ELA/Literacy
Released Item 2015

Grade 8
Research Simulation
How Phonograph is Similar
VF891434

Sample Student Responses
(annotations included)
Today you will research the topic of sound and the invention of the phonograph. You will read the article “The Incredible Talking Machine.” Then you will read a passage from the article “History of the Cylinder Phonograph” and the article “Psst . . . Hey, You.” As you review these sources, you will gather information and answer questions about sound and the invention of the phonograph so you can write an essay.

Copyright restrictions prevent "The Incredible Talking Machine" by Randall Stross from being displayed in this format. Please refer to the June 23, 2010, issue of TIME magazine, accessible through your local library.
Today you will research the topic of sound and the invention of the phonograph. You will read the article “The Incredible Talking Machine.” Then you will read a passage from the article “History of the Cylinder Phonograph” and the article “Psst . . . Hey, You.” As you review these sources, you will gather information and answer questions about sound and the invention of the phonograph so you can write an essay.

Read the passage from “History of the Cylinder Phonograph.” Then answer the questions.

from “History of the Cylinder Phonograph”

1. The phonograph was developed as a result of Thomas Edison’s work on two other inventions, the telegraph and the telephone. In 1877, Edison was working on a machine that would transcribe telegraphic messages through indentations on paper tape, which could later be sent over the telegraph repeatedly. This development led Edison to speculate that a telephone message could also be recorded in a similar fashion. He experimented with a diaphragm which had an embossing point and was held against rapidly-moving paraffin paper. The speaking vibrations made indentations in the paper. Edison later changed the paper to a metal cylinder with tin foil wrapped around it. The machine had two diaphragm-and-needle units, one for recording, and one for playback. When one would speak into a mouthpiece, the sound vibrations would be indented onto the cylinder by the recording needle in a vertical (or hill and dale) groove pattern. Edison gave a sketch of the machine to his mechanic, John Kruesi, to build, which Kruesi supposedly did within 30 hours. Edison immediately tested the machine by speaking the nursery rhyme into the mouthpiece, “Mary had a little lamb.” To his amazement, the machine played his words back to him.

2. Although it was later stated that the date for this event was on August 12, 1877, some historians believe that it probably happened several months later, since Edison did not file for a patent until December 24, 1877. Also, the diary of one of Edison’s aides, Charles Batchelor, seems to confirm that the phonograph was not constructed until December 4, and finished two days later. The patent on the phonograph was issued on February 19, 1878. The invention was highly original. The only other recorded evidence of such an invention was in a paper by French scientist Charles Cros, written on April 18, 1877. There were some differences, however, between the two men’s ideas, and Cros’s work remained only a theory, since he did not produce a working model of it.
Edison took his new invention to the offices of *Scientific American* in New York City and showed it to staff there. As the December 22, 1877, issue reported, “Mr. Thomas A. Edison recently came into this office, placed a little machine on our desk, turned a crank, and the machine inquired as to our health, asked how we liked the phonograph, informed us that it was very well, and bid us a cordial good night.” Interest was great, and the invention was reported in several New York newspapers, and later in other American newspapers and magazines.

The Edison Speaking Phonograph Company was established on January 24, 1878, to exploit the new machine by exhibiting it. Edison received $10,000 for the manufacturing and sales rights and 20% of the profits. As a novelty, the machine was an instant success, but was difficult to operate except by experts, and the tin foil would last for only a few playings.

Ever practical and visionary, Edison offered the following possible future uses for the phonograph in *North American Review* in June 1878:

1. Letter writing and all kinds of dictation without the aid of a stenographer.
2. Phonographic books, which will speak to blind people without effort on their part.
3. The teaching of elocution.
5. The “Family Record”—a registry of sayings, reminiscences, etc., by members of a family in their own voices, and of the last words of dying persons.
7. Clocks that should announce in articulate speech the time for going home, going to meals, etc.
8. The preservation of languages by exact reproduction of the manner of pronouncing.
9. Educational purposes; such as preserving the explanations made by a teacher, so that the pupil can refer to them at any moment, and spelling or other lessons placed upon the phonograph for convenience in committing to memory.
10. Connection with the telephone, so as to make that instrument an auxiliary in the transmission of permanent and invaluable records, instead of being the recipient of momentary and fleeting communication.

