

LESSON 1:1. READING**Chemical Equations**

Scientists believe that elements consist of atoms. Atoms are the smallest pieces of elements. Elements combine to form compounds. When this happens, the atoms of each element stick, or bond, together. These bonded atoms form molecules. When two atoms of Hydrogen (H) combine with one atom of Oxygen (O₂), they form one molecule of water (H₂O).

Chemical equations show what happens when the compounds combine. For example, $\text{H}_2\text{O} + \text{SO}_2 \rightarrow \text{H}_2\text{SO}_3$. In this equation, sulfur dioxide (SO₂) combines with water (H₂O) to yield sulfurous acid (H₂SO₃). We often combine compounds of unequal amounts. Then, we write a number before the symbol for the compound. For example, 5O₂ means 5 parts of oxygen.

1. According to the passage, atoms:
 - (A) are larger than molecules
 - (B) are the largest pieces of elements
 - (C) are smaller than molecules
 - (D) combine to form compounds
2. Which is true of compounds?
 - (A) They are smaller than molecules
 - (B) They are smaller than atoms
 - (C) They are the same as elements
 - (D) They are formed when elements combine.
3. The word "yield" in the paragraph 2 is closest in meaning to:
 - (A) produce
 - (B) stick together
 - (C) unequal
 - (D) allow

4. Explain or show the relationship between atoms, molecules, and compounds.

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WILDERNESS FIRST AID

In the woods, people are alone and far from help. Thinking ahead can help avoid getting hurt. On long trips, it is a good idea to bring a first aid book and a medical bag. A list of important items should be prepared and checked before leaving. A first aid bag with treatment for cuts should always be prepared and taken. It should also have medicine for bug bites, pain, and other maladies. Also, it is important to know what to do. A medical bag full of items is useless if no one knows how to use them. The use of these items should be clearly understood. They may be needed to treat pain and injuries!

1. Which of the following do you need for a long trip in the woods?
 - (A) Nothing special
 - (B) A first aid bag
 - (C) Training, a medical bag, and a first aid book
 - (D) A first aid bag, a book, and a medical bag
2. Why do you need first aid training for a long trip in the woods?
 - (A) It's not really necessary.
 - (B) You will be alone and far from help.
 - (C) You will be traveling on foot.
 - (D) You may not know where there is water.
3. The word "maladies" is closest in meaning to
 - (A) Female mosquitoes
 - (B) Vitamins
 - (C) Hurt women
 - (D) Health problems

POTTERY

Many North American First Nations people make beautiful pottery. Many of these First Nations potters are women, and most of this potter is used for cooking. All pottery is made from clay, and First Nations people know where to get clay that is very special.

To make a pot, the potter must first get the clay. Then she grinds it into fine powder. Next, any small lumps or stones are taken out. Water is then added to the clay powder until it is like bread dough. The potter shapes it into a pot and lets it dry. Then, it is painted. Finally, the potter puts it into a hot fire for a long time.

1. According to the passage, what group of people makes beautiful pottery?
 - (A) French women
 - (B) Canadian potters
 - (C) First Nations people
 - (D) Americans
2. What is the pottery made from?
 - (A) powder
 - (B) bread dough
 - (C) paint
 - (D) clay
3. The word "shapes" in the paragraph 2 is closest meaning to
 - (A) Puts
 - (B) Pours
 - (C) Forms
 - (D) Grinds

2. SPEAKING

Question 1: what is a useful skill your mother or father taught you? Describe the skill and how you were taught the skill.

- Answer introduction:

A useful skill my ----- taught me is -----

When/ How I was taught this skill -----

Why is this skill important ----- ?

- More detail:

A useful skill my----- taught me is-----

----- He/ She taught me this skill by-----

----- when I

was-----

From this, I learned how to-----

Today, I use this skill when -----

- Related ideas and expressions:

- Nouns: sewing machine, laundry, motorcycle, bicycle...
- Verbs: mangle, use, operate, repair, ride...
- Adverbs: nowadays, usually, all the time, today

Question 2: How did you spend your free time in high school? Do you think this was a useful or positive way to spend your free time? Talk about specific things you did and why you chose to do this.

