

ENGLISH 3: Unit 4

Core English Program: 203203

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Name Number.....

Group..... Number in the group.....

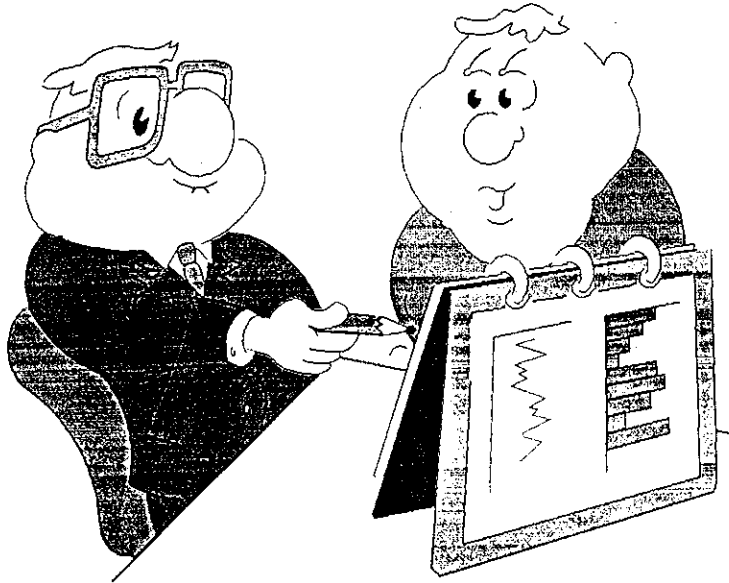
Unit 4

Engineering

In this unit, you will do the following four tasks

- ❖ Read academic texts
- ❖ Write a comparison and contrast paragraph
- ❖ Listen to introductory remarks, a conversation, and an academic lecture
- ❖ Present a verbal summary of a short passage

Task 1: Read academic texts





Text 1: Is Engineering for You?

Pre-task 1: Work in pairs to discuss your preference towards engineering.

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

Pre-task 2: Vocabulary preview

Here are some words you will see in the reading text. Work in groups of four to (1) read English meanings of some words and then write their Thai meanings; and (2) find the meanings of some words from their contexts.

Paragraph 1

Words	English meanings	Thai meaning
determine (v)	find out, discover, learn, establish, calculate, work out, ascertain, check, verify, certify	.....
suit (v)	make appropriate or agreeable; adapt, accommodate, make suitable	.....
especially (adv)	particularly, above all, mainly, chiefly, principally	.....
ambition (n)	desire, goal, aim, objective, purpose, intent, desire, wish	.....
probably (adv)	likely, most likely, in all likelihood, as likely as not, it is to be expected that, perhaps, maybe, it may be	.....

Paragraph 2

Words	English meanings	Thai meaning
review (v)	reconsideration, re-examination, reassessment, re-evaluation, reappraisal, revision, rethink, another look	.....
arouse (v)	excite, provoke, goad, prompt, spur on, urge, encourage	.....
curiosity (n)	inquisitiveness, spirit of inquiry, interest, investigativeness, researching, querying, asking questions, questioning	.....
relate to (v)	connect, associate, link, correlate, ally, couple, join	.....

Paragraph 2 (continue)

Words	English meanings	Thai meaning
description (n)	detailed statement, report, setting out, chronicle, narration, recounting, relation, commentary, explanation, elucidation, illustration; details	.....
indicate (v)	show, demonstrate, exhibit, display, manifest, evince, express, make known, tell, state, reveal, disclose, register, record	.....

Context clues: Find the meanings of the following words from their contexts.

Words	Meanings	Clues/Types of clues*
personnel (n) (L7)
pose (v) (L7)

Paragraph 3

Words	English meanings	Thai meaning
prospective (adj)	Future, to-be, soon-to-be, intended, expected	.....
solution (n)	Answer, result, key, resolution	.....
practical (adj)	Available or useful in practice; able to be used	.....
quantity (n)	A (specified) portion or amount <i>of</i> an article, commodity, quality, etc., or a (specified) number <i>of</i> things; <i>the</i> portion, amount, or number (<i>of</i> something) present in a particular instance	.....
principle (n)	truth, philosophy, idea, theory, basis, fundamental, essence, assumption	.....
application (n)	use, exercise, administration, employment, putting into operation/practice, practice	.....
formulate (v)	Reduce to or express (as) in a formula; put into a systematic form or statement	.....
compound (n)	amalgam, blend, mixture, admixture, complex, combination, fusion, alloy, conglomerate, synthesis, medley, hybrid	.....
element (n)	basis, ingredient, factor, feature, detail, trace, component, constituent, part, section, portion, piece, segment, member, unit, module, subdivision	.....
indicate (v)	point to, show, evince, manifest, reveal, be a sign/symptom of, be symptomatic of, mark, signal, denote, bespeak, betoken, connote, suggest, imply	.....

Paragraph 3 (continue)

Context clues: Find the meanings of the following words from their contexts.

Words	Meanings	Clues/Types of clues*
capability (n) (L 1)
mastery (n) (L 2)
academic record (n) (L10)
undertake (v) (L11)

Paragraph 4

Words	English meanings	Thai meaning
extremely (adv)	to the uttermost degree; with a very great degree of some quality, esp. severity; to or in an extreme degree; very much	.....
visualize (v)	Make visible to the mind or imagination (something abstract or not visible or present to the eye); form a mental vision or image (of)	.....
concret (adj)	Make visible to the mind or imagination (something abstract or not visible or present to the eye); form a mental vision or image (of)	.....
describe (v)	description/account of, give details of, detail, tell, narrate, put into words, express, recount, relate, report, set out, chronicle, define, explain, elucidate	.....
illustrate (v)	add pictures/drawings/sketches to, provide artwork for, adorn, decorate, ornament, embellish	.....
mix (v)	admix, blend, put together, combine, mingle, compound, homogenize, alloy, merge, unite, join, amalgamate, fuse, coalesce, interweave	.....
carburetor (n)	apparatus for charging air with a fine spray of liquid fuel for combustion, esp. in a petrol engine	.....
internal (adj)	Of or pertaining to the inside or interior of something; within the limits of something	.....

Context clues: Find the meanings of the following words from their contexts.

Words	Meanings	Clues/Types of clues*
orally (adv) (L6)

Paragraph 5

Words	English meanings	Thai meaning
relate (v)	Connect, associate, link, correlate, ally, couple, join	.....
essential (adj)	Necessary, indispensable, vital, crucial, requisite, important, needed	.....
communicate (v)	Get one's ideas/message across, interface, be articulate, be fluent	.....
effectively (adv)	Successful, productive, competent, capable, able, efficient, efficacious, effectual, useful, adequate, active	.....
consider (v)	Think about, weigh up, give thought to, examine, study	.....
performance (n)	Something performed or done; an action, a deed	.....
accomplish (v)	Bring to an end, complete	.....

Paragraph 6

Words	English meanings	Thai meaning
evaluate (v)	put a value/price on, appraise, size up, weigh up, gauge, judge, rate, rank, estimate, calculate, reckon, measure, determine	.....
honest (adj)	upright, honourable, moral, ethical, principled, righteous, right-minded, virtuous, good, worthy, decent, law-abiding, high-minded, upstanding, just, fair, incorruptible, truthful, true, veracious, trustworthy, trusty, reliable	.....
judge (v)	consider, believe, think, form the opinion, deduce, gather, conclude	.....
require (v)	want, wish, desire, crave, miss	.....
persevere (v)	persist, go on, keep on, keep at, keep going, continue, carry on, struggle, work, hammer away, be tenacious, be persistent, be pertinacious, be resolute, be purposeful, be obstinate, be insistent	.....
unfavorable (adj)	adverse, critical, hostile, inimical, unfriendly, negative, discouraging, poor, bad	.....
apply (v)	use, put to use, employ, utilize, administer, exercise, put into practice, bring into effect/play, bring to bear.	.....
efficient (adj)	capable, able, competent, effective, productive, skilful, expert, proficient, adept, deft, organized, workmanlike	.....
constantly (adv)	always, all the time, continually, continuously, endlessly, non-stop, incessantly, ceaselessly, perpetually, persistently, interminably, relentlessly.	.....

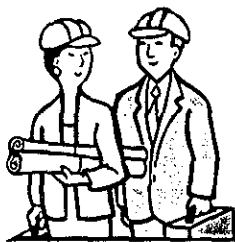
Paragraph 6

Words	English meanings	Thai meaning
effort (n)	Exertion, force, power, energy, work, muscle, application, labor, striving, endeavor, toil, struggle, strain, stress; ¹	.....
sufficiently (adv)	Enough, adequate, plenty of, ample	.....
estimate (n)	make an estimate, calculate roughly/approximately, work out, assess, compute, gauge, reckon, evaluate, judge, appraise, guess	.....
in this regard (phrase)	in respect of, with reference to	.....
complete (v)	Bring to an end, finish, conclude	.....
urge (v)	Push, drive, propel, impel, force, hasten, hurry, speed up	.....
avoid (v)	Shun, keep away from, eschew, steer clear of; evade, hide from, elude, shirk, dodge; abstain from, refrain from, hold back from	.....
portion (n)	A part of any whole; a specified or limited quantity or amount	.....
potential (n)	Promise, capability, capacity, ability, aptitude, talent, flair	.....

Context clues: Find the meanings of the following words from their contexts.

Words	Meanings	Clues/Types of clues*
call for (v) (L1)
master (v) (L4)
draw towards (v) (L11)

Text 1: Is Engineering for You?



(1) In order to determine if you are suited to a career as an engineer, it will be necessary for you to examine your interests, especially with regard to three particular areas: interest in engineering, ability, and ambition. Of these three factors, perhaps the most important is your amount of interest in an engineering career. Any type of work that greatly interests you will probably be the type of work at which you will most likely succeed.

(2) To discover where your interests lie, it may help to review your life to see what ideas or activities have aroused your curiosity. With respect to engineering, it is important to consider any interest you may have had in technical and scientific developments. Are your hobbies related to scientific and technical activities? Do you like mathematics and mathematical puzzles? In your previous reading about various career fields, have you found

the descriptions of engineering to be interesting or boring? If you have visited a manufacturing plant, a laboratory, or a design office, were you interested in the activities of the technical personnel there? Have you ever posed questions about their work to engineers in any of the fields discussed earlier? Have you tried to learn as much as you could about the area of engineering that interests you the most? The answers to these questions can go a long way toward indicating whether you truly have an interest in engineering.