Eventually, the novelty of the invention wore off for the public, and Edison did no further work on the phonograph for a while, concentrating instead on inventing the incandescent light bulb.

Today you will research the topic of sound and the invention of the phonograph. You will read the article “The Incredible Talking Machine.” Then you will read a passage from the article “History of the Cylinder Phonograph” and the article “Psst . . . Hey, You.” As you review these sources, you will gather information and answer questions about sound and the invention of the phonograph so you can write an essay.

Read the article “Psst . . . Hey, You.” Then answer the questions.

Psst . . . Hey, You
by Mark Fischetti

1 You are walking down a quiet grocery store aisle when suddenly a voice says: “Thirsty? Buy me.” You stop in front of the soda display, but no one is next to you, and shoppers a few feet away do not seem to hear a thing.

2 At that moment, you are standing in a cylinder of sound. Whereas a loudspeaker broadcasts sound in all directions, the way a lightbulb radiates light, a directional speaker shines a beam of waves akin to a spotlight. The beam consists of ultrasound waves, which humans cannot hear, but which can emit audible tones as they interact with air. By describing these interactions mathematically, engineers can coax a beam to exude voice, music or any other sound.

3 Military and sonar researchers tried to harness the phenomenon as far back as the 1960s but only managed to generate highly distorted audible signals. In 1998 Joseph Pompei, then at the Massachusetts Institute of Technology, published algorithms that cut the distortion to only a few percent. He then designed an amplifier, electronics and speakers to produce ultrasound “that is clean enough to generate clean audio,” Pompei says. He trademarked the technology Audio Spotlight and started Holosonics, Inc., in Watertown, Mass., in 1999. Rival inventor Woody Norris markets a competing product called HyperSonic Sound from his American Technology Corporation in San Diego.
Pompeii’s speakers are installed in company lobbies, and above exhibits at the Boston Museum of Fine Arts and Walt Disney World’s Epcot Center, among other locations. Narrations inform visitors standing in front of artifacts or video screens without filling the rooms with noise. Department stores have tried the arrangement for retail displays, and automakers are experimenting with them so passengers can hear only their own music or movies. A speaker above a recliner in the living room would allow Dad to hear the television while other family members read on the couch in peace.

Detractors say that in certain situations headphones can provide similar benefits, and note random problems, such as unwanted reflections off a car seat. But the primary obstacle to wider deployment is cost: systems can run from $600 to $1,000 or more. If the price drops, consumers are more likely to consider buying the gear... or encounter it while shopping.

DID YOU KNOW...
• BOUNCED: Ultrasound waves remain in a tight column where they reflect off a hard, smooth surface. Police teams could bounce a beam off a building at the end of an alley or off a distant window inside a warehouse to flush out suspects, who would run away from the sound—and right into the officers’ waiting arms.
• BATS NOT DOGS: Certain animals can detect the ultrasound noise behind audible directed sound. The ultrasound speakers emit frequencies from 40,000 to 80,000 cycles a second, or hertz (Hz). Humans typically hear frequencies between 20 and 20,000 Hz. Dogs can hear up to 40,000 Hz or so, mice up to 90,000, and bats, porpoises and beluga whales up to 100,000 Hz or higher.
• BONUS: Middle ear bones limit human hearing to below 20,000 Hz. But researchers have applied ultrasound up to 200,000 Hz to the skulls of volunteers, some of whom report “hearing” sounds; the skull may be distorting vibrations that reach the cochlea.

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You have now read two articles about the beginning of sound technology and one article about modern technology. Write an essay explaining how the process of refining and marketing the phonograph is similar to the development of the Audio Spotlight in "Psst . . . Hey, You." Be sure to use details from all three articles to support your answer.
Anchor Set
A1 – A10
The modern world continues to evolve and grow based on the needs of humans. By definition, technology is anything designed to extend the abilities of a being. By inventing sound technologies, humans have been able to record sounds for both their pleasure and to help them to accomplish tasks in their everyday lives. According to the passages, "The Incredible Talking Machine" and "The History of the Edison Cylinder Phonograph," the inventing of sound technologies was started by Thomas Edison, who set in motion a phenomenon that still continues today. By refining and marketing his phonograph, he was able to inspire others to discover and utilize more sound technologies such as types of 'sound beams,' as described in "Psst... Hey, You," and able to shape the modern world in the image and likelyhood it is currently.

