

Reading **FUSION** 1

SECOND EDITION

Andrew E. Bennett

NAN'UN-DO

The background of the cover is a composite image. The top half shows a dark blue space with a red planet (Mars) in the upper right and a bright blue nebula on the left. The bottom half shows a satellite with a large gold hexagonal antenna and a long white boom, orbiting Earth. The Earth's surface is visible with city lights and a blue atmosphere. The overall theme is space and technology.

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Reading Fusion 1 <2nd Edition>

Andrew E. Bennett

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Written and designed by: Andrew E. Bennett

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Reading Fusion is a three-level series designed to help students improve all of their English skills. Each book contains 15 units which center on informative, thought-provoking articles about topics of current interest. A variety of important themes are covered, including the environment, health, technology, arts and entertainment, and many more.

Each unit's main reading passage is 500 words long in *Reading Fusion 1*, 600 words long in *Reading Fusion 2*, and 700 words long in *Reading Fusion 3*. Units open with a series of pre-reading warm-up activities. Part 1 of the unit consists of reading and vocabulary skill building exercises. Part 2 contains word part and grammar exercises, in addition to a set of listening and reading practice tests.

In the second edition of *Reading Fusion*, every unit has been updated and revised. That includes content updates for the reading passages, engaging new images on the first page of every unit, and a thorough revision of all the exercises.

The following is a page-by-page visual introduction to *Reading Fusion 1*.

1 The Arts
Music and the Mind

Unit 1

Vocabulary Warm-up Track 2

A Read and listen to this list of the unit's target vocabulary. Write the letter of the target word or phrase next to the correct definition.

a. ability	f. expert	k. region
b. anticipate	g. instrument	l. remind
c. concentrate	h. no wonder	m. role
d. discover	i. organize	n. track
e. evidence	j. pour in	o. unique

1. to arrange; sort
2. to arrive or come in at a fast rate
3. of course; that's why
4. to find out
5. to help someone remember
6. skill
7. purpose; function
8. to focus
9. to follow; keep up with
10. proof

B Complete each sentence with a word or phrase from the above list. Remember to use the correct word form.

- If we want to expand our business in Europe, we'll need to hire someone who is a(n) _____ in the market.
- My favorite _____ is the piano, but my sister prefers the violin.
- Because the singer's voice is so _____, it's easy to identify her songs.
- I don't _____ any bad weather, but we'd better take an umbrella just to be safe.
- That _____ of Indonesia is home to the world's rarest monkeys.

Pre-reading Questions Discuss these questions in pairs.

- Do you play any musical instruments? If not, would you like to learn one?
- Does listening to music make it easier for you to work or study?
- Some people say learning to play an instrument can make you smarter. Do you agree or disagree? Why?

A short preview of the main article opens the unit and helps the class prepare for the lesson.

Three pre-reading questions give students a chance to start thinking about the topic.

The vocabulary warm-up page lists the unit's 15 target vocabulary items. (They are also recorded on a downloadable audio file.) Two sets of exercises check students' understanding of the target items.

Part 1: Reading and Vocabulary Building

Reading Passage Track 3

In all the world's cultures, people sing, play **instruments**, and celebrate with music. Music plays such an important **role** in our lives that whole fields are dedicated to its study, including one looking into the biology of music. **Experts** are finding that because of the way our brains process music, learning to play an instrument or just listening to music can have a wide range of benefits.

Music education has received a lot of attention in recent years. Learning to play an instrument can help children improve math, science, and language skills. One study in Canada **tracked** children's IQ scores for nine months, **discovering** that children who studied music had the largest test score improvements. The secret may lie in the way reading music and playing notes uses several **regions** of the brain, boosting our **ability** to learn school subjects. For example, reading musical notes improves spatial reasoning skills, which are essential in solving math problems like fractions.

Music is also used for medical purposes, such as in the treatment of diseases which affect memory. The secret lies in the way the brain processes music.