(3) In addition to a serious interest in the field of engineering, a prospective engineer must have certain capabilities in order to be successful. Among these capabilities is a mastery of mathematics and the application of mathematical principles in the solution of practical problems. You should ask yourself: "How good am I at stating problems in quantitative terms and in obtaining quantitative solutions? Can I translate real situations into abstract terms or symbols without becoming confused? Do I understand the various number systems used in mathematics?" In addition to asking these questions about mathematics, you should examine your interests and successes in such related fields as physics and chemistry. Do the principles of physics interest you? Can you find any application of these principles in the real world? Can you understand concepts such as force, mass, acceleration, leverage, gravitation, and other abstract physical principles? Are you interested in studying the chemical formulation of compounds and the way in which various elements combine in nature? It should be easy to answer these questions by reviewing your own academic record in high school. High scores and excellent grades in mathematics, physics, and chemistry usually indicate that a person has the capability to undertake engineering studies with a significant chance of success.

(4) Other capabilities are also extremely helpful. If not necessary for a successful career in engineering. One of these abilities is the power to visualize in concrete terms what is described in words. A person interested in a career as an engineer should consider whether he or she is able to describe in words, and to illustrate in sketches, complex actions or processes. For example, would you be able to describe in words and illustrate with a few simple sketches the mixing of fuel and air in the carburetor of an internal combustion engine? Could you show in a simple sketch the way an airplane wing works to lift the aircraft? The ability to communicate in words, both orally and on paper, is very important for success as an engineer.

(5) A person interested in an engineering career should consider whether he or she is able to relate well to others. It is essential for an engineer, who works as a member of a large team. To get along well with other people and to be able to communicate effectively with them. In considering a career in engineering, a person should examine his or her own past performance in working with others in groups to accomplish specific goals and objectives.

(6) In making the self-evaluation called for in the preceding paragraphs, if you have been honest in judging your interests, abilities, and ambitions, you can say at this point whether you are seriously interested in engineering as a career. You must remember, however, that you will be required to work hard and persevere, at times under very unfavorable conditions. Working in technical fields can be difficult and very exacting. As an engineer, you will be called upon to master a great deal of technical information and to understand many technical concepts. You must be capable of applying yourself in an efficient way. You should reevaluate your work habits constantly to improve your efforts. If you can work in this way, and if you are sufficiently ambitious, you will succeed in an engineering career just as you would in any other career. On the other hand, a careless or lazy individual can no more succeed as an engineer than in any other profession. In order to get an estimate of your own capabilities in this regard, ask yourself the following questions: "Do I complete my study assignments on time? Do I need urging by others to complete an assigned task? When I have an assignment, do I avoid the technical or numerical portions of a problem? Am I more strongly drawn toward nontechnical questions?" The answers to these questions will help you to judge your potential for success in a career as an engineer.



Reading-task 1: Survey

Survey the text and fill in Table 1. Try to put a time limit of 3-5 minutes on your surveying.

Table 1

Text	Availability		Details
	Yes	No	
Title		
Headings, sub-headings		
Visual material (pictures, graphs, etc.)		
Bold or italic letters		



Reading-task 2: Question

Form questions for the "Analog and Digital" text. Then write them in Table 2.

Table 2

Guidelines	Questions
Turn the title, headings, and/or sub-headings into questions
Write the questions you want the text to answer.



Reading-task 3: Detailed reading

Read each paragraph and fill in the following tables. The first paragraph has been done for you.

Table 3

The whole text + The 1 st paragraph
<p>Topic: Is Engineering for You?</p> <p>Thesis statement:</p> <p>.....</p> <p>The writers purpose: To describe ways for deciding whether one is suitable to be an engineer</p>

The 2 nd paragraph
<p>Topic: Interest in engineering</p> <p>Topic sentence or main idea:</p> <p>.....</p> <p>MJ 1:</p> <p>.....</p> <p>MN 1.1: Ask yourself the following questions:</p> <ul style="list-style-type: none"> - Are your hobbies related to scientific and technical activities? - Do you like mathematics and mathematical puzzles? - In your previous reading about various career fields, have you found the descriptions of engineering to be interesting or boring? - If you have visited a manufacturing plant, a laboratory, or a design office, were you interested in the activities of the technical personnel there? - Have you ever posed questions about their work to engineers in any of the fields discussed earlier? - Have you tried to learn as much as you could about the area of engineering that interests you the most? <p>Concluding sentence:</p> <p>.....</p> <p>Paragraph organization:</p> <p>Information type: .....Fact; .....Opinion</p>

The 3 rd paragraph
<p>Topic: Capabilities needed for being engineers</p> <p>Topic sentence or main idea: :</p> <p>.....</p> <p>MJ 1:</p> <p>.....</p> <p>MN 1.1: Ask yourself the following questions:</p> <ul style="list-style-type: none"> - How good am I at stating problems in quantitative terms and in obtaining quantitative solutions? - Can I translate real situations into abstract terms or symbols without becoming confused? - Do I understand the various number systems used in mathematics? <p>MJ 2:</p> <p>.....</p> <p>MN 2.1: Ask yourself the following questions:</p> <ul style="list-style-type: none"> - Do the principles of physics interest you? - Can you find any application of these principles in the real world? - Can you understand concepts such as force, mass, acceleration, leverage, gravitation, and other abstract physical principles? - Are you interested in studying the chemical formulation of compounds and the way in which various elements combine in nature?

The 3rd paragraph (continue)

MJ 3:

MN 3.1: High scores and excellent grades in mathematics, physics, and chemistry usually indicate that a person has the capability to undertake engineering studies with a significant chance of success

Concluding sentence: none

Paragraph organization:

Information type: Fact; Opinion

The 4th paragraph

Topic: Capabilities needed for being engineers

Topic sentence or main idea: :

MJ 1: One of these abilities is the power to visualize in concrete terms what is described in words.

MN 1.1:

- For example, would you be able to describe in words and illustrate with a few simple sketches the mixing of fuel and air in the carburetor of an internal combustion engine?
- Could you show in a simple sketch the way an airplane wing works to lift the aircraft?

Concluding sentence:

Paragraph organization:

Information type: Fact; Opinion

The 5th paragraph

Topic:

Topic sentence or main idea:

MN 1.1:

MN 1.1: To get along well with other people and to be able to communicate effectively with them. For example, would you be able to describe in words and illustrate with a few simple sketches the

Concluding sentence:

Paragraph organization:

Information type: Fact; Opinion

The 6th paragraph

Topic: Self-evaluation whether one is suitable to be an engineer

Topic sentence or main idea:

MJ 1:

The 6th paragraph (continue)

MN 1.1: Working in technical fields can be difficult and very exacting.

- As an engineer, you will be called upon to master a great deal of technical information and to understand many technical concepts.
- You must be capable of applying yourself in an efficient way.
- You should reevaluate your work habits constantly to improve your efforts.
- If you can work in this way, and if you are sufficiently ambitious, you will succeed in an engineering career just as you would in any other career.

MJ 2:

MN 1.2: In order to get an estimate of your own capabilities in this regard, ask yourself the following questions:

- Do I complete my study assignments on time?
- Do I need urging by others to complete an assigned task?
- When I have an assignment, do I avoid the technical or numerical portions of a problem?
- Am I more strongly drawn toward nontechnical question?

Concluding sentence:

Paragraph organization:

Information type: Fact; Opinion

Post- task 1: Summarize the text

Work in pairs to summarize the criteria for determining whether a person is suit to be an engineer

Interests

1

2

3

4

5

Abilities

1

2

3

Ambitions

1

2.



Post-task 2: Log On

Read one or two articles on "engineers" on the following website:

- <http://www.todayseengineer.org/>

Or search on the internet with the key word "engineers." Then make a diagram to summarize your reading.



Reading strategy: Patterns of textual organization

Knowing the pattern of textual organization will help you understand the text you are reading. There are nine main types of patterns of textual organizations:

1. Narrative
2. Description
3. Process
4. Comparison or contrast
5. Exemplification
6. Classification
7. Definition
8. Cause and effect
9. Persuasion



Study the purpose of each of the following textual organizations, then read find the paragraph that is its example.

Patterns of Organization	Purpose	Examples
1. Narration	to tell a story or give an account of a meaningful incident	Text
2. Description	to break a subject into categories and then discuss each category	Text
3. Process	to explain the steps to do, make, or repair something	Text
4. Comparison and contrast	to show the differences or similarities between two subjects	Text
5. Exemplification	to give examples in order to explain a statement or a point of view	Text
6. Classification	to break a subject into categories and then discuss each category	Text
7. Definition	to explain the meaning of a term	Text
8. Cause-effect	to tell reasons and outcomes of a specific event, situation, or series of actions	Text
9. Persuasion	to convince or persuade the reader to do something or to change his/her mind about something	Text

Text 1/Narrative

Many tasks in finishing a new home seem simple, but they turn out to be more difficult than one would think. In designing her new home, Jessica decided to have a small balcony off her upstairs bedroom. She loved the idea of waking up in the mornings and stepping outside to admire the view of the forest surrounding her house and watching the stars before she went to bed. Originally, the expense was written into the house's cost based on the size of the balcony, the materials needed, and the labor required. When the time came to construct the balcony, the foreman discovered that the supports for the balcony could not be placed where planned because of the door underneath. After some discussion with the builder, Jessica decided to lengthen the balcony several feet to allow the supports to be placed correctly. The best part was that the builder had to absorb the costs since the error was his!

<http://www.okc.cc.ok.us/svanschuyver/Susan/Susan/body.html>

2. Exemplification

Great athletes do not reach the top by talent alone but by pushing themselves to the limit and beyond. For instance, champion figure skater Michelle Kwan is her own worst critic, studying every practice on video in order to perfect her performance. During one practice, when she flubbed a double axel, she repeated the jump over and over until the ice cleaners urged her off the ice. "Winning isn't about miracles on ice," she says. "It's all about training." Another example is tennis great Pete Sampras, whose relaxed attitude hides a punishing work ethic. For 90 to 150 minutes a day, he rallies with a tennis pro and then works out with a strength and conditioning coach for another 60 to 90 minutes. Even Chicago Bulls superstar Michael Jordan, who has been called the most gifted athlete of all time, was a relentlessly hard worker and perfectionist. He and two teammates practiced before every team practice. Each day from pre-season camp to the last Finals game, Jordan was in his gym with a trainer by 8 a.m., sweating through a tough routine created by exercise scientists; then he hit the court. Like many top athletes, he turned his talent into greatness through sheer hard work.

