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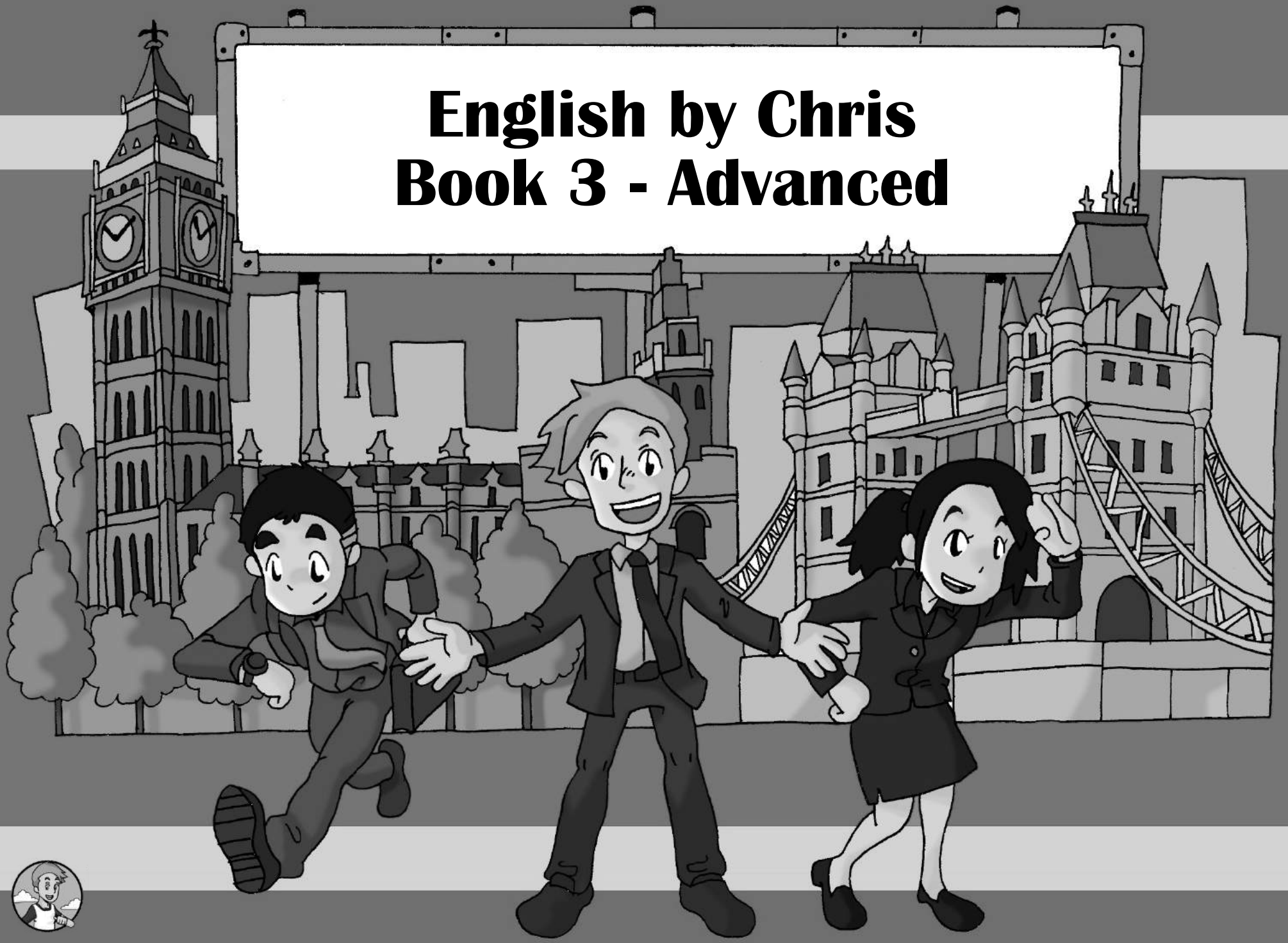

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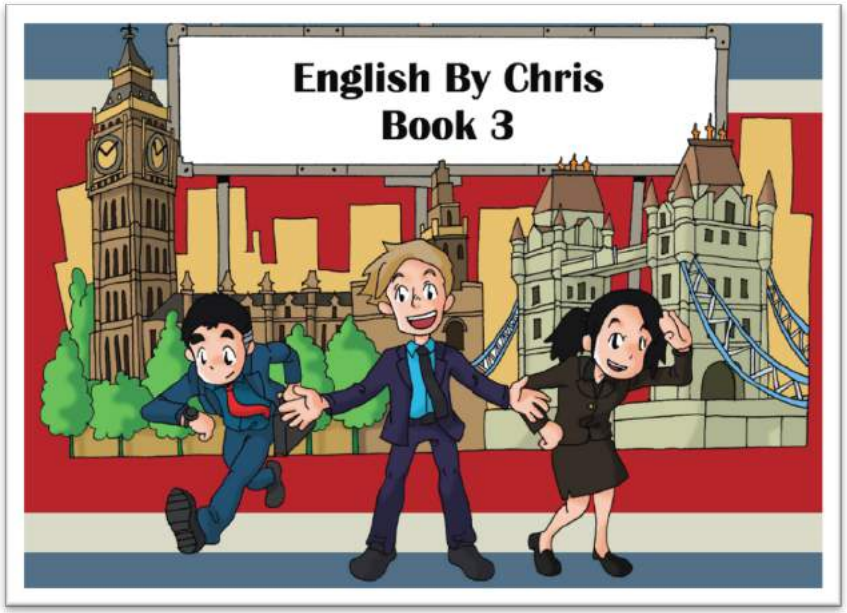

หนังสือฉบับนี้ถูกออกแบบสำหรับการใช้ภาษาอังกฤษในชีวิตประจำวัน
เนื้อหาของหนังสือฉบับนี้จะสอนให้รู้ภาษาอังกฤษที่จำเป็นมากที่สุดในชีวิตประจำวัน
รวมถึงคำศัพท์เฉพาะและการถามตอบที่ใช้บ่อยที่สุดในการสื่อสาร
ทุกบทจะสอนคำศัพท์ใหม่ๆ ที่มีความถี่มากที่สุดและเกิดบ่อยที่สุดในชีวิตประจำวัน

เกี่ยวกับผู้เขียน

คุณครูคริส
เป็นคนอังกฤษที่มีประสบการณ์ในการสอนภาษาอังกฤษเป็นระยะเวลานาน
ครูคริสสามารถใช้สามภาษาด้วยกัน อังกฤษ ไทย และ จีน
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ครูคริสได้สร้างหลักสูตรสอนภาษาอังกฤษที่มีการจำหน่ายทั้งกับโรงเรียนและส่วนบุคคล
โดยการประยุกต์ใช้ประสบการณ์ทั้งในการเรียนและสอนภาษาเพื่อประกอบเป็นหลักสูตรสอนภาษาอังกฤษของเขาเอง