One area near the forehead, the medial prefrontal cortex, connects music with memories stored in two other areas: the amygdala and hippocampus. That's why an old song can **remind** you of something that happened years ago. For patients suffering from diseases like Alzheimer's, listening to music can help unlock buried memories by strengthening musical pathways to those memories.

25 Studies of the music/brain connection often focus on classical music since it activates both the left and right sides of our brains. One study using MRI scans observed people's brain activity as they listened to music by composer William Boyce. The study found that activity was highest during the short breaks between the movements of a piece. During each pause, the person's brain **anticipated** what would come next while **organizing** what he or she had just heard. This process of sorting beginnings and endings is similar to the way our brain organizes information and may explain why classical music can help improve memory.

Some people are taking the music/brain connection to another level by listening to personalized "brain music." First, a person's brainwaves (which, like our fingerprints, are **unique** to each of us) are measured. Then, using a mathematical procedure, the brainwaves are turned into short pieces of music. Listening to a "relaxing" piece (based on the person's slower brainwaves) can slow the heart rate and lower blood pressure. An "activating" piece (based on his or her faster brainwaves) can help the person **concentrate** and prepare for a difficult task.

It's amazing how attuned our brains are to music. Some neuroscientists like Daniel Levitin (author of books such as *The World in Six Songs: How the Musical Brain Created Human Nature*) even think we're born with the ability to learn music, just as we all have the skills to learn language. After all, children without any training frequently make up songs while they play. With the **evidence** of music's benefits **pouring in**, it's **no wonder** countries like Japan and Hungary make music study a part of their educational systems. People are recognizing that more than just a form of entertainment, music is also great for the brain.

3 dedicated to - focused on; committed to
4 process - handle; deal with
9 IQ - "Intelligence Quotient" (widely used measure of intelligence)
14 boost - increase
16 spatial reasoning - the ability to mentally process shapes and patterns
17 fraction - part of a whole (ex: 1/2, 1/3)
21 Alzheimer's - disease which affects memory (common among older people)
24 buried - hidden; forgotten

26 activate - turn on; make active
28 MRI (Magnetic Resonance Imaging) - device showing an internal image of a patient
32 composer - person who writes music
32 movement - section of a work of classical music
39 personalized - specially made for one person
41 procedure - method; sequence
45 attuned to - sensitive towards; focused on
46 neuroscientist - person who studies the brain and nervous system

Beneath the reading passage is a glossary with easy-to-read definitions. To the left of each glossary item is the line number where the word or phrase can be found in the article.

A caption beneath each image shows its relevance to the article.

Each reading passage is 500 words long. The unit's 15 target vocabulary items are indicated in bold.

The reading passage is recorded on a downloadable audio file.

Line numbers to the left of the reading passage provide easy reference.

Following the passage are five reading comprehension questions, including main idea, detail, vocabulary, and analysis questions.

These vocabulary exercises check students' knowledge of the unit's 15 target vocabulary items. There are three types of exercises: synonym, fill in the blank, and word form.

Reading Comprehension
Choose the best answer to each question.
Unit 1

Main Idea

1. () What is the main idea of the reading?
 A. Music therapy is effective in treating Alzheimer's patients.
 B. The human brain is difficult to understand.
 C. Besides being enjoyable, music has real-world applications.
 D. It's best to learn music at a very young age.

Detail

2. () In the Canadian study, which children had increased IQ scores?
 A. Those who had always listened to music
 B. Those who studied music
 C. Those who already had high IQs
 D. Those who could not play an instrument

Vocabulary

3. () In line 28, what does "observed" mean?
 A. heightened B. watched
 C. preserved D. composed

Analysis

4. () Why may classical music help our memories?
 A. Listening to it uses brain processes which we also use to record memories.
 B. Classical music is easier to play than other types of music.
 C. This type of music activates the left side of our brain, but not the right side.
 D. Brain activity is highest when we listen to music being played.