--taken from *Evergreen: A Guide to Writing*, 6th edition

(From: <http://www.lsu.edu/users/dsimpson/1001/exemplification.htm>)

3. Exemplification

Aggressive drivers not only are stressed out and dangerous, but often they save no time getting where they want to go. Recently I was driving south from Oakland to San Jose. Traffic was heavy but moving. I noticed an extremely aggressive driver jumping lanes, speeding up and slowing down. Clearly, he was in a hurry. For the most part, I remained in one lane for the entire forty-mile journey. I was listening to a new audiotape and daydreaming. I enjoyed the trip because driving gives me a chance to be alone. As I was exiting off the freeway, the aggressive driver crowded up behind me and raced on by. Without realizing it, I had arrived in San Jose ahead of him. All his weaving, rapid acceleration, and putting families at risk had earned him nothing except perhaps some high blood pressure and a great deal of wear and tear on his vehicle.

--taken from *Evergreen: A Guide to Writing*, 6th edition, based on a paragraph in Richard Carlson's *Don't Sweat the Small Stuff*

(From: <http://www.lsu.edu/users/dsimpson/1001/exemplification.htm>)

Text 2/

4. Compare/contrast

In building a log house, an important decision which must be made is the choice of the style of logs to be used. Two popular choices are round logs and D-shaped logs. First of all, authentic log homes are constructed of round logs with traditional chinking between the logs. The look is rustic and appropriate for mountain or lake cabins. On the other hand, a modern variation is the D-shaped log. These machined logs use the tongue and groove system to join the logs together which seals more effectively than the traditional chinking method. Also, the style is cleaner and more uniform. Secondly, when rounded logs are used, they are uneven on the inside which makes it difficult to hang pictures straight or even to attach the interior walls effectively. On the contrary, D-shaped logs mean flat interior walls which are easier to decorate and easier to attach to interior walls. Although the D-shaped logs do give a contemporary feeling to the dwelling, the logs are still rustic in style and are often the style chosen today.

<http://www.okc.cc.ok.us/svanschuyver/Susan/Susan/body.html>

Definition

Mental practice, a part of sports psychology, is a technique that may increase a person's athletic performance. Mental practice, which is also referred to as visualization, imagery rehearsal, or mental rehearsal, begins with twenty to thirty minutes of relaxation training. Following relaxation, the athlete visualizes some aspect of his or her game. The athlete breaks down various parts of the game. He or she creates images of the playing field, the other players, and his or her actions and reactions. The athlete focuses attention on his or her personal feelings and emotional responses. Mental practice is the equivalent of physical practice. For example, a golfer can visualize the correct swing. A golfer's muscles may actually start to learn the swing through this mental practice. The body's muscles code a blueprint of the moves and the performance desired. Performance after mental practice, which includes relaxation and visualization, often shows improvement.

(Linda Wong, Paragraph Essentials, First Edition)

(http://college.hmco.com/devenglish/wong/paragraph_essentials/1e/students/index.html)

Cause and effect

Smoking has many serious effects. The most obvious effect is the deterioration of a smoker's health. Smoking increases the risk of lung disease, increases blood pressure, increases the risk of heart attacks, and reduces the flow of oxygen to the brain. (4) Smoking creates respiratory problems. (5) A smoker's cough expels phlegm, a thick mucus in the nose and the throat that wants to escape the body. (6) Prolonged use may lead to emphysema and the need to hook up to a machine to pump enough oxygen into the lungs. (7) Another effect of this habit is that smoking breeds halitosis; a smoker's breath always smells foul and repulsive. (8) Smoking frequently results in social isolation because fewer people smoke or want to be in the presence of second-hand smoke. (9) Friends and acquaintances often bluntly tell their smoking friends that they don't want the smell in their cars or in their homes. (10) The strong, offensive odor of smoke clings to smokers' clothing, hair, and skin. (11) The final effect of smoking is that it depletes the pocketbook. (12) Smoking is now an expensive habit, and the price of cigarettes continues to rise. (13) The effects of smoking are many, which leaves one wondering why intelligent people do not find a way to break their harmful addiction.

(Linda Wong, Paragraph Essentials, First Edition)

(http://college.hmco.com/devenglish/wong/paragraph_essentials/1e/students/index.html)

Text 3



5. Illustration

When building a house or purchasing a home from a builder, the new owner often has several more decisions to make and tasks to accomplish. First of all, the outside of the house may be very bare. For example, most newly completed homes do not come with established lawns. Should the new owners buy and install the sod themselves, pay the sod company to install it, or attempt to plant the grass? In addition to the lawn, shrubbery and trees may need to be chosen and planted. Thirdly, most homeowners today want some type of fence which often does not come with a new house. They must decide on a chain link or privacy fence and determine who will install it. Another area to consider is inside the house. The new homeowner may be responsible for choosing, purchasing, and hanging the curtains, draperies, or mini blinds. Other small tasks will certainly come up such as finding a shower curtain to match the colors in the bathroom. Although filling out the mortgage papers and signing the title agreements may seem like the final steps in purchasing a new home, the tasks and decisions will continue for some time.

<http://www.okc.cc.ok.us/svanschuyver/Susan/Susan/body.html>

Text 4

6. Division/classification

When people walk through a hardware store or home improvement center, they will notice how many kinds of paint are available. The various kinds of paint can be grouped according to finish: glossy, semi-gloss, and flat. First of all, most kitchens and bathrooms are painted with glossy or semi-gloss enamel which is the easiest to clean and holds up well to scrubbing. Enamels are also used on interior trim for the same reasons. Sometimes they are even used on children's bedroom walls where they might get scuff marks or be written on accidentally. The other kind of paint is flat latex; this paint is used for walls and ceilings of regular bedrooms and living areas as it is less likely to show the imperfections of rough walls due to poor putty jobs, scratches, or uneven surfaces under the paint and it is less likely to need frequent scrubbing. In conclusion, the finish of the paint is as important as the color.

<http://www.okc.cc.ok.us/svanschuyver/Susan/Susan/body.html>

Text 6/

7. Persuasion

Building a new home is challenging, but it is the best way for people to ensure that most of their needs and wants are met within the confines of their budgets. First of all, many people only purchase one home during their adult life, so that home should match closely with the person or couple's sense of style and comfort. For example, when building a house, the new owners can choose the floor plan, carpet, wall coverings, heating system, built-in appliances and fixtures, as well as lighting and countless other items, and therefore, have a good chance of being happy with the final dwelling. In addition, if something can't be done because of the structure of the house or the cost or for some other reason, the person building the house will be in on the decisions and understand why which may make the disappointment easier to bear. Of course, if the new owners choose a carpet or floor plan that does not work out, they must take responsibility for the decision. Building is stressful, but the rewards are great.

<http://www.okc.cc.ok.us/svanschuyver/Susan/Susan/body.html>

Text 8



The architectural style of a home is crucial to the future satisfaction of the owner. First of all, the owner should decide whether comfort or elegance is more important. This decision will help to eliminate some possibilities. For example, if comfort is very important, a relaxed style such as country might be the best choice. However, if elegance is more to the style of the owner, contemporary or classic designs would be more appropriate. Secondly, the owner may want to survey the prospective neighborhood. Although the house should not be a duplicate of its neighbors, the style should be compatible with the other homes in the area. For instance, a log cabin would not be a good choice for an upper class suburban neighborhood.

<http://www.okc.cc.ok.us/svanschuyver/Susan/Susan/body.html>



Log-in

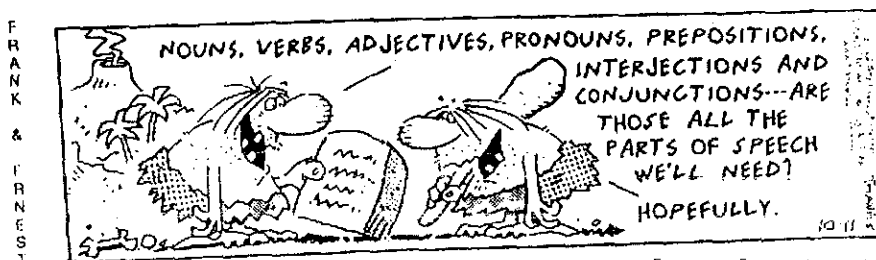
For more information and practices on "patterns of textual organization" log on to the following websites

- <http://www.okc.cc.ok.us/svanschuyver/Susan/Susan/EsyPIPnt1.html>
- <http://www.lsue.edu/users/dsimpson/1001/exemplification.htm>
- http://college.hmco.com/devenglish/resources/reading_ace/students/index.html

or search on the internet with the key words "patterns of textual organization."



Language-focus: Adverbs



Frank and Ernest Oct 11, 2001
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(From: <http://webster.comnet.edu/grammar/adverbs.htm>)

Adverbs are words that modify a **verb**, an **adjective**, or **another adverb**.

Words that are modified	Examples
Verb	SUT students <u>study</u> patiently . (verb)
Adjective	They are very <u>diligent</u> students. (adjective)
Another adverb	They study quite <u>hard</u> . (adverb)

Order of Adverbs

There are five kinds of adverbs: manner, place, frequency, time, and purpose. If there are more than one adverb in a sentence, they should be arranged in the following order:

There is a basic order in which adverbs will appear when there is more than one. It is similar to The Royal Order of Adjectives, but it is even more flexible.



THE ROYAL ORDER OF ADVERBS



Subject	Verb	Manner	Place	Frequency	Time	Purpose
Beth	swims	enthusiastically	in the pool	every morning	before dawn	to keep in shape.
Dad	walks	impatiently	into town	every afternoon	before supper	to get a newspaper.
Tashonda	naps		in her room	every morning	before lunch.	

In actual practice, of course, it would be highly unusual to have a string of adverbial modifiers beyond two or three (at the most). Because the placement of adverbs is so flexible, one or two of the modifiers would probably move to the beginning of the sentence: "Every afternoon before supper, Dad impatiently walks into town to get a newspaper." When that happens, the introductory adverbial modifiers are usually set off with a comma.

(From <http://webster.commnet.edu/grammar/adverbs.htm>)

Read each of the following sentences, then circle each adverb and draw a line to identify the verb, adjective, or other adverb that it modifies. The first one has been done for you.