- Answer introduction:

In high school, I spend my free time ----- . I think this was a ----- way to spend my free time.

Activity 1: ----- why I did it: -----

Activity 2: ----- why I did it: -----

Activity 3: ----- why I did it: -----

- More detail:
In high school, I spent my free time -----
----- . I think this was a ----- way
to spend my free time. For example, one thing I did was -----
----- I did it because I
thought ----- . Another
thing I did was ----- .
I did it because ----- . Spending my
free time ----- in high school was a
----- experience for me.
- Related ideas and expressions:
 1. Activities: jogging, studying in the library, watching TV.....
 2. Reasons: for exercise, to socialize, to earn money, to kill time.....
 3. Adjectives: fun, entertaining, challenging.....

GENERAL SPEAKING PRACTICE

1. Introducing yourself/ Identifying yourself:

Identification (name)	Relevant information
Hello, I'm.....	From....
Hello, my name is.....	I work for/with/in.....
Hello, let me introduce myself. I'm....	I'm in charge of.....
Hello, first name + surname....	I've got an appointment with...
Good morning. My name is....	I've got an appointment to see....
I don't think we've met. I'm ...	I'm responsible for...
Excuse me. Are you ...(name)...? I'm....	From....
May I introduce myself? My name is...(formal)	Of Trumpington College.
Allow me to introduce myself. My name is...(formal)	I'm fromUniversity.

2. Introducing people:

Phrase of introduction	Relevant information
<u>Formal:</u> Mr/Miss.., I like you to meet... Mr/ Miss..., may I introduce you to... Mr/Miss..., I'd like introduce	A colleague of mine. From France. Our tutor.
<u>Informal:</u> Mr/Miss.., can I introduce.. Mr/ Mss,.. this is.. Mr/Miss,... I want you to meet... Mr/Miss,... have you met... Mr/Miss,.. do you know...	He's with the British Council. A friend of mine He's over here on a course From the US David's brother.

3. Greetings:(A) Greetings used when you meet somebody for the first time:

<ul style="list-style-type: none"> - How do you do? - Glad to meet you? - Pleased to meet you. - Nice to meet you. - Delighted to meet you. 	<ul style="list-style-type: none"> - Good morning/ good afternoon/ good evening - Hello/ Hullo! (informal) - Hi! (informal)
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(B) Greetings used when you meet somebody you already know:

- I'm please to meet you again.
- It's nice to meet you again.
- Good to see you again.
- Nice to see you again.
- I haven't seen you for a long time/ for a while / ages.
- I haven't seen you since...
- It's been a long time.
- Hello, Jone!
- I hear you...
- I heard you...
- Did you have good journey/holiday/time/trip?
- Id everything all right?
- I don't know if you remember me. I'm..... We met at...

- Fancy meeting you here.
- How are you?
- How are things/
- How are you doing?
- How are you keeping?
- How have you been getting on?
- How's it going?
- How's it all going?
- How are you enjoying life there/the new job?
- How was it?
- How did you enjoy your holiday?
- How was the flight/trip/journey?
- How was the film/movie?
- How did you enjoy the film?
- How did it go?

USING SPECIFIC WORDS

Using these words in your way (giving example and presenting a short talk about these topics)

L1 Contracts

<i>Abide by</i>	<i>v. to comply with, to conform</i>
<i>Agreement</i>	<i>n. a mutual arrangement, a contract</i>
<i>Agree v.</i>	<i>agreeable adj.</i>
<i>Assurance</i>	<i>n. a guarantee, confidence</i>
<i>Cancel</i>	<i>v. to annul, to call off</i>
<i>Determine</i>	<i>v. to find out, to influence</i>
<i>Engage</i>	<i>v. to hire, to involve+</i>
<i>Establish</i>	<i>v. to institute permanently, to bring about</i>
<i>Obligate</i>	<i>v. to bind legally or morally</i>
<i>Obligation n.</i>	<i>obligatory adj.</i>
<i>Party</i>	<i>n. a person or group participating in an action or plan, the persons or sides concerned in a legal matter</i>
<i>Provision</i>	<i>n. a measure taken beforehand, a stipulation</i>
<i>Provider n.</i>	<i>provision n.</i>
<i>Resolve</i>	<i>v. to deal with successfully, to declare</i>
<i>Specify</i>	<i>v. to mention explicitly</i>
<i>Specification v.</i>	<i>specific adj.</i>