5. () What can we infer about "brain music"?
 A. It may not be effective at treating disease.
 B. Listening to the music is only helpful to those who excel at math.
 C. Each person's musical recording is different.
 D. It is better at helping people relax than at helping them focus.

Short Answers Write a full-sentence answer to each question.

1. How can reading musical notes make us better at math?

2. What parts of the brain store memories?

3. In "brain music," how are a person's brainwaves turned into music?

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13

These three questions are also based on the reading passage. Answers should be one sentence long.

Improving knowledge of word parts is an excellent way to strengthen reading skills. This section presents three word parts (one prefix, one root, and one suffix). They are based on word parts found in the reading passage. A short exercise checks students' understanding of the material.

From unit to unit, this listening comprehension section alternates between a short conversation and a short talk. For recycling and retention, every conversation and short talk includes three of the unit's target vocabulary items. The listening transcript can be found in the Teacher's Manual.

The conversations and short talks are recorded on downloadable audio files.

Part 2: Focus Areas
Unit 1

Focus on Language

Word Parts

Study the word parts in this chart. Then read the pairs of sentences that follow. Decide if the second sentence is true or false.

Word Part	Meaning	Examples
pre-	before; in front of	preface; preview
-form-	shape	informal; performance
-ful	full of	colorful; cheerful

1. The market survey's preliminary results show that people love the product. *It's the final set of results from the survey.* (True / False)

2. Mr. Lee is well known in the community for being truthful. *People think Mr. Lee is honest.* (True / False)

3. Sandra's political ideas don't conform to those of her classmates. *Sandra and her classmates have different political views.* (True / False)

Grammar Adjective Clauses

We use adjective clauses to provide more information about a person, place, or thing. Depending on the type of noun being modified, we use the connector *who, whom, which, where, or that*.

person	who, whom, that	Ex: Lisa is the person <u>who</u> can help you.
place	where, that, which	Ex: This is the town <u>where</u> I was born.
thing	which, that	Ex: The form <u>which</u> you need is right here.

Combine the two sentences using an adjective clause.

1. Toronto is a great city. You can find some excellent restaurants there.

2. This is a delicious fruit. It only grows in these mountains.

3. I'd like to introduce you to my friend. She works as a research assistant.

14
15

This section presents practical grammar structures with the goal of improving communicative grammar skills. First comes a short, simple explanation of the grammar point. That's followed by structural models (if applicable) and example sentences. Finally, a short exercise checks students' ability to apply what they've learned.

From unit to unit, this section alternates between a short reading comprehension passage (such as an article, e-mail, report, etc.) and a cloze passage. Every passage recycles three of the unit's target vocabulary items.

Music and the Mind



Music has always been important in our lives and traditions. Now, modern research is helping us understand just how strong the music/brain connection is. In fields like education and healthcare, more and more benefits of playing instruments and listening to music are being discovered.

Pre-reading Questions

Discuss these questions in pairs.

1. Do you play any musical instruments? If not, would you like to learn one?
2. Does listening to music make it easier for you to work or study?
3. Some people say learning to play an instrument can make you smarter. Do you agree or disagree? Why?

Vocabulary Warm-up



Track 2

A Read and listen to this list of the unit's target vocabulary. Write the letter of the target word or phrase next to the correct definition.

- | | | |
|----------------|---------------|-----------|
| a. ability | f. expert | k. region |
| b. anticipate | g. instrument | l. remind |
| c. concentrate | h. no wonder | m. role |
| d. discover | i. organize | n. track |
| e. evidence | j. pour in | o. unique |

- ___ 1. to arrange; sort
- ___ 2. to arrive or come in at a fast rate
- ___ 3. of course; that's why
- ___ 4. to find out
- ___ 5. to help someone remember
- ___ 6. skill
- ___ 7. purpose; function
- ___ 8. to focus
- ___ 9. to follow; keep up with
- ___ 10. proof

B Complete each sentence with a word or phrase from the above list. Remember to use the correct word form.