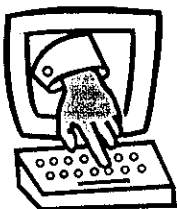
Any type of work that <u>greatly</u> interest you will probably be the type of work at which you will most likely to succeed.	
adverb	word it modifies
greatly	interest (verb)

It is essential for an engineer, who works as a member of a large team, to get along well with other people and to be able to communicate effectively with them.	
adverb	word it modifies

You can honestly judge your abilities and ambitions by carefully looking at your academic record, to tell if you are seriously interested in a career in engineering.	
adverb	word it modifies

You should evaluate your work habits constantly to improve your effort.	
adverb	word it modifies

In Japan, China, India and other eastern areas, engineering developed separately but similarly.	
adverb	word it modifies



Log-in

For more information and exercises on "adverbs" log on to the following websites:

- <http://www.webster.commnet.edu/grammar/adverbs.html>
- <http://web2.uvcs.uvic.ca/elc/studyzone/410/grammar/adverb.htm>

Or search on the internet with the key words "adverbs."



Language-focus: Present participle (Ving)

Present participles are verb forms, which end in **-ing**. They can be used in a sentence as adjectives or nouns.

Examples

Adjectives	Nouns
The swimming girl is my daughter. (adjective)	Swimming is her favorite sport. (Noun/subject) She enjoys swimming . (Noun/subject)

Study each of the following sentences, then underline each present participle and identify its function in the sentence (verb, noun or adjective)

No	Sentences	Function in the sentence
1	Engineering is a profession.	Subject
2	It requires long yeas of educational and specialized training for successful practice.	
3	The underlying purpose of most professions is collective action by the members for the public goods.	
4	A person does engineering work by applying scientific principles to the solution of practical problems.	
5	Many engineers are employees of large corporations or counseling firms.	
6	The effects of their activities upon community well-being are quite important.	
7	Many famous ancient structures that are still standing today demonstrate the ingenuity and skills of early engineers	
8-10	The daily activities of doctors are directed towards improving human living conditions and developing a more civilized society	8. 9. 10.
11	John Smeaton was the first to call himself a civil engineer, thus separating his work from that of a military engineering.	
12	By 1880, the use of chemicals in manufacturing had created a new industry.	
13-15	In your previous reading about various career fields, have you found the description of engineering to be boring or interesting?	13. 14. 15.
16	The eighteen-century also witness the founding in Britain of the world's first engineering society.	

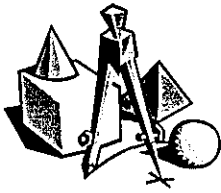


Log-in

For more information and exercises on "Present participle" log on to the following websites:

- Gerund: <http://www.bartleby.com/64/C001/028.html>
- <http://www.chompchomp.com/terms/participle.htm>

Or search on the internet with the key words "Present participle."



Text 2: What is Engineering?

(This text is for a test, do all the Pre- and Post- reading tasks and read the text for homework, you will be tested your understanding of this text in class)

Pre-task 1: Work in pairs to discuss what engineering is in your opinion.

.....

.....

.....

.....

.....

.....

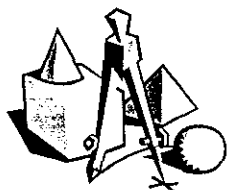
Pre-task 2: Vocabulary preview

Here are some words you will see in the reading text. Work in groups of four read their English meaning and then write their meanings in Thai.

Paragraph 1

Words	English meanings	Thai meaning
evolution (n)	
precede (v)	
float (v)	
held, hold, hold(v)	
exhibit (v)	
obvious (adj)	
extensive (adj)	

Text 2: What is Engineering?



(1) Perhaps the best way to answer the question "What is engineering?" is to look at the answer to this question that has been given collectively by practicing engineers. The American Society for Engineering Education has given the following definition of engineering:

Engineering is the profession in which a knowledge of the mathematical and natural sciences gained by study, experience, and practice is applied with judgment to develop ways to utilize the materials and forces of nature, economically for the benefit of mankind.

(2) Obviously, the engineer is deeply involved with the application of mathematical and natural sciences. Because of this, many people are confused about the distinction between scientists and engineers. The confusion increases because many individuals function as both engineers and scientists. They apparently perform engineering work, applying scientific principles to the solution of practical problems, but they do not even call themselves engineers. They do not possess the general characteristics of a professional engineer: a college engineering degree, an engineering license or a legal registration, and membership in a professional engineering society. Other individuals who were originally trained in engineering enter other fields of activity but continue to consider themselves engineers. Many people who function as sales representatives or as managers refer to themselves as "engineers" because their basic education and early experience were in engineering. Inevitably, some individuals will function as scientists, engineers, and technicians all at the same time. Others will sometimes act as engineers and at other times as technicians. For the moment, let's disregard these people who are sufficiently flexible to practice in several different fields and concentrate on the definition of engineering mentioned above.

(3) First, engineering is a profession. When we say that, we mean a vocation or a calling that requires the application of specialized knowledge gained through long and intense preparation. For most people, this preparation for a professional career is obtained through formal education. Two clear examples of professions other than engineering are medicine and law, which require long years of educational and specialized training for successful practice.

(4) In addition to intensive and specialized preparation through education, a profession has other major characteristics. One of these characteristics is the insistence on high standards of conduct by the members of the profession themselves. Members of the profession form some sort of organization to police themselves and their colleagues and insist that their fellow professionals have high standards of ethics as well as achievement in technical subjects. Maintaining a high standard of technical achievement often requires members of a profession to continue to study and gain experience in their chosen fields throughout their entire careers. There are numerous engineering organizations that perform these functions for the different branches of engineering.

(5) Finally, most people who consider themselves professionals would describe themselves as engaged in some form of public service. In other words, the underlying purpose of most professions is collective action by their members of that profession for the public good. It is easy to see that the day-to-day activities of doctors and lawyers are directed toward improving human living conditions and opening a more civilized society. In much the same way, engineers work to develop a better quality of life for their fellow human beings. To do this, engineers apply scientific principles and their experiences in using natural resources and the forces of nature for the benefit of humankind. Many engineers are employees of large corporations or consulting firms, and, as such, their contributions to the public good may be somewhat indirect and therefore hard to recognize. Nevertheless, the effects of their activities upon community well-being are quite important. In any of the industrialized nations of Western Europe and North America, almost everything that the average citizen uses, touches, or eats during her or his daily life has been influenced in a significant way by an engineer's activities at some stage in its manufacture or processing.

Kunz, Danief W. (1989) *Careers in Engineering* Chicago: NTC Publishing Group. pp. 1-2.



Reading-task 1: Survey

Survey the text and fill in Table 1. Try to put a time limit of 3-5 minutes on your surveying.

Table 1

Text	Availability		Details
	Yes	No	
Title		
Headings, sub-headings		
Visual material (pictures, graphs, etc.)		
Bold or italic letters		



Reading-task 2: Question

Form questions for the "Analog and Digital" text. Then write them in Table 2.

Table 2

Guidelines	Questions
Turn the title, headings, and/or sub-headings into questions
Write the questions you want the text to answer.



Reading-task 3: Detailed reading

Read each paragraph and fill in the following tables. The first paragraph has been done for you.

Table 3 (Text 2)
The whole text

Topic: What Is Engineering?
Thesis statement: Perhaps the best way to answer the question "What is engineering?" is to look at the answer to this question that has been given collectively by practicing engineers.
The writers purpose: To define the term "engineering."

The 1st paragraph (Introductory paragraph)

Topic: Definition of "engineering"
Thesis statement: Perhaps the best way to answer the question "What is engineering?" is to look at the answer to this question that has been given collectively by practicing engineers.
MJ 1: American Society for Engineering Education's definition of "engineering"
Paragraph organization: explanation
Information type: Fact; Opinion

- Note. 1. Paragraph organizations: narration, description, explanation, definition, exemplification, classification, comparison, contrast, cause and effect, argumentation
2. MJ = Major support; MN = Minor support

The 2nd paragraph

Topic: Confusion about the distinction between scientists and engineers
Topic sentence or main idea: Obviously, the engineer is deeply involved with the application of mathematical and natural sciences. Because of this, many people are confused about the distinction between scientists and engineers.
MJ 1: Many individuals function as both engineers and scientists. They apparently perform engineering work, applying scientific principles to the solution of practical problems, but they do not even call themselves engineers
MN 1.1: This is because They do not possess the general characteristics of a professional engineer: a college engineering degree, an engineering license or a legal registration, and membership in a professional engineering society.
MJ 2: Other individuals who were originally trained in engineering enter other fields of activity but continue to consider themselves engineers.
MN 2.1: Many people who function as sales representatives or as managers refer to themselves as "engineers" because their basic education and early experience were in engineering.
MJ 3: Inevitably, some individuals will function as scientists, engineers, and technicians all at the same time. Others will sometimes act as engineers and at other times as technicians.
MJ 4: For the moment, let's disregard these people who are sufficiently flexible to practice in several different fields and concentrate on the definition of engineering mentioned above.
Concluding sentence: none
Paragraph organization: Exemplification/explanation
Information type: Fact; Opinion

The 3th paragraph

Topic: The first characteristic of -engineering-

Topic sentence or main idea: First, engineering is a profession.

MJ 1: When we say that, we mean a vocation or a calling that requires the application of specialized knowledge gained through long and intense preparation.

MN 1.1: For most people, this preparation for a professional career is obtained through formal education.

MN 1.2: Two clear examples of professions other than engineering are medicine and law, which require long years of educational and specialized training for successful practice.

Concluding sentence: none

Paragraph organization: Exemplification/explanation

Information type: Fact; Opinion

The 4th paragraph

Topic: The first characteristic of -engineering-

Introductory sentence: In addition to intensive and specialized preparation through education, a profession has other major characteristics.

Topic sentence: One of these characteristics is the insistence on high standards of conduct by the members of the profession themselves.

MJ 1: Members of the profession form some sort of organization to police themselves and their colleagues and insist that their fellow professionals have high standards of ethics as well as achievement in technical subjects.

MJ 2: Maintaining a high standard of technical achievement often requires members of a profession to continue to study and gain experience in their chosen fields throughout their entire careers.

MJ 3: There are numerous engineering organizations that perform these functions for the different branches of engineering.

Concluding sentence: none

Paragraph organization: explanation

Information type: Fact; Opinion

The 5th paragraph

Topic: The third characteristic of "engineering"

Topic sentence or main idea: Finally, most people who consider themselves professionals would describe themselves as engaged in some form of public service.

MJ 1: In other words, the underlying purpose of most professions is collective action by their members of that profession for the public good.

MN 1.1: It is easy to see that the day-to-day activities of doctors and lawyers are directed toward improving human living conditions and opting a more civilized society.

MN 1.2: In much the same way, engineers work to develop a better quality of life for their fellow human beings.