By inventing the phonograph, Thomas Edison, one of history's greatest inventors, has opened up many industries and many opportunties to improve the quality of human life. When he and his team of inventors first began work on an idea, they persisted until they had a basic model of the device. As stated, "Edison had an idea. They were working with wasy to use paper strips to make a record of telegraph messages... would make the attached diaphragm, which should reproduce the original sound. edison's assistants set to work. Within the hour, they had a working device they tried out... that was encouraging. The staff went on working through the night, fiddling with the gizmo." ("The Incredible Talking Machine," paragraph 4-5) By persisting in their work on a spontaneous idea, Edison and his assistants developed the first recording device, and were able to share their findings with the world. When this invention was later released to the media, others were able to observe the true potential of the device, even more then Edison envisioned. According to the passage, "Interest was great, and the invention was reported in several New York newspapers, and later in other american newspapers and magazines... Ever practical and visionary, Edison offered...future uses for the phonograph." (The History of the Edison Cylinder Phonograph," paragraph 3-5) By marketing his invention to the media, he inspired others to invent similiar mechanisms, but like all prototypes, the first phonograph had flaws. It was only when other companies as well as Edison started to refine the technology that the device was able to be used for practical purposes.

Modern technologies are examples of evolutions of past inventions, and they are nothing but refined models of prototypes. When the world was introduced with the technology of the modern sound beam, the idea had been already presented in the 1960s. Sound beams, now seving as a more commercial purpose were initially used for sending signals for military, but now, since they are more clearly able to project their sound to a narrow target, they have allowed for their use in stores. As is states in the text, "Military and sonar researchers tried to harness the phenomenon as far back as the 1960s but only managed to generate highly distorted audible sounds. In 1998 Joseph Pompei, then at the Massachusetts Institute of Technology, published algorithms that cut the distortion to only a few percent...Department stores have the arrangement for retail displays, and auto makers are experimenting with them so passengers can hear only their own music or movies." ("Psst...Hey, You," paragraph 3-4) In other words, the original purpose of the sound beam was able to serve the specific purpose of transmitting signals. The developers were not able to use this idea efficiently, but as more ideas on how to improve the technology were introduced, the sound beams began to serve their purpose in the stores and leisure uses of the modern day.

Both the phonograph and the sound beam technologies were used for the aiding of hearing. When the phonograph was first marketed, others had ideas of their own to make the technology better, and they were able to refine it into a better device overall. When the sound beam was first introduced, the technology was only able to send barely audible signals. However, others added their own thought on the technology, such as Pompeii who added algorithms and an amplifier, they potentially made the idea into a reality and was able to make the technology practical. In both inventions, others were involved in the development of the device, and
were able to make it more appealing to the general public because they were much better than the original prototype overall. These ideas contributed majorly to the success of the inventions and when these ideas were combined, they helped extend the uses and help accomplish tasks for humans.

The inventions of the modern day are examples of what human collaboration could accomplish. As more and more people were able to contribute to the overall effort of an idea, they could soon make it a reality. The phonograph by Thomas Edison wasn't a completely functioning device in its early stages, but when other companies started to develop the idea further, they were able to make a mechanism more what is in the modern day, in that it is more efficient in accomplishing its purpose and doesn't break down as often. The modern sound beam was also created this way, as when Joseph Pompeii developed the idea into projecting a more audible beam, it was finally able to be used for practical purposes. Both inventions are prime examples of what the human race has accomplished, and are present creations made by the conjoinment of various ideas.
The response provides an accurate analysis of the similarities between the two technologies, and the analysis is supported with effective and convincing textual evidence. *Both the phonograph and the sound beam technologies were used for the aiding of hearing. When the phonograph was first marketed, others had ideas of their own to make the technology better, and they were able to refine it into a better device overall. When the sound beam was first introduced, the technology was only able to send barely audible signals. However, others added their own thought on the technology, such as Pompeii who added algorithms and an amplifier, they potentially made the idea into a reality and was able to make the technology practical*. This response demonstrates full comprehension of ideas.