L2 Marketing

<i>Attract</i>	<i>v. to draw by appeal</i>
<i>Attraction n.</i>	<i>attractive adj.</i>
<i>Compare</i>	<i>v. to examine similarities and differences</i>
<i>Comparison n.</i>	<i>comparable adj.</i>
<i>Compete</i>	<i>v. to strive against a rival</i>
<i>Consume</i>	<i>v. to absorb, to use up</i>
<i>Consumer n.</i>	<i>consumable adj.</i>
<i>Convince</i>	<i>v. to bring to believe by argument, to persuade</i>

Current	adj. Happening or existing at the present time, adv. To be on top of things
Fad	n. a practice followed enthusiastically for a short time, a craze
Inspire	v. to spur on, to stimulate imagination or emotion.
Market	v. the course of buying and selling a product, n. the demand for a product
Marketing	n. marketable adj.
Persuade	v. to move by argument or logic
Productive	adj. Constructive, high yield
Satisfy	v. to make happy

L3 Warranties

Characteristic	adj. Revealing of individual traits
Consequence	n. that which follows necessarily
Consider	v. to think about carefully
Consideration	n. considerable
Cover	v. to provide protection against
Expire	v. to come to an end
Frequently	adv. Occurring commonly, widespread
Imply	v. to indicate by inference
Promise	v. n. to pledge to do, bring about, or provide
Protect	v. to guard
Protection	n. protective adj.
Reputation	n. the overall quality of character
Reputable	adj. Reputed adj.
Require	v. to deem necessary or essential
Requirement	n. requisite adj.
Vary	v. to be different from another, to change

3. VOCABULARY

A - Food Crops

Target Words:

Definitions and Samples

1. **Abandon** v. To leave; to give up
To save their lives, the sailors had to abandon the sinking ship.
- Parts of speech: abandonment (n)
2. **Adversely** adv. In a harmful way; negatively
Excessive rainfall early in the spring can adversely affect the planting of crops.
- Usage tips: Adversely is often followed by affect.
- Parts of speech: adversity (n), adverse (adj.)
3. **Aggregate** adj. Gathered into or amounting to a whole

It is impossible to judge last year's performance without knowing the aggregate sales numbers.

Usage tips Aggregate is often followed by a term like sum, total, or numbers.

- Parts of speech: aggregate v, aggregate n

4. **Cultivation** n. Preparing the land to grow crops; improvement for agricultural purposes

With the development of land cultivation, hunters and gatherers were able to settle in one place.

- Parts of speech: cultivate v

5. **Fertilize** v. To supply with nourishment for plants by adding helpful substances to the soil

This farm fertilizes tomatoes more than any other crop.

- Parts of speech: fertilizer n, fertilization n

6. **Intensify** v. To increase in power; to act with increased strength
Jacob's long absence intensified his certainty that he should marry Rose.

- Parts of speech: intensification n, intense adj

7. **Irrigation** n. The supplying of water to dry land

In dry areas of the country, you can see ditches all over the farmland for irrigation.

- Parts of speech: irrigate v

8. **Obtain** v. To gain possession of; to get

After a series of difficult interviews, he finally was able to obtain the job.

9. **Photosynthesis** n. The process by which green plants make their own food by combining water, salts, and carbon dioxide in the presence of light.

Oxygen is a by-product of the process of photosynthesis.

- Parts of speech: photosynthesize v

10. **Precipitation** n. Water that falls to the Earth's surface

In the Pacific Northwest, the high level of precipitation ensures rich, green plant life.

TOEFL I: Complete each sentence by filling in the blank with the best word from the list. Change the form of the word if necessary.