MN 1.3: To do this, engineers apply scientific principles and their experiences in using natural resources and the forces of nature for the benefit of humankind.

MN 1.4: Many engineers are employees of large corporations or consulting firms, and, as such, their contributions to the public good may be somewhat indirect and therefore hard to recognize.

MJ 2: Nevertheless, the effects of their activities upon community well-being are quite important.

MN 2.1: In any of the industrialized nations of Western Europe and North America, almost everything that the average citizen uses, touches, or eats during her or his daily life has been influenced in a significant way by an engineer's activities at some stage in its manufacture or processing

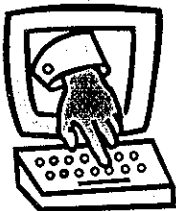
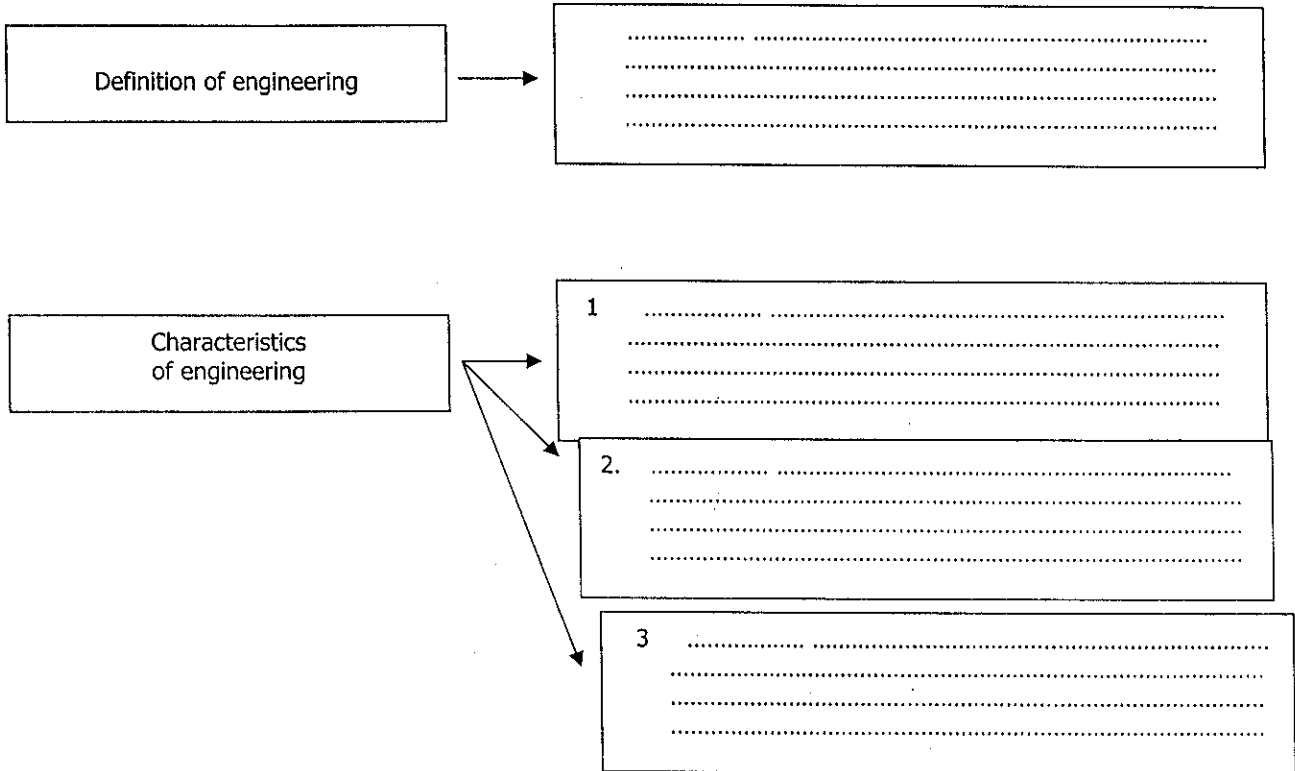
Concluding sentence: none

Paragraph organization: Explanation

Information type:√.....Fact;Opinion

Post- task 1: Summarize the text

Work in pairs to summarize the definitions of engineer in the following diagram.



Post-task 2: Log On

Read one or two articles on "definitions of engineering" on the following website:

- <http://biotsavart.tripod.com/engrdef.htm>
- <http://www.factmonster.com/ce6/sci/A0817360.html>

Or search on the internet with the key words "definitions of engineering." Then make a diagram to summarize your reading.

Checkpoint

1. How much have I understood? (for example, 50%)

Text 1:

Text 2:

2. What were the difficulties?

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

3. Was my approach effective? Is there anything else I should do for the next time I read?

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

Task 2: Write a comparison or contrast paragraph



Introduction

Comparing and contrasting are common in our daily life. They are used in advertisement, weather, sports, etc. When you **compare**, you discuss the similarities between two or more things. On the contrary, when you **contrast**, you discuss the differences between them. You practice writing a contrast and a comparison paragraph in Unit 1 and 3 respectively. The following activities will guide you to write comparison and contrastive paragraphs.



Step 1: Explore ideas

Read the text "Is Engineering for You?" Then summarize the similarities and differences between the interests and abilities needed for being an engineer and your own interests and abilities. You may arrange the similarities and differences from the most important similarity and difference to the least ones or vice versa.

Interests and abilities needed for being an engineer	Yours interests and abilities
<p>1. Interests</p> <p>1.1 (details/explanation) </p> <p>1.2 (details/explanation) </p> <p>1.3 (details/explanation) </p>	<p>1. Interests</p> <p>1.1 (details/explanation) </p> <p>1.2 (details/explanation) </p> <p>1.3 (details/explanation) </p>

Mentioned in the text	Yours
<p>Interests (continue)</p>	<p>Interests (continue)</p>
<p>1.4 (details/explanation) </p>	<p>1.4 (details/explanation) </p>
<p>1. Abilities</p>	<p>2. Abilities</p>
<p>2.1 (details/explanation) </p>	<p>2.1 (details/explanation) </p>
<p>2.2 (details/explanation) </p>	<p>2.2 (details/explanation) </p>
<p>2.3 (details/explanation) </p>	<p>2.3 (details/explanation) </p>
<p>2.4 (details/explanation) </p>	<p>2.4 (details/explanation) </p>



Step 2: Make an organizational outline

Study the explanation on how to develop point-by-point and item-by-item organizational patterns in Unit 1. Then develop point-by-point and item-by-item organizational patterns for a paragraph that compare the similarities and contrast the differences between the interests and abilities needed for being an engineer and your own interests and abilities.

Point-by-point	Item-by-item
1. Topic sentence	1. Topic sentence
2. Point 1: Interests 1,2,3,4 a. Required b. Yours	2. Item 1: Required Point 1: Interests 1,2,3,4 Point 2:
3. Point 2: a. b.	3. Item 2: Yours Point 1: Point 2:
4. Concluding sentence	4. Concluding sentence



Step 3: Write a paragraph

Use the information from the **point-by-point** or **item-by-item** organizational pattern you have made in Step 2 to write **two** paragraph comparing the similarities and contrasting the differences between the interests and abilities needed for being an engineer and your own interests and abilities. Study the contrasting paragraph model in Unit 1 and the comparison paragraph model in Unit 3 before you start writing.

For more examples of comparison and contrasting paragraphs, log on the following websites:

- <http://lrs.ed.uiuc.edu/students/fvalters/compcnt.html>



Step 3.1: Explore language

Review the grammatical structures, or words that are common and needed for **comparison and contrastive paragraphs** in Unit 1 and Unit 3 respectively. Grammatical structures, or words that are common and needed for **comparison and contrastive** paragraph are:

- **Present Simple Tense**

Patterns	Reason
Subject + Verb 1 (s, es)	A contrastive paragraph tells the fact about the differences between things, people, animals, or ideas.

- **Comparative structures**

Patterns	Examples
<i>as...as</i> <i>not as...as</i>	<i>as difficult as</i> <i>not as difficult as</i>
<i>-er...than</i>	<i>easier than</i>
<i>more...than</i> <i>less...than</i>	<i>more difficult than</i> <i>less difficult than</i>

- **Conjunctions**

although but despite even though even though however	in contrast by contrast in spite of nevertheless on the one hand on the other hand	on the contrary unlike whereas while yet
---	---	--

similarly, likewise, ...the same... ...the same as... ...also... ..., too. both is similar to as well	In the same way, X is similar to Y in that (they)... X and Y are similar in that (they)... Like X, Y [verb]... In like manner, One way in which X is similar to Y is (that)... Another way in which X is similar to Y is (that)...
---	--



Step 3.2: Write a topic sentence

A topic sentence tells the main idea of the paragraph. It tells readers what the paragraph is about. Your topic sentence of the comparison paragraph should tell your readers that you will write about the similarities between the prokaryotic and eukaryotic cells. Here are some patterns you can use to write the topic sentence of a comparison paragraph:

1. **There are several similarities/difference between ... A and B... ..**
2. **... A and B ... are similar/different in many ways.**
3. **... A... is similar to/different from ... B... in many ways.**
4. **A comparison between ... A and B ... reveals (shows/demonstrates) several similarities/differences.**
5. **Are you aware of the striking similarities/ differences between ... A and B ... ?**

Notes. A = *my interest and abilities*
B = *the interest and abilities needed for being an engineer*

Write a topic sentence for your **comparison or contrast** paragraph.

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



Step 3.3: Write supporting sentences

Write supporting sentences point by point according to the point-by-point organization you have made in Step 2. Use the comparing paragraph **"My Hometown and My College Town"** as your model for your comparison paragraph. Use the contrasting paragraph **"Arizona and Rhode Island"** in Unit 1 as your model for your contrastive paragraph. Use the following grammatical structures, words, and phrases:

- Present Simple tense
- Comparative structures
- Clear transitional conjunctions

	Subject	Verb	Object or complement
Topic sentence			
Point 1			
1.1 (explanation and/or examples)			
1.2			
1.3			
1.4			

	Subject	Verb	Object or complement
Point 2			
2.1 (explanation and/or examples)			
2.2			
2.3			
2.4			
Concluding sentence			



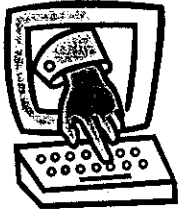
Step 3-4: Write a concluding sentence

A concluding sentence summarizes the paragraph. Here are some good examples of concluding sentences for a contrastive paragraph.