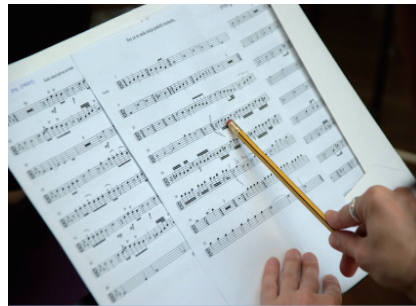
1. If we want to expand our business in Europe, we'll need to hire someone who is a(n) _____ in the market.
2. My favorite _____ is the piano, but my sister prefers the violin.
3. Because the singer's voice is so _____, it's easy to identify her songs.
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Reading Passage



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Reading notes may be one of the reasons why learning music improves math skills.

Music is also used for medical purposes, such as in the treatment of diseases which affect memory. The secret lies in the way the brain processes music. One area near the forehead, the medial prefrontal cortex, connects music with memories stored in two other areas: the amygdala and hippocampus. That's why an old song can **remind** you of something that happened years ago. For patients suffering from diseases like Alzheimer's, listening to music can help unlock buried memories by strengthening musical pathways to those memories.

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A controlled, relaxed environment helps music listeners.

Some people are taking the music/brain connection to another level by listening to personalized "brain music." First, a person's brainwaves (which, like our fingerprints, are **unique** to each of us) are measured. Then, using a mathematical procedure, the brainwaves are turned into short pieces of music. Listening to a "relaxing" piece (based on the person's slower brainwaves) can slow the heart rate and lower blood pressure. An "activating" piece (based on his or her faster brainwaves) can help the person **concentrate** and prepare for a difficult task.

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- 14 boost - increase
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- 24 buried - hidden; forgotten

- 26 activate - turn on; make active
- 28 MRI (Magnetic Resonance Imaging) - device showing an internal image of a patient
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Reading Comprehension

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1. () What is the main idea of the reading?
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Short Answers

Write a full-sentence answer to each question.

1. How can reading musical notes make us better at math?

2. What parts of the brain store memories?

3. In "brain music," how are a person's brainwaves turned into music?

Vocabulary Building

A Choose the answer that is a synonym for the word or phrase in italics.

1. The police usually do not arrest a person without *evidence* that he or she committed a crime.
 A. range B. activity C. proof
2. Airports can *track* planes all the way from take off to landing.
 A. follow B. board C. compare
3. In that *region* of the country, the temperature often falls to 10 degrees below zero.
 A. citizen B. attention C. area
4. Considering all the money that the shop is losing, it's *no wonder* they're going out of business.
 A. so unfortunate B. very recent C. not surprising
5. Computers are great at helping people *organize* photos and other information.
 A. relax B. sort C. concentrate

B Complete each sentence below with one of these words or phrases. Remember to use the correct word form.

instrument pour in role unique ability

1. After the scientist won the Nobel Prize for chemistry, job offers and research opportunities _____.
2. The gallery sells _____ works of art from Mexico.
3. My _____ in the company is to make sure shipments arrive at their intended destinations on time.
4. The _____ to speak Chinese is a great asset these days.
5. Orchestras include string _____ such as the violin, cello, and viola.

C Circle the correct form of the words in parentheses.

1. (Anticipate/Anticipation) is high that the recession will soon end.
2. The person who (discovers/discovery) a new planet can also name it.
3. The procedure requires total (concentrate/concentration), so the operating room must be kept very quiet.
4. The watchmaker (expertly/expert) reassembled the antique clock.
5. The app can send you a (remind/reminder) of your important appointments.

Focus on Language

Word Parts

Study the word parts in this chart. Then read the pairs of sentences that follow. Decide if the second sentence is true or false.