Use each word only once.

abandoned precipitation cultivation fertilize photosynthesis

1. Through _____, green plants create organic materials with the help of chlorophyll.
2. The coastal city gets half of its _____ during the months of January, February, and March.
3. Farmers use various methods of land _____.
4. When they heard the hull crack, all but two of the sailors _____ ship.
5. Inexperienced gardeners may not realize how important it is that they _____ their plants.

TOEFL II:

Find the word or phrase that is closest in meaning to the opposite of each word in the left-hand column. Write the letter in the blank.

- | | |
|---------------|----------------|
| 1. obtain | (a) weaken |
| 2. intensify | (b) separate |
| 3. irrigation | (c) lose |
| 4. aggregate | (d) drainage |
| 5. adversely | (e) positively |

TOEFL III:

Read the passage to review the vocabulary you have learned. Answer the questions that follow.

In countries like Niger and Mauritania, the cultivation of land has changed little in the past several centuries. Additionally, these countries' mono-modal rainfall pattern brings precipitation for only three months during the year. As a result, food production doesn't nearly meet demand

Several agencies and organizations have intensified their efforts to increase the productivity of land in these countries. They have introduced new strains of seed, improved irrigation techniques, and introduced new methods of fertilization and soil management. With ample sunlight for photosynthesis and modern irrigation techniques, sustainable farming techniques should allow farmers to boost aggregate production in order to meet demand.

Still, crop revitalization faces an unexpected adversary: institutional incompetence. Where crop specialists have convinced individual farmers to abandon old farming techniques in place of new, they can't readily obtain the governmental cooperation they need. The biggest hurdles are political corruption, incompetence, and the absence of a marketing infrastructure.

1. In this passage, the word adversary is closest in meaning to
 - a. friend
 - b. helper
 - c. enemy
 - d. leader

2. In the last paragraph, the word they refers to
 - a. crop specialists
 - b. farmers
 - c. farming techniques
 - d. adversaries

B - Disaster

Target Words

Definitions and Samples:

1. **Anticipate** v. To expect; to sense something before it happens
By placing sensors in earthquake-prone areas, scientists can anticipate some tremors in time to warn the public.
- Parts of speech: anticipation n, anticipatory adj

2. **Catastrophic** adj. Extremely harmful; causing financial or physical ruin
The architect died in a catastrophic elevator accident.
- Parts of speech: catastrophe n, catastrophically adv

3. **Collide** v. To come together with great or violent force
As usual, their holiday was ruined when their in-laws' views on politics collided with their own.
- Parts of speech: collision n

4. **Eruption** n. A sudden, often violent, outburst
The eruption of Mount St. Helens in 1980 caused 57 deaths and immeasurable change to the face of the mountain.
Usage tips Eruption is often followed by a phrase.
- Parts of speech: erupt v

5. **Famine** n. Severe hunger; a drastic food shortage
The potato famine in Ireland in the mid-nineteenth century caused large numbers of Irish people to emigrate to America.

6. **Flood** n. An overflowing of water; an excessive amount
The constant rain and poor drainage system caused a flood in town.
The political party sent out a flood of letters criticizing their opponents.
- Parts of speech: flood v

7. **Impact** n. A strong influence
The speech about the importance of education made an impact on me.

Usage tips Impact is usually followed by on or of.

- Parts of speech: impact v

8. **Persevere** v. To keep going, despite obstacles or discouragement; to maintain a purpose

The hikers persevered despite the bad weather and the icy trail.

- Parts of speech: persist v, persistent adj

9. **Plunge** v. To go down suddenly; to decrease by a great amount in a short time

He jumped off the diving board and plunged into the pool.

The value of the company's stock plunged after its chief executive was arrested.

- Usage tips: Plunge is often followed by an into phrase.

- Parts of speech: plunge n

10. **Unleash** v. To release a thing or an emotion

When they saw the strange man on their property, they unleashed their dogs.

He is from such an unemotional family, he will never learn to unleash his feelings.

TOEFL I :

Find the word or phrase that is closest in meaning to the opposite of each word in the left-hand column. Write the letter in the blank.

- | | |
|-----------------|---------------------------------|
| 1. persevere | (a) to pass by without hitting |
| 2. anticipate | (b) to give up |
| 3. famine | (c) to not see something coming |
| 4. collide | (d) harmless |
| 5. catastrophic | (e) excess of food |

TOEFL II: Circle the word that best completes each sentence.