1. These entire similarities make *me suitable* for being an engineer.
2. These entire differences make *me unsuitable* for being an engineer.

Write a concluding sentence for your **comparison or contrastive paragraph**.

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



Log-in

For more information and examples about how to write comparison and contrast paragraphs, log in to the following websites:

- http://www2.actden.com/writ_den/tips/contents.htm
- <http://www.georcoll.on.ca/courses/tws/ptptcomp.htm>

Or search on the internet with the key word "comparison and contrastive paragraphs."

Checkpoint

1. How well can I write the paragraphs?
(Very well, a little, Not very well but I try)

Paragraph 1:
Paragraph 2:

2. What were the difficulties?

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

3. Was my writing approach effective? Is there anything else I should do for the next time I write?

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

**Task 2: Listen to
introductory remarks,
a conversation and
an academic lecture**





Listening Task 1

1. Prediction In Task 1, you will hear the opening remarks in a radio program. Work in pairs to think of information you expect to hear and note it down. The first one has been done for you.

a. Greeting (Good evening)
b.
c.

2. Vocabulary preview: Here are some words you will hear during the opening remarks. Work in groups of four to match them with their meanings.

Nouns

- detail
- facility
- freedom
- harm
- risk

Verbs

- involve
- manage
- operate
- predict
- stay tuned

Adjectives

- unacceptable

Nouns , Verbs, Adjectives, Adverbs

รายละเอียด	สิ่งที่ทำอันตราย	จัดการ	ติดตามฟังต่อไป
สิ่งอำนวยความสะดวก	ความเสี่ยง	ควบคุมให้เครื่องยนต์	ไม่สามารถยอมรับได้
อิสระภาพ	เกี่ยวข้อง	ทำงาน	
		ทำนาย	

3. Listen: Read the following questions. Then listen to the talk focus on finding answers for each question.

1. What is the topic of this program?
2. What is he going to talk about?
3. What do we mean by "safety"?
4. Where does this talk take place?
5. What details will this talk probably mention?

4. **Check:** Answer the following questions.

1. How much have I understood? (for example, 50%)
2. How many right answers do I get?

5. **Practice listening:** Listen to the opening remarks and put the following sentences in the right order. The first one has been done for you.

.....	And what do you think engineering safety is about?
.....	But that's just the beginning.
.....	For that we have an engineer to explain that engineering safety involves predicting and managing the risks involved in building and operating engineering facilities.
.....1.....	Good evening ladies and gentlemen.
.....	Now for the details stay tuned.
.....	Tonight on this Thursday edition of Radio Revelations we're going to talk about engineering safety.
.....	Well, safety can be called freedom from unacceptable risk or personal harm.
.....	What do we mean by safety?

6. **Listen again:** Listen to the opening remarks again without looking at the script and answer the listening questions in Step 2. Then do Step 4 again and note your answer in the following space.

1. How much have I understood? (For example, 50%)
2. How many right answers do I get?



Listening Task 2

1. Prediction: In Task 2, you will hear the opening remarks of a lecturer. Work in pairs to think of information you expect to hear and note it down. The first one has been done for you.

a. Greeting (Good morning class.)
 b.

 c.

2. Vocabulary preview: Here are some words you will hear during the opening remarks. Work in groups of four to find their meanings.

Nouns

- function
- management
- skill
- human
- ability

Adjectives

- managerial
- conceptual
- analytical

Verbs

- organize
- staff
- motivate
- control
- include

Nouns , Verbs, Adjectives

การจัดการ	เกี่ยวข้องกับความคิด	ทักษะ	สนับสนุน	สนใจ
เกี่ยวข้องกับกาใช้เหตุผล	ควบคุม	มนุษย์	หน้าที่	
เกี่ยวข้องกับการจัดการ	ความสามารถ	รวมด้วย	ประกอบด้วย	

3. Listen: Read the following questions. Then listen to the talk focus on finding answers for each question.

1. What is the topic of this talk?
2. What did they discuss last week?
3. What is he going to talk about?
4. Where does this talk take place?
5. Which skill will he start with?

4. **Check:** Answer the following questions.

- | |
|---|
| 1. How much have I understood? (for example, 50%) |
| 2. How many right answers do I have got? |

5. **Practice listening:** Listen to the opening remarks and put the following sentences in the right order. The first one has been done for you.

.....	First, let's talk about human skills.
.....1.....	Good morning class.
.....	These include human skills, conceptual skills, technical skills, decision making ability, analytical skills, and communication skills.
.....	This week we're going to move a step further.
.....	We will talk about the types managerial skills.
.....	Welcome to Engineering Management. Last week we discussed the functions of management, which involved planning, organizing, staffing, motivating and controlling.

6. **Listen again:** Listen to the opening remarks again without looking at the script and answer the listening questions in Step 2. Then do Step 4 again and note your answer in the following space.

- | |
|---|
| 1. How much have I understood? (for example, 50%) |
| 2. How many right answers do I get? |



Listening Task 3

- 1. Prediction:** In Task 3, you will hear the opening remarks of a conference. Work in pairs to think of information you expect to hear and note it down. The first one has been done for you.

a. Greeting (Good morning distinguished participants, ladies and gentlemen)

b.

c.

- 2. Vocabulary preview:** Here are some words you will hear during the opening remarks. Work in groups of four to find their meanings.

Nouns

pleasure
 keynote speaker
 civil engineer
 award
 quality
 assurance

Verbs

introduce
 receive

Adjectives

national
 international

Nouns , Verbs, Adjectives

ความมั่นใจ	ได้รับ
ความยินดี	แนะนำ
คุณภาพ	ผู้บรรยายหลัก

ระดับชาติ	รางวัล
ระดับนานาชาติ	วิศวกรรมโยธา

- 3. Listen:** Read the following questions. Then listen to the talk focus on finding answers for each question.

1. What is the topic of this talk?
2. What is his field of study?
3. What is he going to talk about?
4. Where does this talk take place?

4. **Check:** Answer the following questions.

1. How much have I understood? (for example, 50%)
2. How many right answers do I have got?

5. **Practice listening:** Listen to the opening remarks and put the following sentences in the right order. The first one has been done for you.

.....1.....	Good afternoon ladies and gentlemen.
.....	He has done several research studies in the field of Civil Engineering and had received many awards both national and international.
.....	He is here with us today to give a talk on quality assurance in engineering.
.....	I now have the pleasure of introducing our keynote speaker.
.....	Ladies and gentlemen please welcome Professor (first name).
.....	Professor (first name) received his Ph.D. degree in Civil Engineering in 1986 from the University of Texas at Arlington U.S.A.
.....	Professor -- --- from Suranaree University of Technology in Thailand.

6. **Listen again:** Listen to the opening remarks again without looking at the script and answer the listening questions in Step 2. Then do Step 4 again and note your answer in the following space.

1. How much have I understood? (for example, 50%)
2. How many right answers do I get?



Listening Task 4

1. Prediction In Task 4, you will hear a conversation between two students (Bob and Somchit) talking about a lecture they have just attended. Work in pairs to think of information you expect to hear and note it down. The first one has been done for you.

<p>a. Their attitude towards the lecture (How did you like the lecture?)</p> <p>b.</p> <p>c.</p>
--

2. Vocabulary preview: Here are some words you will hear during the opening remarks. Work in groups of four to find their meanings.

Nouns

supervisor

Adjectives

special
industrial

Verbs

rush

Adverbs

really

Nouns , Verbs, Adjectives

เกี่ยวกับอุตสาหกรรม
ตามความเป็นจริง

พิเศษ

รีบเร่ง

อาจารย์ที่ปรึกษา

3. Listen: Read the following questions. Then listen to the talk focus on finding answers for each question.

1. What is the topic of this discussion?
2. Where will the special lecture be?
3. Where does Wannee have to go?
4. Where does the discussion take place?

4. **Check:** Answer the following questions.

1. How much have I understood? (for example, 50%)
2. How many right answers do I get?

5. **Practice listening:** Listen to the conversation and put the following sentences in the right order. The first one has been done for you.

.....	Dr. Wirachai Manoppitakwatana from the Institute of Industrial Technology.
.....	Great, I'll be there but now I have to rush.
.....	Hello Wanne. I have good news for you. There's a special lecture on industrial engineering projects in B1103 at 9:30 tomorrow morning.
.....	I have to go meet my engineering supervisor in his office. Bye.
.....	Oh really sounds interesting. Who is the speaker?
.....	Why? What's the matter?

6. **Listen again:** Listen to the conversation again without looking at the script and answer the listening questions in Step 2. Then do Step 4 again and note your answer in the following space.

1. How much have I understood? (for example, 50%)
2. How many right answers do I get?

Listening Tasks 5, 6, and 7

1. Prediction: In Tasks 5, 6, and 7 you will hear a lecture on "Engineering, risk, safety, and hazards." Work in pairs to think information you expect to hear and note it down. The first one has been done for you.

a.	What is the relationship among engineering, risk, safety and hazards?
b.	..... .....
c.	..... .....

2. Vocabulary preview: Here are some words you will hear during the opening remarks. Work in groups of four to find their meanings.

Nouns

aid	.....	harm	.....
analysis	.....	hazard	.....
artifact	.....	lipoid	.....
attempt	.....	occurrence	.....
balance	.....	oil rig	.....
chance	.....	operation	.....
consequence	.....	potential	.....
context	.....	reliability	.....
court	.....	requirement	.....
definition	.....	right	.....
elimination	.....	risk	.....
estimate	.....	sequence	.....
failure	.....	society	.....
freedom	.....	

Nouns

การตีความ	ทฤษฎีการ วัดถุดิบ	เคลื่อนไหว เปลี่ยนแปลง อย่างต่อเนื่อง	โอกาส
ความเข้าใจอย่างต่องแท้ ผู้เชี่ยวชาญด้านการถ่าย พันธ์	ความสัมพันธ์ ผลที่เกิดขึ้น	งบประมาณ กฎระเบียบ	สัญญา สิ่งแวดล้อม
ศักยภาพ	สสาร	การคุ้มครอง	ทักษะ ความสามารถในการ ทำบางอย่าง ความพยายาม
การควบคุมให้เป็นไป ตามที่ต้องการ	การรวมตัวกัน	ข้อบังคับ	ผลกระทบ ข้อบังคับ ข้อกำหนด กำหนดการ แผนการ ความประพฤติ การปฏิบัติตน
ความหลากหลาย สิ่งมีชีวิต	แรงผลักดัน องค์ประกอบ	ทัศนคติ ความสัมพันธ์	
การมีอยู่ การคงอยู่	หลักเหตุผล	การค้นพบ	
อิทธิพล	คำจำกัดความ	นวัตกรรม	
ความฉลาด	รูปการ ทิศทาง เกณฑ์	เหตุการณ์ที่ไม่คาดคิด	

Verbs

concern	.....
address	.....
expect	.....
oblige	.....
provide	.....
demand	.....
defense	.....
pose	.....
combine	.....
identify	.....
quantify	.....
initiate	.....