**Written Expression**

**Score Point 4**

A strong organizational structure demonstrates purposeful coherence, clarity, and cohesion. The student begins with an introduction that presents the idea of others being inspired by and building upon previous technological advances. The response proceeds to a thorough, text-based explanation of the development process of the two technologies and then provides effective and comprehensive development of the similarities between the two development processes. This purposeful organization and progression demonstrates strong awareness of the norms of the discipline.
Inventions today are always being marketed and refined. Just think of the ever popular iPhone. You see advertisements for them everywhere and there are six versions of it. The company Apple, which makes the iPhone, is always marketing and refining their products to make them better. Apple isn't the only company that does this, however. Inventors do it too! The inventor of the phonograph, Thomas Edison, and the inventor of the Audio Spotlight, Joseph Pompei, also marketed and refined their products. In fact, the process they used are very alike. The process of marketing and refining the phonograph is similar to the Audio Spotlight because both inventors had to face competition when marketing their products, both inventors had to show off their products in order for them to sell, and both inventors refined their products to make them better from previous ideas.

The marketing of the phonograph and the Audio Spotlight are similar because both inventors had to face competition in order to make their products successful. In the passage The Incredible Talking Time Machine, it says, "Only after a competitor developed a wax-coated cylinder that could be removed without ruining the recording, something impossible to do with Edison's delicate tinfoil." (Stross-paragraph 9). Thomas Edison, the inventor of the phonograph, faced much competition throughout the marketing process. The inventions kept getting refined and Thomas Edison's phonograph was kind of old news. The inventor of the Audio Spotlight, Joseph Pompei, also faced much competition during the marketing process of his invention. The passage Psst...Hey, You says, "Detractors say that in certain situations headphones can provide similar benefits, and note random problems, such as unwanted reflections off a car seat." (Fischetti-paragraph 5). The headphones are much more portable than the Audio Spotlight, so Joseph Pompei faced a lot of competition from this product. Both Edison and Pompei had to endure all the competition of their inventions in order to make them more successful.

Another similarity between the marketing process of the phonograph and the Audio Spotlight is that both the inventors had to display their creations in order to make people see them and want to buy them. In the passage, The History of the Edison Cylinder Phonograph, it says, "The Edison Speaking Phonograph Company was established on January 24, 1878, to exploit the new machine by exhibiting it." (Editors-paragraph 4). Thomas Edison knew he had to exploit his invention in order to make the marketing of it successful so he established a company to help him do it. Joseph Pompei, the inventor of the Audio Spotlight, also installed his product in stores in order to market it better so it would sell a lot. The passage Psst...Hey, You, says, "Pompeii's speakers are installed in company lobbies, and above exhibits and the Boston Museum of Fine Arts and Walt Disney World's Epcot Center, among other locations." (Fischetti-paragraph 4). Joseph Pompei installed his inventions in very popular places so that people would see them and then want to buy them. Both Edison and Pompei found ways to display their inventions to make marketing and selling of them even better.
A final way the process of refining and marketing the phonograph and the Audio Spotlight are similar is because both the inventors refined their products to make them more efficient and useful than previous ideas. The passage The Incredible Talking Time Machine says, "Edison had an idea. They were working with ways to use paper strips to make a record of telegraph messages. Why not adapt those to record the vibrations of the diaphragm in a telephone mouthpiece?"(Stross-paragraph 4). Thomas Edison expanded the idea he was working on with his assistants and he was able to create the phonograph. Very similar to this, the inventor of the Audio Spotlight, Joseph Pompei, also refined his product based on a previous idea. The passage, Psst...Hey, You, says,"Military and sonar researchers tried to harness the phenomenon as far back as the 1960s but only managed to generate highly distorted audible signals. In 1998, Joseph Pompei...published algorithms and cut the distortion only a few percent. Then he designed an amplifier, electronics and speakers to produce ultrasound."(Fischetti-paragraph 3). As well as Thomas Edison, Joseph Pompei also expanded and refined his idea for his invention based on previous ones that were not as successful. Both of these inventors refined their inventions and made them even better than they were before.