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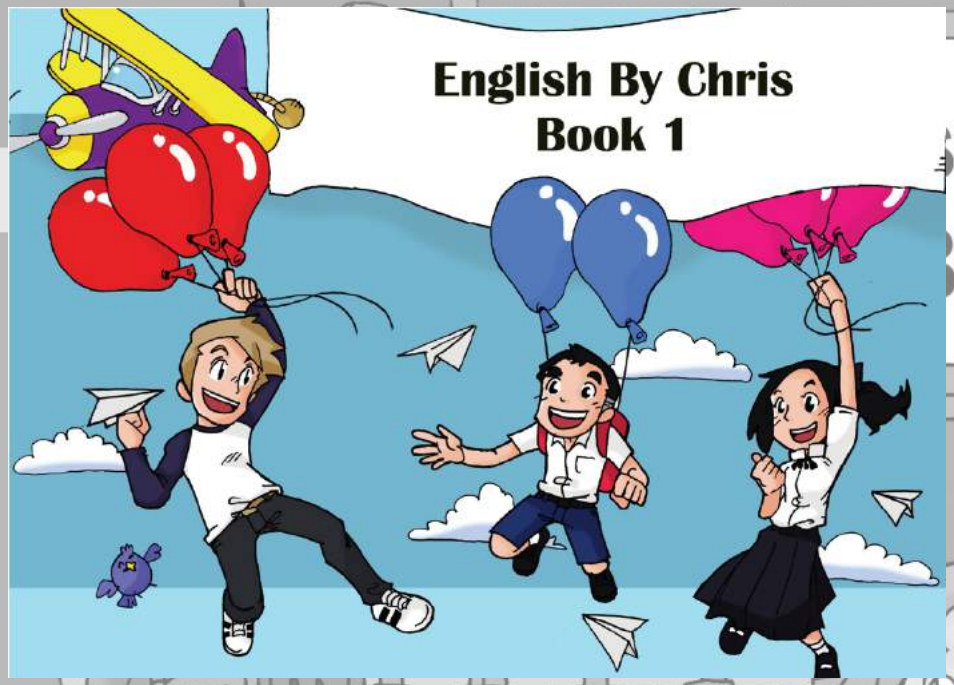
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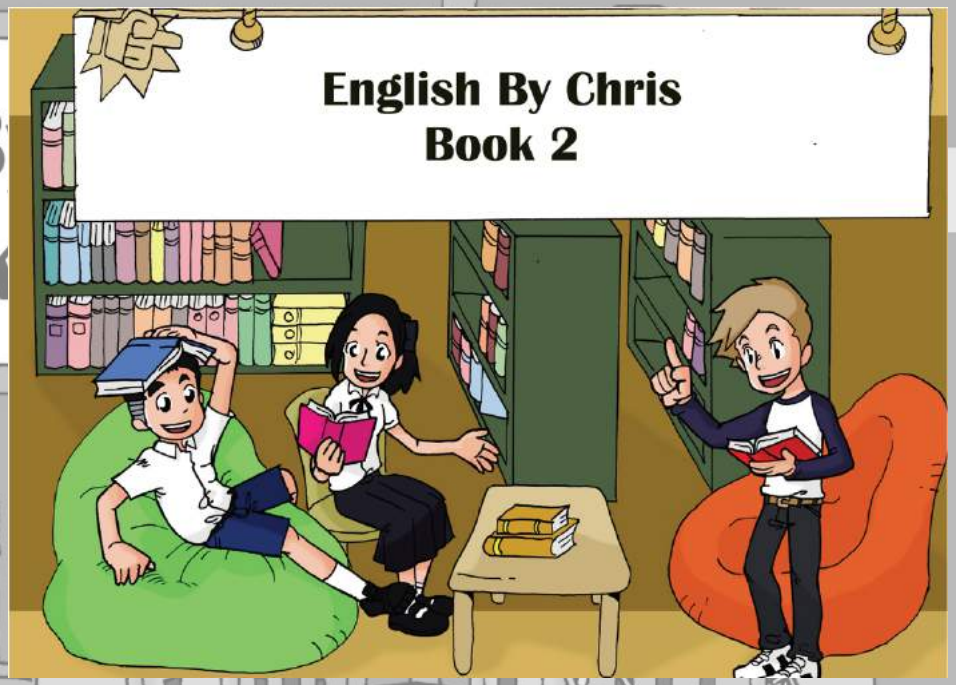
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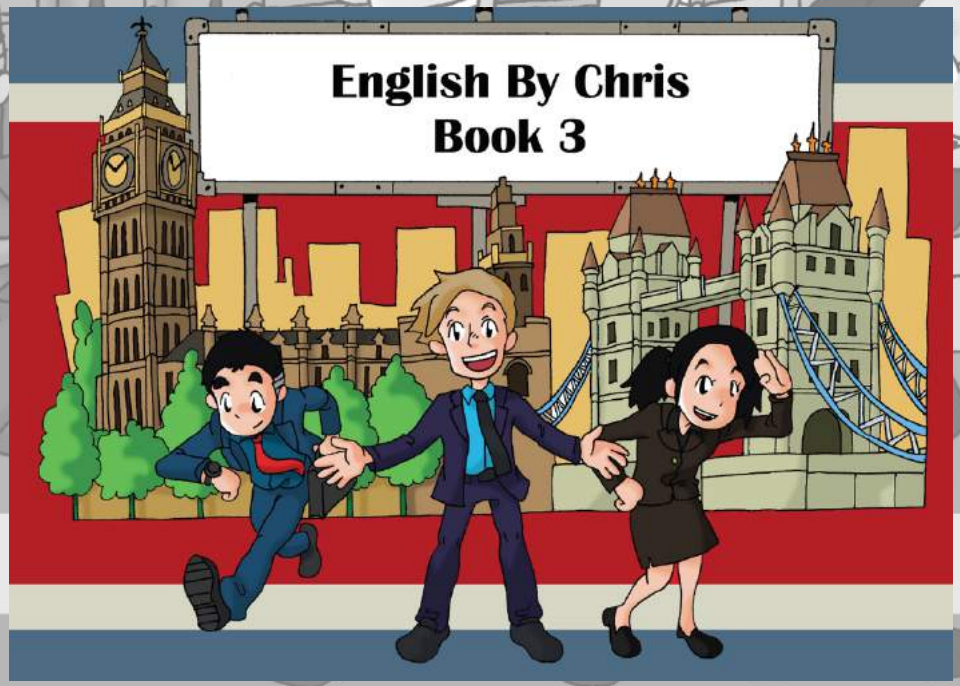
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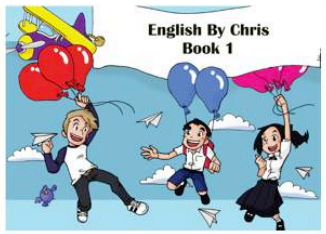

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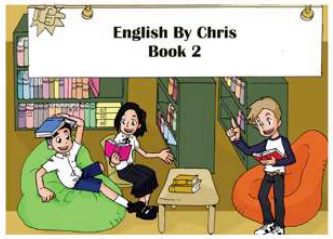

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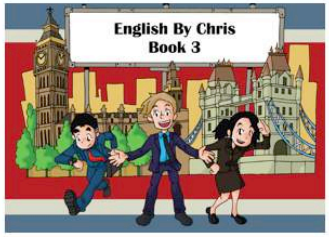

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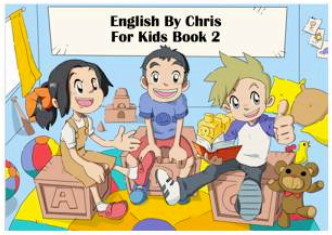

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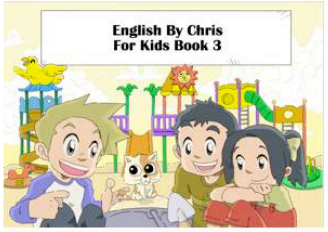