Adjectives

adverse	.....
aware	.....
challenging	.....
complete	.....
particular	.....
personal	.....
reasonable	.....
unacceptable	.....
undesirable	.....

Adverbs

ethically	.....
morally	.....

Verbs

สัมพันธ์ เกี่ยวข้อง	เป็นหนี้	คาดคะเน	แข่งขัน
เกิดจาก	สร้าง	ตรวจสอบ	เกี่ยวข้อง
กระตุ้น	มีอิทธิพลต่อ	เปลี่ยนแปลง กระทำ	ประสบความสำเร็จ
ให้		ดำเนินการ	

Adjectives, Adverb: Conjunctions

กว้างขวาง งบประมาณของรัฐบาล น่าแปลกใจ น่าสนใจ ในทางตรงกันข้าม	เกี่ยวข้องกับด้านการเมือง เกี่ยวข้องกับด้าน การศึกษา เกี่ยวข้องกับด้านธุรกิจ ภายใน	เกี่ยวข้องกับการเงิน เกี่ยวข้องกันสติปัญญา ที่มีอยู่ อย่างแท้จริง ที่แท้จริง ภายใน	เกี่ยวข้องกับสังคม ตามนั้น ฉะนั้น ในทางตรงกันข้าม อย่างรวดเร็ว
--	--	--	---

3. **Listen:** Read the following questions. Then listen to the lecture and answers them.

Task 6

- 1. What is the topic of the discussion?
- 2. What is the single most important question?
- 3. What is an engineer artifact?
- 4. What will we learn from this talk?

Task 7 Listen to the lecture and then decide whether the following statements are true (T) or false (F).

- 1. The speaker defines three terms.
- 2. It is easy to decide what society believe is acceptable.
- 3. A risk is a combination of the possibility of something bad happening and the result it would have in a given context.
- 4. Risk analysis cannot help in decision making.
- 5. To quantify adverse consequences is to give a numerical estimate.
- 6. The last term he defines is "system operation."

Task 8 Listen to the lecture and fill in the blanks. (The third paragraph)

Now to look at the human side of the equation, which engineering must take into account: people's 1. concerning risk are 2 complex and not necessarily 3 Many people seem to have an 4 psychological need for certainty. The search for certainty as "truth" has been at the heart of Western thought both in science and religion. Perhaps this search for certainty is at the root of some people's inner 5 concerning risk, since it is obvious to all that 6 is all around us in our daily lives. However, there are some things that we think we can rely on. Have you heard the British expression "as safe as houses"? Even in 7 ... times, reference was made to the safety of houses built upon good foundations and those built upon poor 8 as examples of the consequences of good and bad conduct (Luke 6). Most people seem to expect 9 facilities to be "as safe as houses". This expectation puts the task of any engineer concerned with the built environment in an especially 10 position.

4. **Check:** Answer the following questions.

- | |
|---|
| 1. How much have I understood? (for example, 50%) |
| 2. How many right answers do I get? |

5. **Practice listening:** Listen to the lecture and put the following sentences in the right order. The first one has been done for you.

The first paragraph

- Another way of putting that is: "What does society have a right to expect and what are engineers obliged to provide?". Should society expect no failures?
- As you are aware, perhaps the single most important question concerning the safety of engineered systems that engineers have to address is "What can society expect of us?".
- Ethically and morally speaking, the answer is of course, "yes".
- Good morning. Welcome to Engineering 403.
- Is it reasonable to demand complete reliability of an engineered artifact whether it be a washing machine, bridge, nuclear reactor, offshore oil rig or nuclear defense system?
- Since you have already learned the basics of engineering, we'll move to something more challenging and more exciting.
- So our topic for today is "engineering safety, risk, and hazards.

The second paragraph

- It will be useful to note some definitions of our basic terms: safety, risk and hazard.
- Safety has been defined as freedom from unacceptable risks and personal harm.
- Meeting this requirement clearly poses the problem of deciding what is acceptable.
- In the courts, safety has been defined, as the elimination of danger is the balance between the chance of an accident and the result of an accident of the power stations.
- Now, let's take a look at more details

The third paragraph

- A hazard has been defined as a set of conditions in the operation of a product or system which have the potential for initiating or starting an accident sequence
- A risk is the combined effect of the chances of occurrence of some undesirable event and its consequences in a given context.
- Our second term is risk.
- Risk analysis is the attempt to identify and if possible to quantify the likelihood of adverse consequences – that's bad results – arising from a particular project or course of action, and to use estimates as an aid to decision making. Got that?
- So the last one is hazard.

The fourth paragraph

- Even in biblical times, reference was made to the safety of houses built upon good foundations and those built upon poor foundations as examples of the consequences of good and bad conduct (Luke 6).
- However, there are some things that we think we can rely on. Have you heard the British expression "as safe as houses"?
- Many people seem to have an inner psychological need for certainty. The search for certainty as "truth" has been at the heart of Western thought both in science and religion.
- Most people seem to expect engineered facilities to be "as safe as houses".
- Now to look at the human side of the equation, which engineering must take into account: people's expectations concerning risk are extremely complex and not necessarily rational.
- Perhaps this search for certainty is at the root of some people's inner tensions concerning risk, since it is obvious to all that uncertainty is all around us in our daily lives.
- This expectation puts the task of any engineer concerned with the built environment in an especially critical position

The fifth paragraph

- But remember.
- No one and nothing is ever perfect: there is always a risk that events will not turn out as planned.
- One important distinction to bear in mind, as the discussion progresses, is between the meaning associated with the way the words "risk" and "hazard" are used in everyday language and the more formal and specialized definitions used in risk and reliability theories.
- The distinction will hopefully become clear as you do more reading and thinking.
- Any questions? Time is up.
- We'll continue this topic next week. Good-bye.

(Adapted from David Blocky (ed.) Engineering Safety, 1992.)

- | |
|---|
| <ol style="list-style-type: none">1. How much have I understood? (for example, 50%) ..... 2. How many right answers do I get? |
|---|

Checkpoint

1. How much have I understood? (for example, 50%)

Task 1:

Task 2:

Task 3:

Task 4:

Lecture:

2. What were the difficulties?

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

3. Was my approach effective? Is there anything else I should do for the next time I listen?

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

Task 4: Present a verbal summary of a short text



Introduction

Being able to give the summaries of information you have read is an importantly academic skill. The following activities will guide you to practice giving summary of short reading passages.



Step 1: Structure of an oral summary

The structure of a verbal summary usually consists of three parts: an opening, a body, and a termination (Kayfetz, J.L. et al, 1992). Work in pairs to study each part of a verbal summary in the following table.

Parts	Content	Sample expressions
Opening	In the opening, say the title of the text and name(s) of author(s).	<ol style="list-style-type: none"> The article I would like to summarize is written by _____ and is titled _____. I have chosen to summarize an article by _____ called _____.
	Then, say a sentence telling the topic of the text	<ol style="list-style-type: none"> What _____ says is that _____. The point of this article is to explain _____. In this article (the author) _____ reviews the subject of _____. In this article (the author) _____ says _____.
Body	Summarize the main points of the text one by one. Your summary should focus on the major points not the minor ones. You may also mention examples from the text. Your summary should clearly, concisely, and accurately state the information presented by the author. Do not include your point of view.	<ol style="list-style-type: none"> The author summarizes that _____. An example that explains this clearly is _____. The author argues that _____. The author's best example of this is _____. The author has examined three approaches to _____. The first is _____. The second is _____. The third is _____. There are two main characteristics that need to be understood: first there is _____. And second there is _____. The third is _____.
Conclusion	Conclude you speech by saying the author's position or point of view.	<ol style="list-style-type: none"> The author's point of view is that _____. According to the author, _____. it is clear that the author favors _____. The author found that _____. The author concludes that _____.

(Adapted from (Kayfetz, J.L. et al, 1992, pp 82-84)



Step 2: Explore language

Review the example of an oral summary in Unit 1, page 56.



Step 3: Prepare an oral summary

Work in pairs to find a text about "engineering or engineers" from the internet, and summarize the text. Then make a plan for an oral summary and note it in the following note-sheet. After that practice it until you satisfy with your performance.

1. Opening

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

2. Body

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

3. Conclusion

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



Step 4: Give your oral summary

Find a new partner and take turn to give your oral summary. Use the following form to give feedback to your partner. Finally, record your summary on a cassette tape for homework and hand it in.

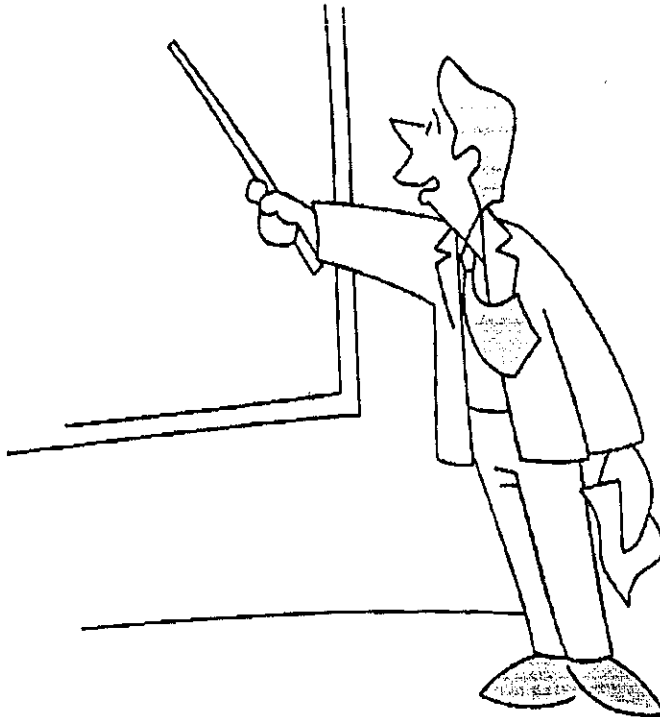
1. Name of speaker
2. Name of commentator
3. Topic
4. Rate the speaker using the scale of 1-4 (1 = poor, 2 = OK, 3 = good, 4 = excellent).
 - a. The title and the author were clearly stated at the beginning.
 - b. The topic of the reading was stated clearly and concisely.
 - c. The example chosen clearly supported their respect points.
 - d. The speaker's pronunciation was clear and evenly paced.
5. Check the items below that apply to the speaker's presentation.
 - e. The summary was too long.
 - f. The speaker used too many examples.
 - g. The speaker presented her own ideas or opinions.
 - h. The speaker did not use her own words, but lift material from the reading.
6. Comments: Write any comments that you feel will help the speaker to give better verbal summary in the future.