Overall, the process in marketing and refining these two inventions was very similar because both the inventors faced competition throughout the marketing process, both inventors displayed their inventions in order to make their products sell better, and both inventors refined their inventions based on previous ideas. Especially in our modern world, inventions are being made, marketed, and refined all the time. We have so many different versions of computers, phones, and tablets. You also can not go about 5 minutes in the city without seeing an advertisement for one of these products. This system goes all the way back to Thomas Jefferson and it has changed so much, but yet, the processes are still very similar.
Anchor Paper 2
Reading
Score Point 4

The response provides an accurate analysis of the similarities between the development processes of the two technologies (both inventors had to face competition in order to make their products successful . . . both the inventors had to display their creations in order to make people see them and want to buy them . . . both the inventors refined their products to make them more efficient and useful than previous ideas) and supports the analysis with effective and convincing textual evidence. The specific reference to headphones being competition for the Audio Spotlight (rather than the more obvious example of Woody Norris vs. Joseph Pompeii) shows a careful reading and strong understanding of the third passage.

Written Expression
Score Point 4

An elegant introduction and conclusion contribute to the style of the response, as well as to a sense of purposeful coherence, clarity, and cohesion. Strong use of transitional words and phrases (Another similarity . . . A final way”), and a smooth switch from discussing the Phonograph to the Audio Spotlight in each body paragraph (“The inventor of the Audio Spotlight . . . also faced much competition”), make it easy to follow the progression of ideas. Overall, the response provides effective and comprehensive development of the topic of the similarities between the two technologies, and supports it with relevant textual evidence.
The phonograph is similar to the directional speaker in the way that they were both designed to assist in commercial endeavors. For example, according to The History of the Edison Cylinder Phonograph, the phonograph was intended for educational, entertainment, and business purposes. A few of these were letter dictation (so workers did not require a stenographer), phonographic books for the blind, teaching languages by enunciating proper pronunciation, and recording telephone calls. The directional speaker, as mentioned in Psst...Hey, You is present in museums, retail stores, company lobbies, and even automobiles to move sound to a specific location instead of in a large, "spraying" pattern.

However, critics have attacked both sound technologies in past and present. In The Incredible Talking Machine, it is said that the phonograph was very basic and primitive in the way that it could not record many sounds without replacing the cylinder inside. However, removing the cylinder in Edison's phonograph would destroy the recording, making it difficult to record anything that would last very long. Another problem with the phonograph was that it broke down constantly. Many entertainers used the early phonograph to amuse audiences, but a trained technician was required on-site at all times, just in case the device malfunctioned. These technicians required a salary like all other workers, and thus cost their superiors a sizable amount to fix an inferior machine.

On the contrary, while the phonograph was very primitive, the directional speaker is still in use today, despite some slight misgivings over its design. These include the complaints that the speaker is too expensive and can be rendered obsolete by headphones, and that in automobiles, the soundwaves reflect off of car seats. As previously mentioned, the machines are rather costly, and consumers and businessmen alike do not believe in the speaker's functionality being on par with the price. However, as more and more people refuse to purchase the speakers, the more the price will drop to accommodate customers. Soon, the public may be encountering the directional speaker more often as time goes on.

In conclusion, while the phonograph and the directional speaker have both encountered problems and criticism in their production, they have both opened new realms of possibility in the field of sound technology.
The response provides a mostly accurate analysis of the similarities in the marketing processes of the phonograph and the directional speaker, using adequate textual evidence (The phonograph is similar to the directional speaker in the way they were both designed to assist in commercial endeavors. . . . the phonograph was intended for educational, entertainment, and business purposes. . . . The directional speaker. . . is present in museums, retail stores, company lobbies, and even automobiles to move sound to a specific location instead of in a large, ‘spraying’ pattern). Additionally, a mostly accurate analysis of the similarities of problems in the refining process uses adequate textual evidence for support (However, critics have attacked both technologies in past and present. . . . removing the cylinder. . . would destroy the recording. . . . a trained technician was required on-site at all times. . . . and thus cost their superiors a sizeable amount to fix. . . . the directional speaker is still in use today, despite some slight misgivings over its design. These include. . . the speaker is too expensive and can be rendered obsolete by headphones. . . in automobiles, the soundwaves reflect off of car seats). Overall, the response demonstrates comprehension of ideas stated explicitly and inferentially.