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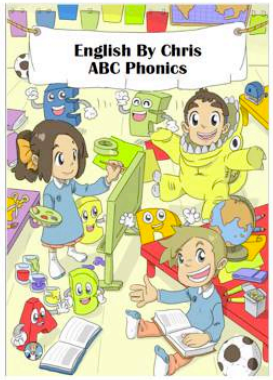

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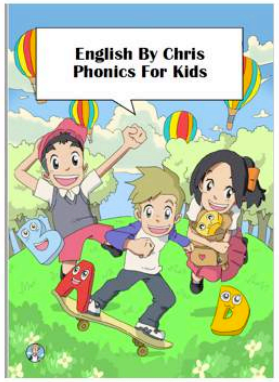

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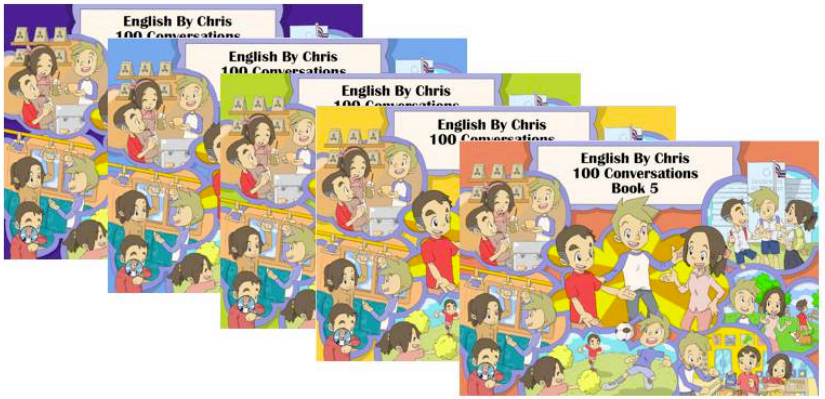

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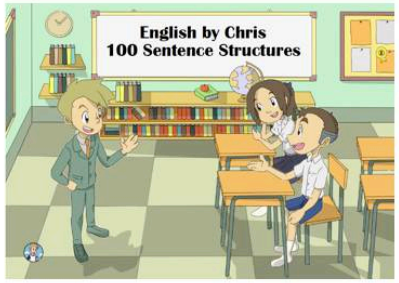

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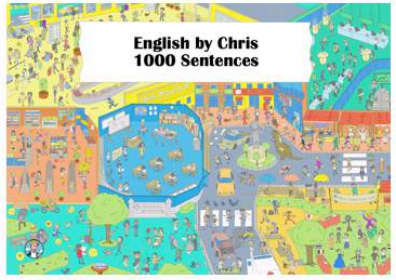

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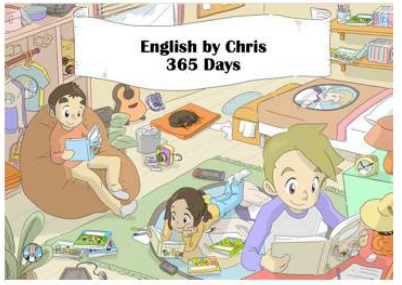

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Science
วิทยาศาสตร์

Sub-topics
หัวข้อย่อย

Science วิทยาศาสตร์

Physical science วิทยาศาสตร์กายภาพ

- **Chemistry** เคมี – Studies the composition, structure, properties and change of matter.
- **Physics** ฟิสิกส์ – Is the natural science that involves the study of matter and its motion through space and time, along with related concepts such as energy and force.

Earth and space science วิทยาศาสตร์โลกและดาราศาสตร์

- **Geology** ธรณีศาสตร์ – Deals with the earth's physical structure and substance, its history, and the processes that are acting upon it.
- **Astronomy** ดาราศาสตร์ – Deals with celestial objects, space, and the physical universe as a whole.

Life science วิทยาศาสตร์ชีวภาพ

- **Biology** ชีววิทยา – Is the study of living organisms, divided into many specialized fields that cover their morphology, physiology, anatomy, behavior, origin, and distribution.

New Vocabulary
คำศัพท์ใหม่

ซึมซับ absorb	ทำให้เปื้อนเปรอะ contaminate	ชั่วนิรันดร์ eternity
เชิงวิเคราะห์ analytical	หดตัว contract	มีอยู่จริง exist
การประเมิน assessment	พืชผล crop	ขยายตัว expand
ดาวเคราะห์น้อย asteroid	เปลือกโลก (earth's) crust	ขับไล่ expel
หลอดเลือด blood vessels	การทำให้เป็นรูปธรรม crystallization	ลักษณะเฉพาะ feature
ย่อยสลาย break down	รับน้ำหนักกระแทก cushion	เจริญพันธุ์ fertile
เชื่อมต่อ chain	ฝูงวัว dairy herd	หน้าที่ function
ลักษณะ characteristic	ระบบย่อยอาหาร digestive system	จำเป็น / สำคัญมากๆ fundamental
ตามลำดับ chronological	ละลาย dissolve	ความเสียดทาน friction
ระบบไหลเวียนโลหิต circulatory	เป็นพิเศษ distinctive	พันธุศาสตร์ genetics
ดาวหาง comet	แยกแยะ distinguish	ถูกดัดแปลงพันธุกรรม genetically manipulating
ทำให้อัดแน่น compact	แบ่งออก divided	แรงโน้มถ่วง gravity
ส่วนประกอบ component	ระบบต่อมไร้ท่อ endocrine system	เป็นอันตราย harmful
ซับซ้อน complex	เอนไซม์ enzyme	สารกำจัดวัชพืช herbicide
แม่นยำ concise	กัดกร่อน erode	อาการเหินน้ำ hydroplane
ข้อสรุป conclusion	ระเบิด erupt	สมมุติฐาน hypothesis
อย่างสม่ำเสมอ constantly	จำเป็น / สำคัญมากๆ essential	หินอัคนี igneous rock

New Vocabulary
คำศัพท์ใหม่

สาธิต illustrate	เยื่อ membrane
ระบบภูมิคุ้มกัน immune system	รวมเข้าด้วยกัน merge
ทำให้แน่นอน insure	หินแปร metamorphic rock
ปริมาณที่บริโภค intake	แร่ธาตุ mineral
มีปฏิกิริยากับ interact	แร่ธาตุวิทยา mineralogy
พลังงานจลน์ kinetic energy	ในระดับโมเลกุล molecular
ของเหลว liquid	โมเลกุล molecule
หล่อลื่น lubricate	ระบบกล้ามเนื้อ muscular system
ระบบน้ำาเหลือง lymphatic system	ระบบประสาท nervous system
ท่อน้ำเหลือง lymph duct	โคจร orbit
ต่อมน้ำเหลือง lymph nodes	อนุภาค particle
หลอดน้ำเหลือง lymph vessels	เชื้อโรค pathogens
หินหนืด magma	การขับเหงื่อ perspiration
เนื้อโลก mantle	ความเป็นกรด-ด่าง ph-level
สิ่ง / วัสดุ matter	การตกตะกอน precipitation