1. Residents of Hawaii must accept the possibility of a volcanic (eruption /perseverance).
2. Years after the accident, she was finally able to (anticipate / unleash) her feelings of anger.
3. Houses along the river often face (famine / flooding) during the rainy season.
4. Many people think it is cruel to (collide / plunge) live lobsters into boiling water.
5. A well-written essay should make some kind of (catastrophe / impact) on its readers.

TOEFL Success III:

Read the passage to review the vocabulary you have learned. Answer the questions that follow.

Nature challenges humans in many ways, through disease, weather, and famine. For those living along the coast, one unusual phenomenon capable of catastrophic destruction is the tsunami (pronounced "tsoo-NAH-mee").

A tsunami is a series of waves generated in a body of water by an impulsive disturbance. Earthquakes, landslides, volcanic eruptions, explosions, and even the impact of meteorites can generate tsunamis. Starting at sea, a tsunami slowly approaches land, growing in height and losing energy through bottom friction and turbulence. Still, just like any other water waves, tsunamis unleash tremendous energy as they plunge onto the shore. They have great erosion potential, stripping beaches of sand, undermining trees, and flooding hundreds of meters inland. They can easily crush cars, homes, vegetation, and anything they collide with.

To minimize the devastation of a tsunami, scientists are constantly trying to anticipate them more accurately and more quickly. Because many factors come together to produce a life-threatening tsunami, foreseeing them is not easy. Despite this, researchers in meteorology persevere in studying and predicting tsunami behavior.

1. Which sentence best expresses the essential information of this passage?

- a. Tsunamis could become a new source of usable energy in the next hundred years.
- b. Tsunamis do more damage to the land than flooding.
- c. Tsunamis can have an especially catastrophic impact on coastal communities.
- d. Scientists can predict and track tsunamis with a fair degree of accuracy, reducing their potential impact.

2. In the first sentence, why does the author mention weather?

- a. because tsunamis are caused by bad weather
- b. because tsunamis are more destructive than weather phenomena
- c. as an example of a destructive natural force
- d. as an introduction to the topic of coastal storms

4. IDIOMS:

1. **to get in/to get on**: to enter or to board a vehicle

To get in is used for cars; to get on is used for all other forms of transportation.

- It's easiest to get in the car from the driver's side. The door on the other side doesn't work well.
- I always get on the bus to work at 34th Street.

2. **to get out of/to get off**: to leave or to descend from a vehicle

To get out of is used for cars; to get off is used for all other forms of transportation.

- Why don't we stop and get out of the car for a while?
- Helen got off the train at the 42nd Street terminal.

3. **to put on**: to place on oneself (usually said of clothes) (S)

- Mary put on her coat and left the room.
- Put your hat on before you leave the house.

4. **to take off**: to remove (usually said of clothes) (S)

- John took off his jacket as he entered the office.
- Take your sweater off. The room is very warm.

5. **to call up**: to telephone (also: to give someone a call) (S)

To call can be used instead of to call up, as in the first example below.

- I forgot to call up Mr. Jones yesterday I'd better call him now.
- Call me up tomorrow, Jane. We'll arrange a time to have lunch together.
- I promise to give you a call as soon as I arrive in New York.

6. **to turn on**: to start or cause to function (also: to switch on) (S)

- Please turn on the light; it's too dark in here.
- Do you know who turned the air conditioning on?

7. **to turn off**: to cause to stop functioning (also: to switch off, to shut off) (S)

Turn on and turn off, as well as their related forms, are used for things that flow, such as electricity, water, gas, etc.

- Please turn off the light when you leave the room.
- Are you really listening to the radio, or should I turn it off?

8. **right away**: very soon; immediately (also: at once)

- Dad says that dinner will be ready right away, so we'd better wash our hands and set the table.
- Tell Will to come to my office right away. I must see him immediately.
- Stop playing that loud music at once!

9. **to pick up**: to lift from the floor, table, etc., with one's fingers (S)

- Harry picked up the newspaper that was on the front doorstep.
- Could you pick your toy up before someone falls over it?