Written Expression
Score Point 3

The response demonstrates mostly effective development of the similarities of the technologies by using clear reasoning and relevant textual evidence. Despite the lack of an introduction, the use of clear topic sentences (The phonograph is similar to the directional speaker in the way they were both designed to assist in commercial endeavors. . . . However, critics have attacked both technologies in the past and present. . . . On the contrary, while the phonograph was very primitive, the directional speaker is still in use today”) and purposeful word choices (endeavors, functionality) contribute to a mostly effective style. Overall, the response demonstrates coherence, clarity, and cohesion, making the progression of ideas fairly easy to follow.
Sound is very important to humans. Humans use sound every day whether it's listening to music or talking on the phone. Sound is all around us. In the articles "The Incredible Talking Machine" and "The History of the Edison Cylinder Phonograph" they both tell how Edison formed and created the phonograph. While in the article "Pssst...Hey, You" tells about the Audio Spotlight and its development. The process of refining and marketing the phonograph is very similar to the process of the Audio Spotlight.

The process of refining the phonograph is very similar to the process of refining the phonograph, because both inventions took many years to program rightly. Thomas Edison first started to work on the phonograph in 1877 he then became bored with the idea and stop working on the phonograph, but ten years later he decided he wanted to improve the phonograph. In the 1960s the Military "tried to harness the phenomenon" they were unsuccessful, but in 1998 Joseph Pompei designed electronics and speakers to create ultrasound, which he trademarked Audio Spotlight.

Thomas Edison also made many changes to the phonograph as so did Joseph Pompei when he was designing the Audio Spotlight. Thomas Edison first used paper strips to record but later on replaced the paper with tin foil. Joseph Pompei used algorithms, but then he designed an amplifier to produce ultrasound.

The marketing process of both inventions are similar. The phonograph was used in offices and companies for writing letters without the aid of a stenographer and to connect to the telephones. The Audio Spotlight was used in offices, companies, and Department stores.

In conclusion, both the Audio Spotlight and the phonograph were used in amazing ways to help advance sound. The inventions process of marketing and refining are both very similar.
The response provides a mostly accurate analysis of the similarities between the refining and marketing processes of the technologies mentioned in the passages (“Thomas Edison also made many changes to the phonograph as so did Joseph Pompei when he was designing the Audio Spotlight”). The analysis is supported using adequate textual evidence (Thomas Edison first used paper strips to record but later on replaced the paper with tin foil. Joseph Pompei used algorithms, but then he designed an amplifier to produce ultrasound). Overall, the response demonstrates comprehension of ideas.

A mostly effective organizational pattern includes an introduction, three body paragraphs, and a brief conclusion. The use of clear topic sentences to separate sections of the text contributes to progression, making it fairly easy to follow the writer’s ideas. The student provides mostly effective development supported by clear reasoning and relevant textual evidence (The marketing process of both inventions are similar. The phonograph was used in offices and companies for writing letters without the aid of a stenographer and to connect to the telephones. The Audio Spotlight was used in offices, companies, and Department stores). Overall, the response establishes and maintains a mostly effective style while attending to the norms of the discipline.
The process of refining and marketing the phonograph is similar to the development of the Audio Spotlight in a few ways. One, there was competition when both the phonograph and Audio Spotlight were being made. Two, they both improved very quickly from when they were first made. Lastly, three, they both were successful but wore off to the public quickly.