New Vocabulary
คำศัพท์ใหม่

คาดการณ์ predict	ทำให้เป็นของแข็ง solidify
แอ่งน้ำขนาดเล็ก puddle	แก้ไขปัญหา solve (problems)
รวดเร็ว rapidly	สารอาหารพวกคาร์โบไฮเดรต starch
ควบคุม regulate	สาร substance
ระบบสืบพันธุ์ reproductive system	อาหารเสริม supplements
ต่อต้าน resistant	สังเคราะห์ synthesize
ระบบหายใจ respiratory system	แผ่นเปลือกโลก tectonic plates
การสุ่มเก็บตัวอย่าง sampling	เส้นเอ็น tendon
คายออก secrete	สามมิติ three dimensional
ตะกอน sediment	กับดัก trap
หินตะกอน sedimentary rock	ระบบทางเดินปัสสาวะ urinary system
ระบบโครงสร้างกระดูก skeletal system	จำเป็น / สำคัญมากๆ vital
ระบบผิวหนัง skin system	นึกภาพออก visualize
ของแข็ง solid	วัชพืช weed

Food chemistry

Food science deals with the three biological components of food.
1. **Carbohydrates** are sugars and starches which are chemical fuels needed for our body's cells to function.
2. **Liquids** are fats and oils and are essential parts of cell membranes that lubricate and cushion organs within the body. Because fats have 2.25 times the energy per gram than either carbohydrates or proteins, many people try to limit their intake to avoid becoming overweight.
3. **Proteins** are complex molecules composed of from 100 to 500 or more amino acids that are chained together and folded into three-dimensional shapes necessary for the structure and function of every cell. Our bodies can synthesize some of the amino acids; however eight of them, the essential amino acids, must be taken in as part of our food. Food scientists are also concerned with the inorganic components of food such as its water content, minerals, vitamins and enzymes.

1. What do our cells need to function?

   ……

2. What causes people to become overweight?

   ……

3. How many amino acids make up proteins and how do they become three-dimensional shapes?

   ……

Environmental chemistry

Environmental chemists study how chemicals interact with the natural environment. Environmental chemistry is a study that involves both analytical chemistry and an understanding of environmental science with various assessments being used. Environmental chemists must first understand the chemicals and chemical reactions present in natural processes in the soil, water and air. Sampling and analysis can then determine if human activities have contaminated the environment or caused harmful reactions to affect it. Water quality is an important area of environmental chemistry. Completely "pure" water does not exist in nature as it always has some kinds of minerals or other substances dissolved in it, even so it is still possible to predict where cleaner water sources may occur. Water quality chemists test rivers, lakes and ocean water for characteristics such as dissolved oxygen, salinity, turbidity, suspended sediments, and ph-levels. Water that is for human consumption must be free of harmful contaminants and may be treated with additives like fluoride and chlorine to insure it is clean enough for human consumption.

1. What's the first thing environmental chemists must understand?

   .....

2. Why is there no such thing as 'pure' water?

   .....

3. How is water treated to insure it's clean enough for human consumption?

   .....

Agricultural chemistry

Agricultural chemistry deals with the substances and chemical reactions that are involved with the production, protection and use of crops and livestock. Agricultural chemists develop fertilizers, insecticides and herbicides necessary for large-scale crop production. They must also monitor how these products are used and their impacts on the environment as many of these products can have a strong negative impact on the surrounding environment causing much damage if not used correctly. As for livestock, nutritional supplements are developed to increase the productivity of meat and dairy herds which lead to more fertile and faster bigger growth of livestock. Agricultural biotechnology is a very important topic for many agricultural chemists. Genetically manipulating crops to be resistant to herbicides used to control weeds in the fields requires detailed understanding of both the plants and the chemicals at the molecular level. Biochemists must understand genetics and chemistry to help develop crops that are easier to transport or that have a longer shelf life therefore increasing profits for businesses.

1. What do agricultural chemists develop?

   ……

2. Why are nutritional supplements used for livestock?

   ……

3. What must biochemists understand and why?

   ……

Thermal expansion and contraction

Let's think about the different chronological states of matter. The idea behind thermal expansion is that gases expand as the temperature increases. Let's use a balloon to help illustrate or somewhat visualize the concept. So if you have a balloon and you heat up the contents, the balloon will get larger. Solids expand and contract the least of all the states of matter. The opposite of expansion is contraction. If things expand with the addition of heat, it makes sense that they contract when heat is removed. If you remove enough heat from a gas it will become a liquid. Liquids can turn into solids with further cooling. What happens when you remove almost all of the energy from a system? Scientists use the terms absolute zero to describe a system that has no kinetic energy. In conclusion we can then say that when there is no kinetic energy in a system, all molecular motion stops. It seems that even the atoms begin to merge at these low temperatures.

1. What happens to gases as their temperature increases?

   ……

2. What happens if you remove enough heat from a gas?

   ……

3. How do you make a liquid turn into a solid?

   ……

Friction

Friction is simply a force that slows down the movement of a moving object. You will find friction everywhere that objects come into contact with one another. The force acts in the opposite direction to the way an object wants to slide. If a car needs to stop at a stop sign, it slows because of the friction between the brakes and the wheels. If you run down the road and stop quickly, you can stop because of the friction between your shoes and the surface of the road. What happens if you run down the sidewalk and you try to stop on a puddle? Friction is still there, but the liquid makes the surfaces smoother and the friction a lot less. Less friction means it is harder to stop which is why so many car accidents happen during heavy rainfall or storms. Even though the friction of the brakes is still there, the brakes may be wet, and the wheels are not in as much contact with the ground. Cars hydroplane when they go too fast on puddles of water.

1. Where does friction happen?

   ……

2. How does a puddle of water make less friction?

   ……

3. What happens when cars go too fast on water?

   ……

Types of rocks

There are three major groups of rocks and it is quite easy to distinguish their differences. **Igneous** rocks are those that have formed by the cooling and crystallization of magma, either at the Earth's surface or within the crust. **Sedimentary** rocks are those that have formed when eroded particles of other rocks have been deposited (on the ocean floor, streams/lake beds, etc.) and compacted, or by the precipitation of minerals from water. **Metamorphic** rocks are those that have formed when existing rocks have undergone pressure and / or temperature changes so that their original mineralogy has been changed. Each of these rock groups contains many different types of rock, and each can be identified from its physical features. Being able to describe and name rocks is one of the fundamental skills of a geologist. Important information regarding the nature of rocks is communicated through concise, accurate descriptions. This information allows the geologist to identify the rock, and, in the process, to learn about its history and the geological environment in which it was formed.

1. Where are igneous rocks formed?

   ……

2. What are sedimentary rocks formed from?

   ……

3. What happens to existing rocks that changes their mineralogy to become metamorphic rocks?

   ……

Volcanoes

A volcano is formed when hot molten rock, ash and gases escape from an opening in the Earth's surface. The molten rock and ash solidify as they cool, forming the distinctive volcano shape. As a volcano erupts, it spills lava that flows downslope. Hot ash and gases are thrown into the air. Some volcanoes are covered with snow and ice. If they erupt, melted snow and ice mixes with mud and volcanic ash and flows down. Volcanic flows are called lahars. The Earth's surface is made up of several tectonic plates which are constantly moving, although very slowly. Where tectonic plates are being pushed together, some of the Earth's crust is pushed deeper into the Earth's mantle where it melts and rises to the surface again to form volcanoes. A large area where this occurs on earth is called the Pacific Ring of Fire. It's still very difficult for scientists to create any kind of hypothesis as for when exactly volcanoes will erupt, but with continual new technological developments, they are getting closer to predicting.