10. **sooner or later** : eventually, after a period of time

- If you study English seriously, sooner or later you'll become fluent.
- I'm too tired to do my homework now; I'm sure I'll do it sooner or later.

11. **to get up**: to arise, to rise from a bed

For the last definition a noun phrase must separate the verb and particle.

- Carlo gets up at seven o'clock every morning.
- At what time should we get the children up tomorrow?

12. **at first**: in the beginning, originally

- At first English was difficult for him, but later he made great progress.
- I thought at first that it was Sheila calling, but then I realized that it was Betty.

EXERCISES

A. Choose the appropriate idiomatic expression to substitute for the underlined word or words in each sentence below.

1. His alarm clock is always set for six o'clock. He arises at the same time every day.
a. turns off b. gets up c. puts on
2. She telephoned her friend to tell him about the meeting. They decided to drive there together.
a. turned on b. took off c. called up
3. It's 4 P.M. now and this important letter must be mailed today. Can you take it to the post office immediately?
a. at first b. right away c. sooner or later
4. Be sure to switch off the light before you leave the house.
a. to turn off b. to take off c. to get off
5. Pat placed her new hat on her head while looking in the mirror.
a. picked up b. put on c. gets on
6. Remove your jacket and sit down for a few minutes.
a. Turn on b. Get on c. Take off

7. I want to stay unmarried for a while, but I hope to get married eventually.

a. sooner or later b. right away c. at first

8. In the beginning I thought that it was Bob who was in the car.

a. To get on b. At once c. At first

9. He boarded the bus at Broadway and 79th Street.

a. got off b. got on c. picked up

10. John took the pencil with his fingers and began to write a note.

a. turned on b. got off c. picked up

B. Fill in each blank with the appropriate form of an idiomatic expression from this unit.

Jean's alarm clock makes a loud ringing noise. She _____ the alarm clock immediately after it rings each morning. However, she doesn't rise from bed _____. She waits a few minutes before she _____. Jean enjoys lying in bed for a while, but _____ she gets up. Then she _____ the bedroom light and goes to her closet. She _____ her pajamas and _____ her work clothes.

5. WRITING

A – STRATEGY: What is brainstorming?

When you brainstorm, you write as many words or phrases as you can think of about a topic. You don't have to write complete sentences when brainstorming.

1. Whenever you brainstorm, think about you can break something down into smaller parts:

For example, while brainstorming about “Things I like to do” , imagine you wrote down “drawing pictures” . How could you break this idea down further?

→ Drawing pictures

- of airplanes
- of a car
- of people
- of animals

2. Now look at these brainstorming notes. Notice the smaller parts, or subtopics. Can you add a more idea?

Things I like to do

→ Traveling:

- Beach
- Mountain
- Interesting city
-

→ Using my computer:

- Making greeting cards
- Using the internet
- Sending email
-

→ Shopping:

- Buying computer software
 - Computer game
 - Graphics software
- Buying magazines
 - Internet magazines
 - Computer magazines
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3. Now brainstorm for three minutes about things you like to do. Write at least 15 things.

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TOEFL question #1:

People attend college or university for many different reasons (for example, new experiences, career preparation, and increased knowledge). Why do you think people attend college or university? Use specific reasons and examples to support your answer.

TOEFL Outlines # 1:

- I. There are many reasons people attend college or university. Some attend in order to prepare for a career. Others attend for personal fulfillment and still others attend in order to make more money in the job market.

- II. Some attend college in order to prepare for a career.
 - a. They learn about a particular subject in depth
 - b. Employers want employees who have very specific knowledge

- III. Some attend for personal fulfillment
 - a. Older adults may attend college just for the joy of learning
 - b. Students may feel a sense of accomplishment by learning new things.

- IV. Some attend in order to make more money in the job market
 - a. If one has specialized skills, one can make more money in the job market (example: computer programming skills)
 - b. One may need more education in order to get promoted in his/her job

- V. In short, people attend college for many reasons some of which include the desire to prepare for a career, personal fulfillment and financial rewards.