THE TRANSATLANTIC CABLE

Words

Write the letter of each definition with the word it defines. If you don't know the definition, use the context of the reading passage to help you. Look for the words in bold as you read the passage.

PARAGRAPHS 1–2

Words	Definitions
1 ..... cable	**A** adj., extremely bad
2 ..... disparate	**B** n., an official investigation
3 ..... utterly	**C** v., to gather support
4 ..... rally	**D** adj., different
5 ..... catastrophic	**E** adv., totally
6 ..... inquiry	**F** n., wire used for sending electric signals

PARAGRAPHS 3–4

Words	Definitions
7 ..... insulation	**G** v., to start an activity
8 ..... requisite	**H** n., need; requirement
9 ..... set out	**I** v., to pull behind
10 ..... tow	**J** n., material used to prevent the passage of electricity, heat, or sound

PARAGRAPH 4

Words	Definitions
11 ..... transmit	**K** v., to make up for; balance out
12 ..... snap	**L** v., to send
13 ..... inexplicably	**M** n., measure of electric power
14 ..... compensate	**N** adv., without explanation
15 ..... voltage	**O** adj., having one's reputation ruined; being spoken about in a bad way
16 ..... vilified	**P** v., to break suddenly

PARAGRAPH 5

Words	Definitions
17 ..... indispensable	**Q** n., a mistake or weakness, especially in design
18 ..... flaw	**R** n., continuation with a task despite difficulties
19 ..... perseverance	**S** v., to succeed; win
20 ..... triumph	**T** adj., completely necessary

Reading

The Transatlantic Cable

(1) Laying the transatlantic **cable** was the culmination of the unflagging perseverance of one man leading like-minded men, of **disparate** technical and scientific advances, and of the need for faster communication. The first attempts at laying the cable in the 1850s, each of which cost an enormous amount of money, failed **utterly**. Yet as technology and science improved, and the need for faster communication increased, perseverance finally paid off.

(2) The man who **rallied** support and raised money for the transatlantic cable venture was Cyrus Field, a New York businessman, who started the New York, Newfoundland, and London Telegraph Company in 1854. For the next twelve years, Field raised money and expectations in North America and England for repeated attempts at laying a cable, despite **catastrophic** cable breaks and a formal **inquiry** when the first cable stopped working within days.

(3) The scientific and technological advances began with electricity, the study of which was attracting the greatest minds of the age. Samuel Morse invented a code that made it possible to send information over electric wires, and he made the first successful transmission in 1842. The next year, d'Alameida, a Portuguese engineer, announced the use of gutta-percha, a rubberlike sap from the gutta tree, as an **insulation** for wires. Thus, two of the **requisites** for an underwater cable were met. In the next several years, telegraph cables were laid in Atlantic Canada, across the English Channel and around Europe, and across the United States.

(4) In 1857, the company Field founded **set out** to lay the cable that had taken months and almost a million dollars to make. The cable was made of 340,000 miles of copper and iron wire and three tons of gutta-percha insulation, too much for one ship to carry. The cable was divided between two ships, each **towed** by another, all four provided by the British and American navies. After only 255 miles of cable had been laid, the cable stopped **transmitting** and then **snapped**, sinking to the depths of the ocean. The second attempt was made in 1858, beginning at the midpoint of the Atlantic, from which each ship lay cable as she sailed to her home shores. Again, the cable **inexplicably** stopped working. They tried again a month later, beginning again from the middle and sailing in opposite directions. This time, success! Queen Victoria sent a message to President Buchanan, and both countries celebrated. Within hours, however, the signal began failing. To **compensate** for the fading transmissions, Whitehouse, the American engineer, transmitted messages at higher **voltages**, eventually burning out the cable. Once a hero, Field was now **vilified**.

(5) Work on the transatlantic cable was halted because of the American Civil War. During the war, the telegraph became **indispensable**, and enthusiasm for a transatlantic cable mounted. In Scotland, William Thomson, who would later be knighted Lord Kelvin for his work, corrected the design **flaws** in Whitehouse's cable. Kelvin also designed a mirror-galvanometer that could detect weak currents, thus allowing lower voltages and weaker currents to transmit information. In 1866, the world's largest steamship laid Kelvin's new cable, an unqualified success. Field's **perseverance** had **triumphed** in the end.

Answer the questions about **The Transatlantic Cable**.

Questions 1–4

Look at the following inventors and the list of descriptions below. Match each inventor with the correct description, ***A–F***.