There was always competition while these two inventions were hot on the market. For the phonograph the competition was between Thomas Edison and many other inventors who were improving his inventions. But for the Audio Spotlight it was mainly between two competitors, Joseph Pompei and Woody Norris. Also, while the phonograph and the Audio Spotlight were hot on the market they were being improved rapidly. As it says in the text Edison was going to again work on the phonograph "only after a competitor developed a wax-coated cylinder that could be removed without ruining the recording." Lastly, the inventions eventually wore off the the public. As it states in *The History of the Edison Cylinder Phonograph* "...the novelty of the invention wore off for the public..." and the Audio Spotlight was too expensive for the public. All in all, these inventions were unique for the public. There was a lot of competition involved in them, they were improved rapidly, but eventually their novelty wore off.
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<td><strong>Anchor Paper 5</strong></td>
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The response provides a generally accurate analysis of the similarities of the two technologies, supporting the analysis with basic textual evidence (Lastly, the inventions eventually wore off for the public. a it states in The History of . . . Phonograph ‘...the novelty of the invention wore off the public...' and the Audio Spotlight was too expensive for the public). Overall, the response demonstrates basic comprehension of the ideas in the passages.

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The response addresses the prompt and provides some development of the claim, using some reasoning and text-based evidence (for the phonograph the competition was between Thomas Edison and many other inventors who were improving his inventions. But for the Audio Spotlight it was mainly between two competitors, Joseph Pompei and Woody Norris). An organizational pattern is discernible through an introduction and basic transitional words and phrases (Also, Lastly, All in All), demonstrating some coherence, clarity, and cohesion, and making the writer’s progression of ideas usually discernible.
In all three passages, it takes you through the features, and the problems about the inventions. The two processes have a lot in common. The phonograph, and the audio spotlight.

In Psst...Hey, You, it takes you through the development process of the audio spotlight. Like the phonograph, it took many years to be effective. In The Incredible Talking Machine, it says it took Edison years to understand what it did best. In The History of the Edison Cylinder Phonograph, it says that Edison didn't have the machine ready until 1878, when he started in 1877, but even though he released it, it quickly wore off and Edison quit working on it.

One thing that was similar between the two marketing patterns was that both were used to make sounds. In Psst...Hey, You, it says how the audio spotlight could be used for museums to explain and narrate exhibits. While as stated in The History of the Edison Cylinder Phonograph, the phonograph could be used for educational purposes, such as preserving explanations made by a teacher. In the Incredible Talking Machine, it was used to reproduce music, replaying the sounds after it was played.

The marketing and refining of the phonograph is very similar to that of the audio spotlight. As shown in the three articles. Each were used for sounds, recreating them, or narrating. And each took a long time to be perfected.
The response provides a generally accurate analysis of the similarities of the two technologies, supporting the analysis with basic textual evidence from each of the three passages (InPsst…Hey, You, it takes you through the development process of the audio spotlight. Like the phonograph, it took many years to be effective. InThe Incredible Talking Machine, it says it took Edison years to understand what it did best. InThe History of the Edison Cylinder Phonograph, it says that Edison didn’t have the machine ready until 1878). Overall, the response demonstrates basic comprehension of the ideas in the passages.

An organizational pattern includes a brief introduction, two body paragraphs, and a conclusion. Occasionally, transitional words and phrases contribute coherence, clarity, and cohesion, making the writer’s progression of ideas usually discernible, but not obvious (Like the phonograph,” “While as stated”). The response addresses the prompt and provides some development of the claims by using some reasoning and textual evidence (InPsst…Hey, You, it says how the audio speaker could be used for museums to explain and narrate exhibits. While as stated inThe History of the Edison Cylinder Phonograph, the phonograph could be used for educational purposes, such as preserving explanations made by a teacher). Overall, the writing style is somewhat effective.
The process of refining and marketing the phonograph is similar to the development of the audio spotlight in "Psst. . Hey, You" because both have to do with sound. In the first article, "The Incredible Talking Machine" Edison says that the original purpose of the phonograph was to reproduce the human voice. In the second article, "The History of the Edison Cylinder Phonograph" it gives a list on what Edison offered to be possible future purposes for the phonograph, one includes that it can be used to record the last words of a dying person. Lastly in the third article, "Psst. . Hey, You" they give examples on how that a dad can be watching tv and he will have the speakers plugged into his chair and his family could be sitting on the couch, undisturbed, reading. All these articles give details that with the invention of the phonograph it helped developed the audio spotlight.
## Annotations