Word Part	Meaning	Examples
pre-	before; in front of	preface; preview
-form-	shape	informal; performance
-ful	full of	colorful; cheerful

- The market survey's preliminary results show that people love the product.
It's the final set of results from the survey. (True / False)
- Mr. Lee is well known in the community for being truthful.
People think Mr. Lee is honest. (True / False)
- Sandra's political ideas don't conform to those of her classmates.
Sandra and her classmates have different political views. (True / False)

Grammar Adjective Clauses

We use adjective clauses to provide more information about a person, place, or thing. Depending on the type of noun being modified, we use the connector *who, whom, which, where, or that*.

person	who, whom, that	Ex: Lisa is the person <u>who</u> can help you.
place	where, that, which	Ex: This is the town <u>where</u> I was born.
thing	which, that	Ex: The form <u>which</u> you need is right here.

Combine the two sentences using an adjective clause.

- Toronto is a great city. You can find some excellent restaurants there.

- This is a delicious fruit. It only grows in these mountains.

- I'd like to introduce you to my friend. She works as a research assistant.

Listening Listen to the conversation. Then answer these questions.



- () What is the woman's occupation?
(A) Graphic designer (B) Shift manager
(C) Physical therapist (D) Sales associate
- () What is the woman concerned about?
(A) Her pay (B) Her new colleague
(C) Her health (D) Her workload
- () What does the man suggest doing?
(A) Hiring another person
(B) Quitting the job
(C) Listening to soft music
(D) Talking to the boss

Reading Read this article. Then answer the questions below.

For people looking for a unique gift for that special someone, the experts at Custom Creations might have the answer. The firm employs a dozen professional songwriters who can write a personalized song just for you. For a reasonable fee, you can have an original piece of music dedicated to your husband, wife, parent, or child.

Ted Simmons, CEO of the firm, has been writing lyrics for more than 20 years. He started out writing songs for commercials, movies, and pop singers. Then, anticipating a rise in the customized gift market, he founded Custom Creations. According to Mr. Simmons, his firm has written more than 2,000 songs and has brought countless smiles to clients' faces.

- () How many people work at Custom Creations?
(A) 1 (B) 12
(C) 20 (D) 2,000
- () The underlined word "founded" is closest in meaning to
(A) located (B) purchased
(C) established (D) imagined
- () What did Ted Simmons do before founding the company?
(A) He built movie sets.
(B) He was a professional songwriter.
(C) He worked at a customized gift shop.
(D) He sang in a band.

Culture

2

Body Language across Cultures



Our body language, such as our gestures and facial expressions, says a lot about us. It communicates our feelings even when we don't say a word. Just as languages differ from country to country, so does body language. Understanding those differences is important for cross-cultural communication.

Pre-reading Questions

Discuss these questions in pairs.

1. What are some common hand gestures? (ex: the "OK" sign) What do they mean?
2. Is your body language expressive? Is it easy for other people to tell what mood you're in even when you don't say anything?
3. Can you think of some examples of body language from other cultures that are different from your own?

Vocabulary Warm-up



Track 5

A Read and listen to this list of the unit's target vocabulary. Write the letter of the target word or phrase next to the correct definition.

- | | | |
|------------------|---------------|-------------|
| a. avoid | f. expressive | k. posture |
| b. be aware of | g. gesture | l. refer to |
| c. communicate | h. intensely | m. sequence |
| d. embarrassment | i. muscle | n. tend to |
| e. encourage | j. opposite | o. vary |

- ___ 1. completely different
- ___ 2. extremely; passionately
- ___ 3. likely to act a certain way or do a certain thing
- ___ 4. to know about or realize
- ___ 5. to share information; interact
- ___ 6. physical expression
- ___ 7. way of standing; body position
- ___ 8. shame
- ___ 9. to stay away from
- ___ 10. the way a series of things is ordered

B Complete each sentence with a word or phrase from the above list. Remember to use the correct word form.

1. During the speech, the inventor _____ some of the people who influenced his work.
2. Fruit and vegetable prices _____ depending on the current supply, weather, and crop forecasts.
3. The university _____ people to visit the campus by offering free tours.
4. After playing baseball for three hours, all of my _____ were sore.
5. Mr. Hoshizaki has such a(n) _____ face that it's easy to tell what kind of mood he's in.