1. What happens to the molten rock and ash as they cool?

   ……

2. What are volcanic flows called?

   ……

3. What are tectonic plates constantly doing?

   ……

Our Solar System

Our Solar System is made up of all the planets that orbit our Sun. In addition to planets, the Solar System also consists of moons, comets, asteroids, minor planets, and dust and gas. Everything in the Solar System orbits or revolves around the Sun. The Sun contains around 98% of all the material in the Solar System. The larger an object is, the more gravity it has. Because the Sun is so large, its powerful gravity attracts all the other objects in the Solar System towards it. At the same time, these objects, which are moving very rapidly, try to fly away from the Sun, outward into the emptiness of outer space. The result of the planets trying to fly away, at the same time that the Sun is trying to pull them inward is that they become trapped half-way in between. Balanced between flying towards the Sun, and escaping into space, they spend eternity orbiting around their parent star.

1. What is our Solar System consisted of?

   ……

2. What happens to an object the larger it is?

   ……

3. What is the result of planets trying to fly away whilst the Sun is trying to pull them inwards?

   ……

Body systems part 1

Our bodies consist of a number of biological systems that carry out specific functions necessary for everyday living. The job of the **circulatory system** is to move blood, nutrients, oxygen, carbon dioxide, and hormones, around the body. The **digestive system** consists of a series of connected organs that together, allow the body to break down and absorb food, and remove waste. The **endocrine system** consists of eight major glands that secrete hormones into the blood. The **immune system** is the body's defense against bacteria, viruses and other pathogens that may be harmful. The **lymphatic system** includes lymph nodes, lymph ducts and lymph vessels, and also plays a role in the body's defenses. Its main job is to make and move lymph, a clear fluid that contains white blood cells, which help the body fight infection.

1. Which biological system moves blood around the body?

   ……

2. How many glands does the endocrine system have?

   ……

3. How is the lymphatic immune system important?

   ……

Body systems part 2

The **nervous system** controls both voluntary actions (like conscious movement) and involuntary actions (like breathing), and sends signals to different parts of the body. The body's **muscular system** consists of about 650 muscles that aid in movement, blood flow and other bodily functions. The **reproductive system** allows humans to reproduce. Our bodies are supported by the **skeletal system**, which consists of 206 bones that are connected by tendons, ligaments and cartilage. The skeleton helps support our body for movement. The **respiratory system** allows us to take in vital oxygen and expel carbon dioxide in a process we call breathing. The **urinary system** helps eliminate a waste product called urea from the body, which is produced when certain foods are broken down. The **skin system** is the body's largest organ. It protects us from the outside world, and is our first defense against bacteria, viruses and other pathogens. Our skin also helps regulate body temperature and eliminate waste through perspiration.

1. Movement is controlled by which biological system?

   ……

2. How many bones does our body have?

   ……

3. Which is the largest biological system?

   ……

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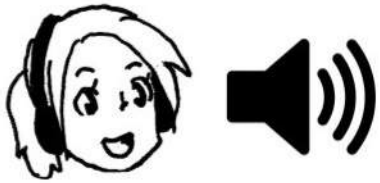


Exercise 1 – Choose the correct answer.

1. How many kinds of memory do we have?

A- Four kinds.

B- Two kinds.

C- Only one kind.

D- Three kinds.

2. Our brain uses how much energy?

A- About half of our body's energy.

B- Up to two percent of the body's energy.

C- None, it makes its own energy.

D- Twenty percent of the body's energy.

3. The left side of the brain controls which functions?

A- Recognizing objects.

B- Musical sounds.

C- Artistic ability.

D- Language and numbers.

Free Speaking Activity

"You are a scientist who must convince the world to change from oil and gas fuels to more environmentally friendly energies."

Notes -

Questioning & Answering 1

การถามตอบ

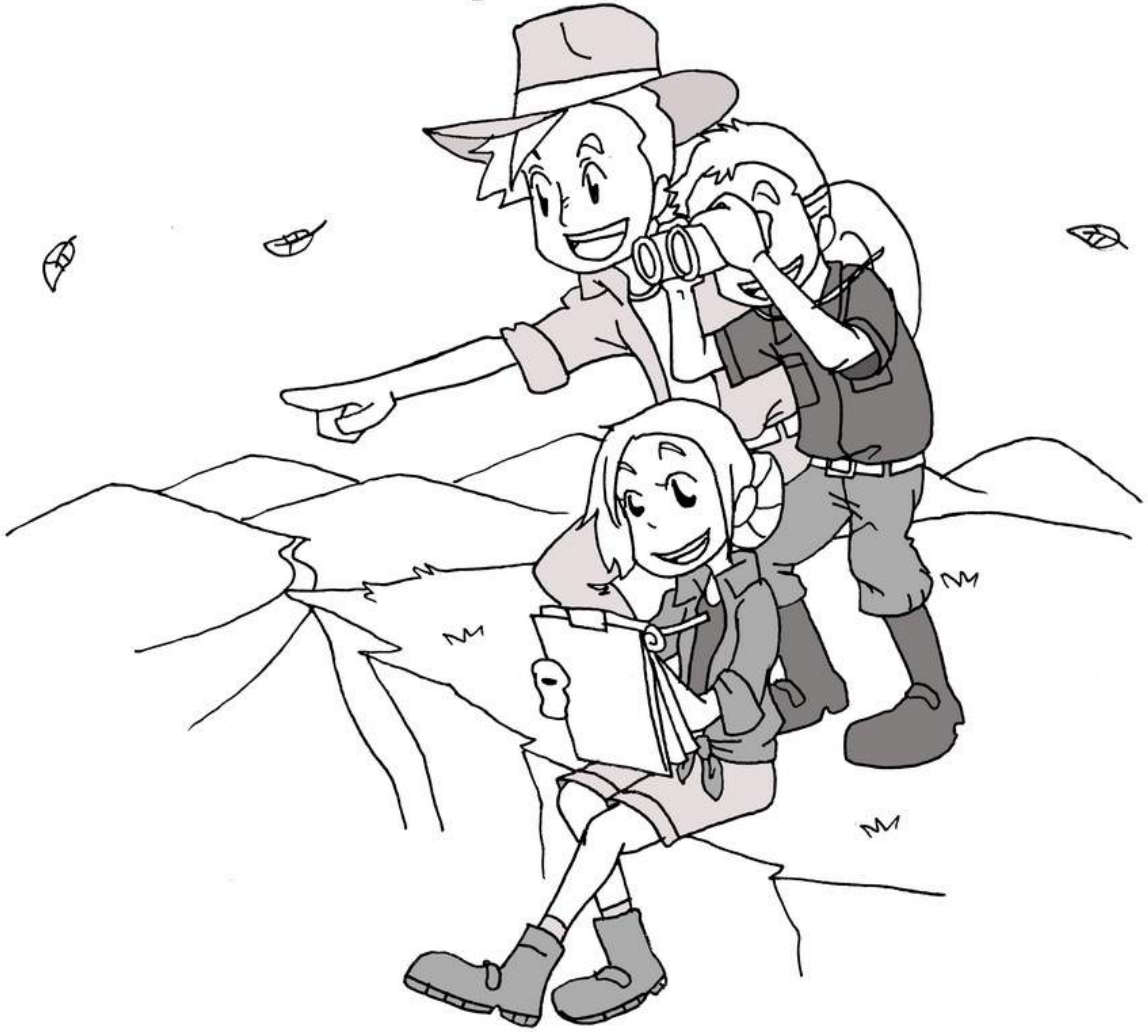
1. **Why do we dream?**
2. **Can computers keep getting more advanced?**
3. **Will we ever cure cancer?**
4. **Do you think science will help humans live forever?**
5. **How will science help the world population problem?**
6. **Do you think time travel will be possible?**
7. **What came first the chicken or the egg?**
8. **Is there life outside of earth?**
9. **Why is the sky blue?**
10. **What's the "Big Bang"?**

