as several Ivy League universities have started offering some of their coursework online. Coursera and Udacity are two of the biggest MOOC websites.

Podcast

A podcast is similar to a radio show: they're audio-only "shows" distributed not via radio waves, but via the Internet. There are podcasts on an unlimited number of topics, and many are educational and appropriate for students. Check out our favorites in these two posts.

QR Code

Have you ever seen one of those weird square boxes that looks like it's full of static? That's a QR code! It's sort of like a barcode, and it can hold almost any text, links, or information you want. (<http://www.fractuslearning.com/2013/03/04/technology-terms-for-teachers/>).



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