A burned out the first transatlantic cable by using high voltages

B was the first to be utterly successful in getting the transatlantic cable laid

C invented a type of insulation from the sap of a tree

D sent a telegraph message to President Buchanan

E was the first to attempt to have a transatlantic cable laid

F developed a code for transmitting messages by electric cable

..... **1** Morse

..... **2** d'Alameida

..... **3** Field

..... **4** Kelvin

Questions 5–9

Complete the summary using words from the list below.

compensated	rallied	towed	triumph
insulation	snapped	transmitted	voltage

In the 1850s, several unsuccessful attempts were made to lay a telegraph cable across the Atlantic Ocean. For the first attempt, a cable was manufactured of copper and iron wire with gutta-percha **5**..... . It was so heavy that the ships that carried it had to be **6**..... by other ships. This cable failed because it **7**..... and sank beneath the sea. The second attempt also failed. The third attempt appeared to be successful, and a message was **8**..... from England to the United States. However, the telegraph company did not **9**..... this time either. This attempt also turned out to be a failure when the cable stopped working, and the reputations of the project leaders were vilified.

Word Families

A

Complete each sentence with the correct word from the word family chart. Make nouns plural where necessary. Use the correct form of verbs.

noun	adjective	adverb
catastrophe	catastrophic	catastrophically

1 The failure of the initial attempts to lay the transatlantic cable resulted in a ..... loss of money.

2 Field failed ..... in his attempts to lay a transatlantic cable.

3 The initial attempts to lay a transatlantic cable ended in ..... for Field.

noun	verb	adjective
compensation	compensate	compensatory

4 There is no ..... for hard work and perseverance.

5 When the signals began to fade, they took ..... measures to keep the cable working.

6 Hard work can sometimes ..... for bad luck.

noun	noun	verb	adjective
insulation	insulator	insulate	insulated

7 Rubber is a good ..... .

8 The transatlantic cable was ..... with gutta-percha.

9 It was important to find a practical way to ..... the cable.

10 Rubber makes good ..... for an electric wire.

noun	verb	adjective
perseverance	persevere	persevering

11 A ..... person can find a way to achieve her dreams.

12 An inventor must ..... to turn his ideas into reality.

13 Because of Field's ....., a telegraph cable was eventually laid under the Atlantic Ocean.

noun	verb	adjective	adverb
triumph	triumph	triumphant	triumphantly

14 It was a ..... day when the English queen sent a telegraph message to the American president.

15 The laying of the cable in 1866 was a ..... for Kelvin.

16 Many people worked hard to make the idea of a transatlantic cable into a reality, and they finally ..... .

17 They ..... announced the completion of the project.

Word Families

B

Choose the correct word family member from the list below to complete each blank.

1	catastrophes	catastrophic	catastrophically
2	perseverance	persevere	persevering
3	triumph	triumphs	triumphant
4	insulation	insulate	insulated
5	compensation	compensate	compensatory

Invention is all about hard work. An inventor may have a brilliant idea, but he has to test it many times. The process may be filled with **1**..... . It is the **2**..... inventor who will eventually be **3**..... . For example, there were many failed attempts before the transatlantic telegraph cable was successfully manufactured and laid. After a material was found that could suitably **4**..... the cable, they thought the major difficulties had been solved. However, they met with many more difficulties when they actually tried to put the cable in place. They tried to **5**..... for the flaws in their method but were unsuccessful. It wasn't until almost ten years later that another group of people succeeded in laying the cable.

Paraphrases

Read the sentence from the reading passage. Then, choose the sentence that has the same meaning.

1 *After only 255 miles of cable had been laid, the cable stopped transmitting and then snapped, sinking to the depths of the ocean.* (paragraph 4)

A The ships traveled 255 miles and then stopped, so the cable sank.

B Before long, the cable stopped sending signals and broke.

C The cable was too short, so the ships just let it sink to the bottom of the sea.

2 *During the war, the telegraph became indispensable, and the enthusiasm for a transatlantic cable mounted.* (paragraph 5)

A The telegraph was very necessary during the war, so interest in a transatlantic cable grew.

B Telegraph technology improved during the war and more cables were laid.

C Telegraph systems were damaged during the war, so people turned their attention to the transatlantic cable.

Word Skill

PHRASAL VERBS WITH *SET*.

Phrasal verbs are made up of two parts: a verb and one or two particles. The meaning of the phrasal verb is usually not related to the meanings of the individual parts.

Phrasal Verb		Meaning
set verb	*out* particle	begin a project
set verb	*back* particle	delay
set verb	*up* particle	arrange

Choose the correct phrasal verb from the list above to complete each sentence.

1 The two inventors ..... to design a new kind of cable.

2 They ..... a meeting to talk about their project.

3 The meeting was ..... several days because of bad weather.

Listening

Track 30

Listen to the talk. Complete the timeline below.
*Write **NO MORE THAN TWO WORDS AND/OR A NUMBER** for each answer.*

1..... The mayor got the idea for a museum.

1976 The mayor **2**..... to get the requisite money.

1977 A large gift of money was lost.

3..... Construction of the museum began.

4..... museum opened

1998 opening of exhibit on **5**.....

Writing (Task 2)

In your opinion, which is more important for success, perseverance or good luck?

Support your opinion with reasons and examples from your own knowledge or experience.

Write at least 250 words.

Speaking

Talk about the following topics.

What profession do you work in or do you plan to work in? What are the usual requisites for entering this profession?

In your opinion, what personal qualities are indispensable for success in your profession?