Notes -

Unit 1

Verb 1	Verb 2	Verb 3
เลื่อนเวลา Postpone	Postpon**ed**	Postpon**ed**
สมัคร / ประยุกต์ใช้ Apply	Appli**ed**	Appli**ed**
ระบุ Specify	Specifi**ed**	Specifi**ed**
ปล้น Rob	Robb**ed**	Robb**ed**
กล่าวหา Accuse	Accus**ed**	Accus**ed**
ต้าน Resist	Resist*ed*	Resist*ed*
กระตุ้น Stimulate	Stimulat*ed*	Stimulat*ed*
ซึมซับ Absorb	Absorb**ed**	Absorb**ed**
แบ่ง Divide	Divid*ed*	Divid*ed*
กรน Snore	Snor**ed**	Snor**ed**

Lesson 2
Geography
ภูมิศาสตร์



Sub-topics
หัวข้อย่อย

Geography ภูมิศาสตร์มนุษย์

- **Human geography** ภูมิศาสตร์มนุษย์ – Deals with the world, its people and their communities, cultures, economies, and interaction with the environment by emphasizing their relations with and across space and place. Human geography studies include that of language, religion, different economic and governmental structures, art, music, and other cultural aspects that explain how and/or why people function as they do in the areas in which they live. Globalization is also becoming increasingly important to the field of human geography as it is allowing these specific aspects of culture to easily travel across the globe. Cultural landscapes are also important because they link culture to the physical environments in which people live. This is vital because it can either limit or nurture the development of various aspects of culture. For instance, people living in a rural area are often more culturally tied to the natural environment around them than those living in a large metropolitan area.

- **Physical geography** ภูมิศาสตร์กายภาพ – Deals with the nature of the earth as in landforms, water, soils, climate, and vegetation as the major natural elements of the environment. The focus of physical geography is on the zone of the land, ocean, and atmosphere containing most of the world's organic life. Physical geography not only helps us to describe the natural world on the surface of the earth but, more importantly, seeks explanations of how and why the physical and biological processes act as they do. Physical geography comprehensively focuses on the processes of the natural environment, often with an emphasis on human modifications to the environment.

New Vocabulary
คำศัพท์ใหม่

รับเป็นของตน adopted	มีผลกระทบอย่างแรง dramatic impact	โลกาภิวัตน์ globalization
บรรยากาศ atmosphere	อาศัยอยู่ dwell	ยึดเอา grab
ทำให้เสียหาย blighted	คลื่นแม่เหล็กไฟฟ้า electromagnetic radiation	ซึ่งไม่สามารถอาศัยอยู่ได้ inhabitable
ทางชีววิทยา biological	เน้น emphasize	ปฏิสัมพันธ์ interaction
วิสาหกิจเอกชน business enterprise	เพิ่มขีดความสามารถ empowerment	อย่างรุกราน invasive
การรวมกัน combination	ก่อตั้ง establish	ธาตุเหล็ก iron
อย่างครอบคลุม comprehensively	เกินกว่า exceed	อิทธิผล influence
การบริโภค consumption	สร้างขึ้น / ผลิต generate	ผู้อาศัย inhabitant
ทำให้ย้ายที่ displace		

New Vocabulary
คำศัพท์ใหม่

ลักษณะผิวดิน landform	การอพยพ migration	ในชนบท / บริเวณนอกเมือง rural area
ภูมิประเทศ landscape	การปรับปรุง modification	แผนก sector
ชั้น layer	แก่นโลก molten core	ดิน soil
รั่วออก leak out	นิเกิ้ล nickel	แหล่ง source
สนามแม่เหล็ก magnetic field	ไนโตรเจน nitrogen	อาณาเขต territory
ส่วนมาก majority	บำรุง / เลี้ยง nurture	ผูกพัน / เชื่อมต่อ tied
ชั้นแมนเทิล mantle	ทับถม pile	พืช vegetation
อุกกาบาต meteoroid	พึ่งพา relies / rely	เงินเดือน / ค่าจ้าง wage
บริเวณนครหลวง metropolitan area		

Urbanization

In the developed world, the scale of increasing urbanization could have a dramatic impact on climate change. In developing nations, the move from rural areas to cities often leads to an accompanying increase in income and that increase in income leads to an increase in the consumption of food and energy, which in turn produces more carbon emissions. Humans have evolved into the ultimate invasive species - when they move into new territory, they often displace the wildlife that was already living there and the land is cleared for those new cities, so much forestry and jungle has been cleared down for this new growth of city expansion. Where there was once beautiful rivers, canals, streams amongst forest and mountains, there are now giant cities. Governments then, are now being pressured to think carefully about how to responsibly handle the issue of urbanization so as to minimize its negative impact on the environment. New conservation rules need to be established if we are to fight the negative effects that urbanization is having on the world.

1. What happens to people's consumption when they move from rural areas to cities?

   .....

2. How are humans "invasive species'?

   .....

3. What are governments being pressured to do?

   .....

The effects of tourism on the economy

The pros of tourism include that it creates jobs, both through direct employment within the tourism industry and indirectly in sectors such as retail and transportation, in some cases it is a country's largest annual source of income. When these people spend their wages on goods and services, it leads to what is known as the "multiplier effect," creating more jobs. The tourism industry also provides opportunities for small-scale business enterprises, which is especially important in rural communities, and generates extra tax revenues, such as airport and hotel taxes, which can be used for schools, housing and hospitals. Successful tourism relies on establishing a basic infrastructure, such as roads, visitor centers and hotels. **The cons** of tourism then, are the expenses that occur which fall on the government, so it has to come out of tax revenues. Jobs created by tourism are often seasonal and poorly paid, yet tourism can push up local property prices and the cost of goods and services. Money generated by tourism does not always benefit the local community, as some of it leaks out to huge international companies, such as hotel chains. Destinations dependent on tourism can be adversely affected by events such as terrorism, natural disasters and economic recession.

1. What happens when people spend their wages on goods and services?

   .....

2. What kinds of other taxes can the tourism industry bring?

   .....

3. What events could affect a destination's tourism industry?

   .....

The atmosphere

What is the sky? What is air? What is the atmosphere? What elements are up there? The atmosphere is a thin layer of gases that surrounds the Earth. It protects us from electromagnetic radiation given off by the Sun and small objects flying through space such as meteoroids. Of course, it also holds the oxygen (O2) which we all breathe to survive. Just as the Earth has different layers, so does the atmosphere. The thickness of the atmosphere is a balance between the gravity of the Earth and energetic molecules that want to rise and move towards space. The molecules in the upper layers of the atmosphere become energized as energy from the Sun hits the Earth. The molecules in the lower layers are cooler and under greater pressure. While the majority of the atmosphere is composed of nitrogen (N2) molecules, there are also oxygen and carbon dioxide (CO2) which plants and animals need to survive. Without our atmosphere, the Earth would be inhabitable for life.

1. Does the atmosphere help protect the Earth? How?

   .....

2. What happens to the molecules in the upper layers of the atmosphere when the Sun hits the Earth?

   .....

3. What is the atmosphere composed of?

   .....