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

Checkpoint

<ol style="list-style-type: none">1. How well can I summary the text? (Very well, a little, Not very well but I try) ..... 2. What were the difficulties? <p>Was my approach effective? Is there anything else I should do for the next time I orally summarize a text?</p> <p>.....</p>
--

Task 4: Practice vocabulary





1. Academic Word List

Look at the following words, circle the ones you do not know their meanings.
Then study them and complete Table 1.

Sublist 4

access	concentrate	goal	occupy	principal	stress
adequate	confer	grant	option	prior	subsequent
annual	contrast	hence	output	professional	sum
apparent	cycle	hypothesis	overall	project	summary
approximate	debate	implement	parallel	promote	undertake
attitude	despite	implicate	parameter	regime	
attribute	dimension	impose	label	resolve	
civil	domestic	integrate	mechanism	retain	
code	emerge	internal	obvious	series	
commit	error	investigate	phase	statistic	
communicate	ethnic	job	predict	status	

(Coxhead, 1998. An Academic word list. Wellington: Victoria University of Wellington)

Table 1

Words	Part of Speech	Word meaning	I can use this word in a sentence.
Example: activity	N:.....✓..... V: activate Adj: active Adv: actively	-moment, action -something that is done for interest or pleasure - กิจกรรม	- There is not much <u>activity</u> in the playground after lunch - Drawing picture is an <u>activity</u> .
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		

Table 1 (continue)

Words	Part of Speech	Word meaning	I can use this word in a sentence.
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		

Table 1 (continue)

Words	Part of Speech	Word meaning	I can use this word in a sentence.
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		

Word association

Divide all the words in Table 1 into groups using your own criteria, and name them. The first one has been done for you.

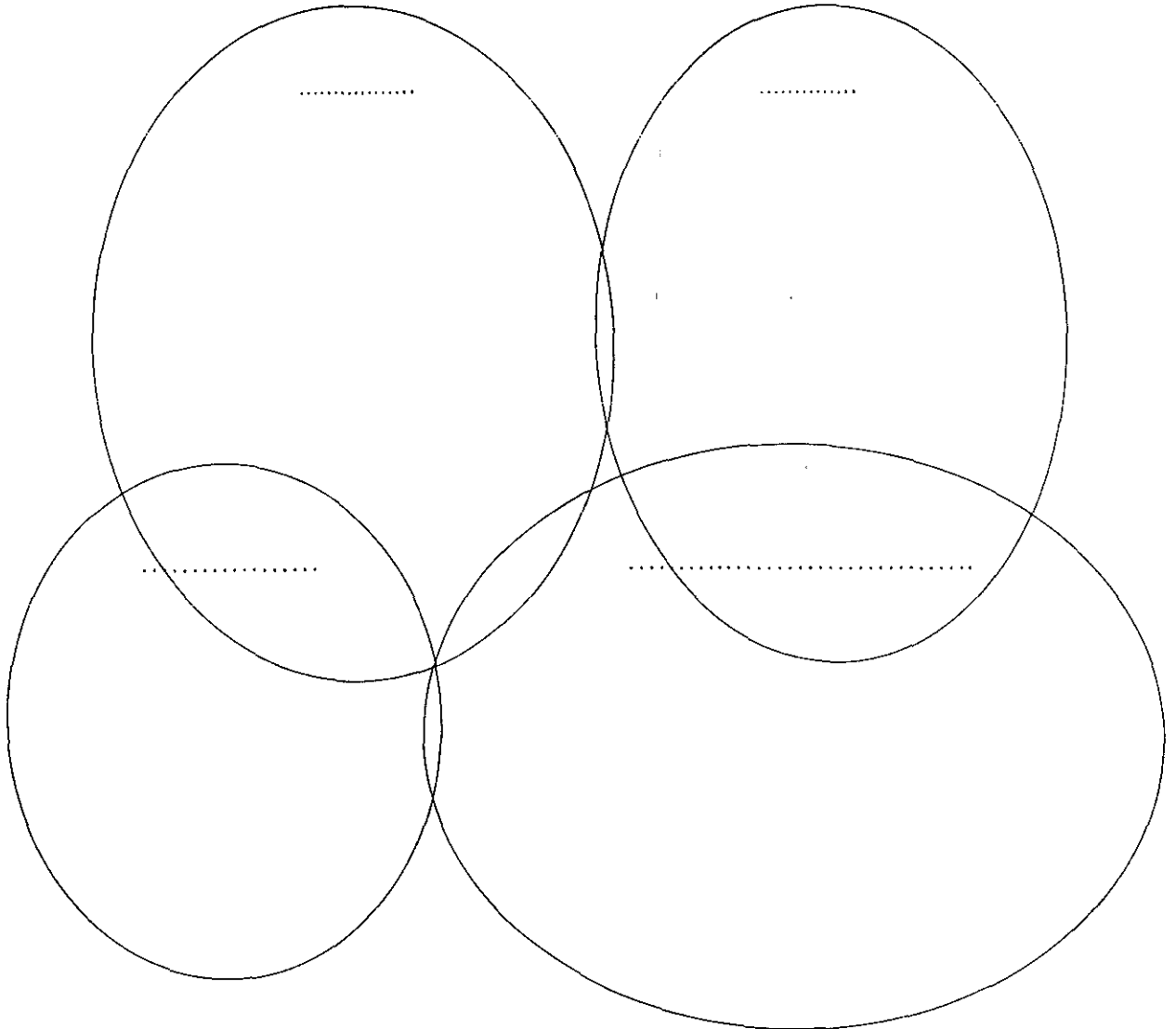
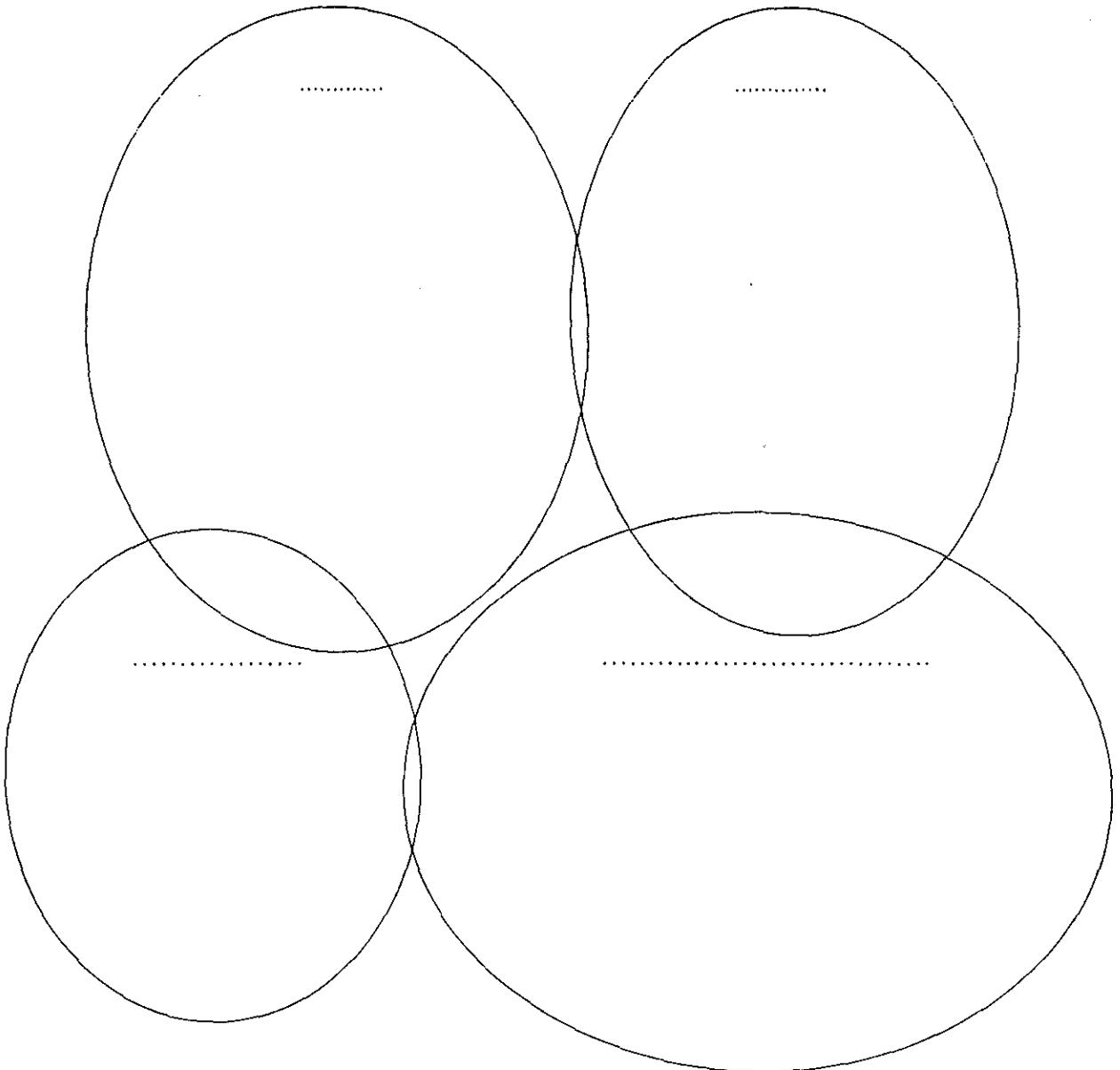


Table 2 (continue)

Words	Part of Speech	Word meaning	I can use this word in a sentence.
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
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	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		
	N: V: Adj: Adv:		

Word association

Divide all the words in Table 2 into groups using your own criteria, and name them. The first one has been done for you.



Checkpo

มหาวิทยาลัยเทคโนโลยีสุรนารี
Suranaree university of Technology



31051000872727

1. How often did I practice vocabulary?

.....

2. How many percent of the words in the two lists have I learned?

.....

3. What were the difficulties?

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

4. Was my approach effective? Is there anything else I should do
for the next time I practice vocabulary?

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

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