The Earth's energy

The energy that enables the systems of Earth to function comes from two locations. The first is the Sun, which radiates huge amounts of energy. Only a small portion of that energy hits the Earth, but it is enough to light our days, heat our air and land, and create weather systems over the oceans. Most of the energy you will learn about comes from the Sun. The Earth also gives off energy itself too. There is a molten outer core of iron (Fe) and nickel (Ni) that radiates heat and creates a magnetic field that surrounds and protects our planet. Most scientific studies suggest that the inner core is around 6,000 degrees Celsius (10,800 degrees Fahrenheit). The asthenosphere and upper mantle also radiate heat from the interior of the planet. Even without the heat of the Sun, the Earth would be warmer than space or a planet with no molten core.

1. What are the two locations of energy for the Earth?

   .....

2. What is the Earth's core made of?

   .....

3. How does the Earth's core help protect our planet?

   .....

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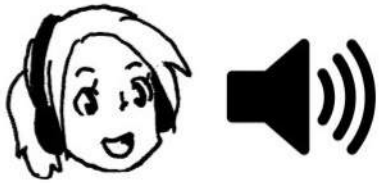


Exercise 1 – Choose the correct answer.

1. Why did so many people move from rural areas to urban areas?

A- For an opportunity.

B- For an apartment.

C- For the economy.

D- For economic opportunities.

2. What is expected to happen within the next 20 years (2010-2030)?

A- 75 per cent of Chinese to be farmers.

B- 75 per cent of Chinese to be living in cities.

C- 75 per cent of Chinese to own a car.

D- 75 per cent of Chinese to be living in rural areas.

3. How are migrant workers treated?

A- As second-class citizens.

B- As poor-class citizens.

C- As lower-class citizens.

D- As weak-class citizens.

Free Speaking Activity

“You're a city-planner, you are to outline your new city for the future and give a short presentation to investors.”

Notes -

Questioning & Answering 2

การถามตอบ

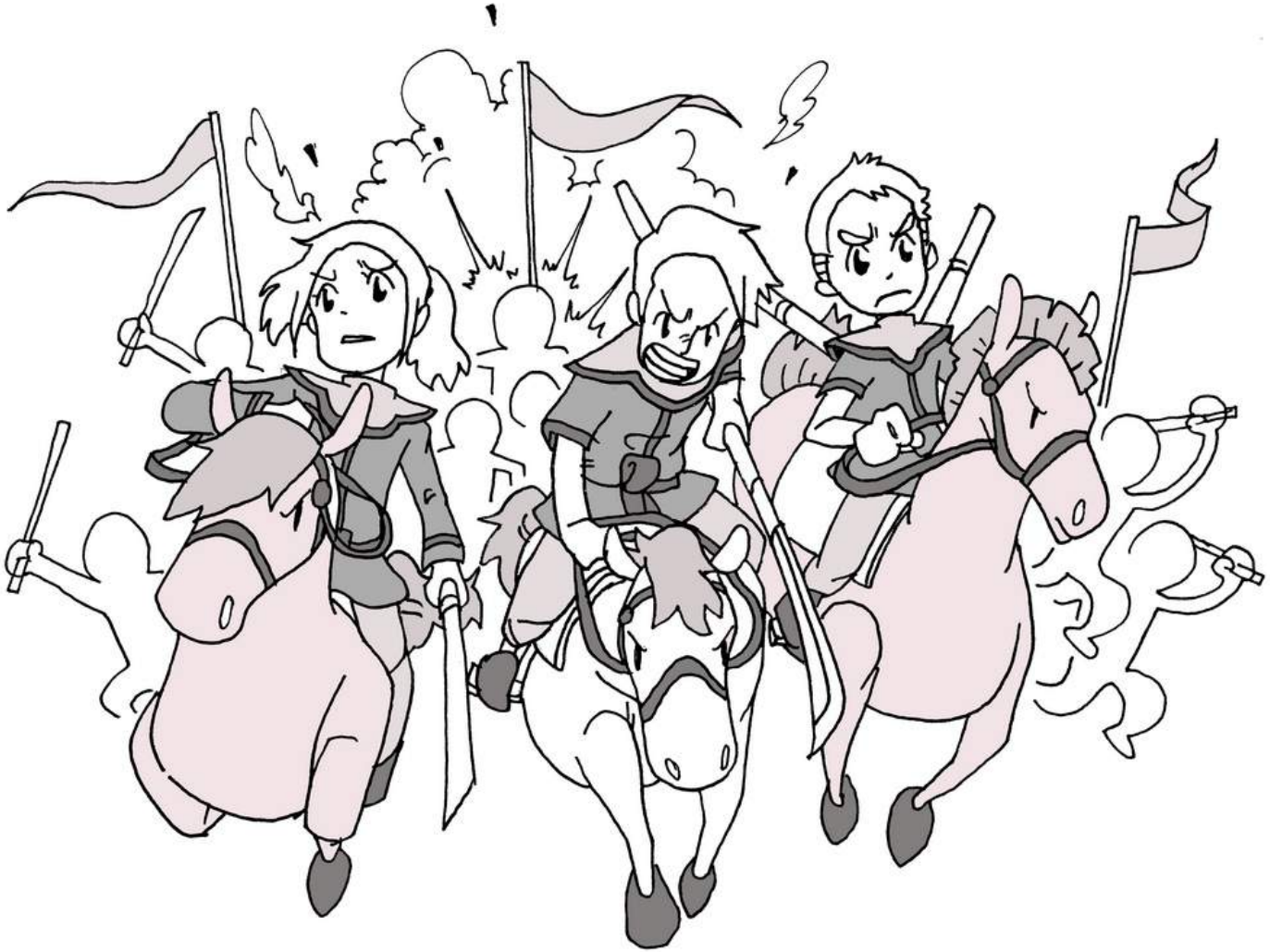
1. How fast is the world's population growing?
2. How many continents are on the earth?
3. What does the word geography mean?
4. What is the third world?
5. Why do droughts occur?
6. What is an epicentre?
7. Why is the desert so cold at night?
8. What is the difference between a city and a town?
9. What is the most popular language in the world?
10. What is the most popular religion in the world?

Notes -

Unit 2

Verb 1	Verb 2	Verb 3
ล้น Overflow	Overflow**ed**	Overflow**ed**
ขัดขวาง / บัง Obstruct	Obstruct*ed*	Obstruct*ed*
เปิดเผย Reveal	Reveal**ed**	Reveal**ed**
แกะสลัก Sculpt	Sculpt*ed*	Sculpt*ed*
บรรจุ Contain	Contain**ed**	Contain**ed**
สมควรได้รับ Deserve	Deserv**ed**	Deserv**ed**
เจตนา Intend	Intend*ed*	Intend*ed*
ชักจูงใจ Persuade	Persuad*ed*	Persuad*ed*
รณรงค์ Campaign	Campaign**ed**	Campaign**ed**
คืบหน้า Progress	Progress<u>ed</u>	Progress<u>ed</u>

Lesson 3
History
ประวัติศาสตร์



Sub-topics
หัวข้อย่อย

History ประวัติศาสตร์

- **Prehistory** สมัยก่อนประวัติศาสตร์ – Prehistory or prehistoric is the period of time before writing began. Prehistoric can refer to people, animals or anything that lived or occurred before writing began (about 5,000 years ago.)

- **Ancient times** สมัยโบราณ – Is from the first recordings of humans and of the first large empires and civilizations such as the Romans, Greeks, Egyptians and so on.

- **Middle ages** สมัยกลาง – Is the time span from the collapse of the Roman Empire to the Renaissance and Reformation. The Middle Ages was a period of enormous historical, social, and linguistic change, despite the continuity of the Roman Catholic Church.

- **Modern era** สมัยใหม่ – Is the time period of industrial and technological development such as the use of coal, oil and gas as energy forms. This is also when many wars between neighboring countries and on a worldwide scale will take place.

New Vocabulary
คำศัพท์ใหม่

มักจะ bound	ความเหนื่อยล้า exhaustion	โดดเด่น outstanding
ให้ได้ by all means	การกำจัด extermination	กระบวนทัศน์ paradigm
สำลัก choke	สูญพันธุ์ extinct	พินาศ / เสียชีวิต perished
เหรียญ coin	ดุร้าย ferocious	แบบต่อเนื่อง perpetual
อาณาจักรโรมันถล่ม collapse	สกปรกมาก filthy	สารฆ่าศัตรูพืชและสัตว์ pesticides
ปะทะกัน collide	มีที่สิ้นสุด finite	ซึ่งมีทั่วๆ rampant
ดังนั้น / จึง consequently	หมัด flea	พูดเอง / อ้างถึง refer
ค่ายกักกัน concentration camp	การทำลายชนชาติ genocide	สะท้อน reflect
โรคติดต่อ contagious	การจัดทำระบบ implementation	การปฏิรูป reformation
ได้รับมาจาก derived	ไม่มีที่สิ้นสุด infinite	สมัยฟื้นฟูศิลปวิทยา renaissance
จักรพรรดิ emperor	ภาษาศาสตร์ linguistic	กฎ / ครอบครอง rule
ราชอาณาจักร empire	การเข้าใจผิด misconception	ความอดอยาก starvation
ใหญ่มากๆ enormous	ซึ่งไม่สามารถหาทดแทนได้ non-renewable	ระยะเวลา time span
ประหารชีวิต execute		

Dinosaurs

Most people think of dinosaurs as big, ferocious and extinct reptiles. That's largely true, but there are some misconceptions. Dinosaurs came in all shapes and sizes. Dinosaurs were the largest land animals of all time, but a great number of dinosaurs were actually smaller than a turkey. Scientists can't seem to agree on why all these dinosaurs have become extinct, but some theories included an asteroid impact, choking chemicals from erupting volcanoes, climate change and possibly other factors. In 1842, paleontologist Richard Owen made the term dinosaur, derived from the Greek *deinos*, meaning "terrible" or "fearfully great," and *sauros*, meaning "lizard" or "reptile" and in the 19th century dinosaur fossils were first officially recognized and accepted as prehistoric creatures.

1. What is a misconception people have about dinosaurs?

   .....

2. How do some scientists theorize how dinosaurs went extinct?

   .....

3. What does the word "Dinosaur" actually mean?

   .....

The Roman Empire

The Roman Empire was the largest empire of the ancient world. Its capital was Rome, and its empire was based in the Mediterranean. The empire was the third stage of Ancient Rome. Rome was first ruled by Roman kings, then by the Roman Republic, then by an emperor. Many modern lands were once part of the Roman Empire, including Britain (not Scotland), Spain, Portugal, France, Italy, Greece, Turkey, Germany, Egypt, and the north coast of Africa. The main language of the Roman Empire was Latin; Greek was an important secondary language. In order to control their large empire, the Romans developed important ideas about law and government. They developed the best army in the world at that time, and ruled by force. They had fine engineering, and built roads, cities, and outstanding buildings. Trade was very important for Rome, a city of more than a million people, by far the largest in the world. The Romans fought many wars against other countries, and enjoyed watching violent sports. They enjoyed watching races between chariots pulled by horses, and fights between men using weapons (gladiators) in the Colosseum. The main coin of the Roman Empire was the denarius.

1. Where was the Roman Empire based?

   .....

2. What were the languages used in the Roman Empire?

   .....

3. Who were “Gladiators” and what did they do?

   .....

The Black Death

The Black Death is the name of a disease that spread throughout Europe from 1347 to 1350. There was no cure for the disease and it was highly contagious. The disease originated in Asia and came to Europe via fleas on rats that were in trade goods ships. It was a horrendous disease that killed millions of people across Europe who were buried in massive pits. The disease mainly moved around via fleas on rats, and rats were running rampant across all major villages and towns. Many people were panicking thinking it was the end of the world. It is estimated that somewhere between 75 million and 200 million people died of the plague. The plague was not called “The Black Death” until many years later. Some think it was called this because of how the skin turned black at the late stages of the disease, but it was more likely called "Black" to reflect the dark and horrible time in history.

1. When did the Black Death occur?

   ……

2. How did the disease come to Europe?

   ……

3. How many people died and how did the disease spread so rampantly?

   ……

Our energy problem

A society and world economic system based on infinite perpetual growth with the emphasis of that energy coming from finite reserves of oil and gas is bound to eventually hit the peak of energy production and so consequently with nothing else to match what those resources can do and can be (plastics, pesticides which enable us to grow large masses of food, cosmetics etc.) then surely a painful down-slide awaits us as the never ending growth that the world economic system needs to live, collides with finite non-renewable resources which we have foolishly based our never ending growth paradigm on. The current world as we know it cannot and will not continue to keep growing. There is coming a time of down-sliding. We should instead learn to only grow at a rate as fast as what nature's renewable resources can handle. As far as using finite non-renewable resources such as oil and gas is concerned, they should be responsibly used and recycled wherever possible by all means.

1. Where does the majority of our energy come from?

   .....

2. What is the "down-slide"?

   .....

3. How should we be using energy to be more efficient and solve this problem?

   .....

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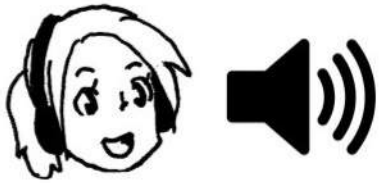

Exercise 1 – Choose the correct answer.

1. How many Jewish people were estimated to have died in the Holocaust?

A- 66 million.

B- 6 million.

C- 6.6 million.

D- 600 million.

2. What were the Nazis called who went around finding Jews and executing them?

A- Killing squad.

B- Death squads.

C- Execution squad.

D- Death team.

3. What were the purpose of "concentration camps"?

A- To execute as many Jews as possible.

B- To give Jews work and healthcare.

C- To accommodate Jews.

D- To imprison the Jews, but not kill them.

Free Speaking Activity

"You are an English solider fighting the Germans in WW2, you're in Paris trying to take back the city. Tell us about your day of fighting and how you won back the city."

Notes -

Questioning & Answering 3

การถามตอบ

1. **Do you think there will be another world war?**
2. **What can we learn from collapsed ancient empires?**
3. **How were the pyramids built?**
4. **If you could go back to any time period, which one?**
5. **Why did the Roman empire collapse?**
6. **How much longer do you think civilization will last?**
7. **Why was the discovery of oil so important?**
8. **What's the "New world order"?**
9. **Will there ever be world peace?**
10. **What are 5 major historical events you can think of?**

Notes -

Unit 3

Verb 1	Verb 2	Verb 3
ทำแท้ง Have an abortion	Had an abortion	Had an abortion
แพร่กระจาย Spread	Spread	Spread
ด่า Scold	Scold*ed*	Scolded
ฟ้อง Tell on	Told on	Told *on*
ระเหย Evaporate	Evaporat*ed*	Evaporat*ed*
ประท้วง Protest	Protest*ed*	Protest*ed*
จับกุม Arrest	Arrest*ed*	Arrest*ed*
เลื่อน Slide	Slid	Slid
สอดคล้อง Conform	Conform**ed**	Conform**ed**
ละเลย Neglect	Neglect*ed*	Neglect*ed*