### Anchor Paper 7

**Reading**  
**Score Point 1**

The response provides a minimally accurate analysis of each article, and support consists of limited textual evidence. *Lastly, in the third article, ‘Psst...Hey, You’ they give examples on how that a dad can be watching tv and he will have speakers plugged into his chair and his family could be sitting on the couch, undisturbed, reading.* Overall, the response demonstrates limited comprehension of ideas.

### Written Expression  
**Score Point 1**

The response provides minimal development by using limited text-based evidence. *In the first article, ‘The Incredible Talking Machine’ Edison says that the original purpose of the phonograph was to reproduce the human voice.* A very basic progression of ideas demonstrates limited coherence, clarity, and cohesion.
In all three articles they have similarities. In the two articles *The Incredible Talking Machine* and *The History of the Edison Cylinder Phonograph* they show that you have a process just like the one in the future like in the story *Pssst...Hey, You.*

Back then they have a process and they design, build, and out on the market just like now. With Edison he had an idea, he told his workers about it, he designed it and then had his workers work on it, he tested it, and then fixed the problems, then he got a patent for his invention, We now still use this method. But in the stories one is about a sound enhancer and one is about the making of the telephone. But they both have to do with sound.
The response provides a minimally accurate analysis of each article, and support consists of limited text-based evidence that is at times vague ([In] *The Incredible* . . . and *The History of the Edison* . . . they show that you have a process just like the one in the future like in the story *Psst...Hey, You*). A partly inaccurate statement in the response demonstrates a partial misunderstanding (*But in the stories one is about a sound enhancer and one is about the making of the telephone*). Overall, the response demonstrates limited comprehension of ideas stated explicitly and inferentially in the texts.

**Written Expression**

Score Point 1

The response provides minimal development by using limited textual evidence (*With Edison he had an idea, he told his workers about it, he designed it and then had his workers work on it, he tested it, and then fixed the problems, then he got a patent for his invention*). Brief introductory and closing sentences suggest an attempt at organization; however, weak connections between sentences diminish the clarity of the progression of ideas. Overall, the response demonstrates limited coherence, clarity, and cohesion.
The article "Psst.... Hey, you" is a good idea because with that technology it was better to get more technology made and it got bigger around the world. Like now they have sound proof rooms, cars, airplanes and a lot more.
The response demonstrates no comprehension of the ideas in the passages and provides no analysis of the similarities between the refining and marketing processes of the two technologies. The response does not provide any text-based evidence.

The response does not demonstrate either coherence or clarity regarding which technology is being referenced from one of the passages (The article ‘Psst...Hey, you’ is a good idea because with that technology it was better to get more technology made and it got bigger around the world). Further details do not clarify (like now they have sound proof rooms cars airplanes and alot more”. No organizational strategy has been attempted. Overall, the writing demonstrates an inappropriate style, with little to no awareness of the norms of the discipline.
they are all deffeanetly use full to most people and do about the same thing but its a complicated thing so it takes alot of explaining to do so some people may not get how it works or what it dose and it has to be fairly expencive except the newer one beacuase it isnt the first thing to make things happen like that with sound all of them were succesfully and the older ones sparked a new feild of tecnology for future uses Thomas Edison started all of this long line of products
Despite an attempt to address the task, the response does not provide an analysis of the similarities between the refining and marketing processes of the phonograph and the Audio Spotlight. Vague textual details do not demonstrate enough understanding of the texts (and the older ones sparked a new field of technology for future uses Thomas Edison started all of this long line of products). Overall, the response demonstrates no comprehension of the ideas in the passages.

Written Expression
Score Point 0

The response demonstrates an inappropriate writing style, with little awareness of the norms of the discipline (they are all definitely useful to most people and do about the same thing but it's a complicated thing so it takes a lot of explaining to do). Overall, the writing lacks coherence, clarity, and cohesion.
Practice Set
P101 - P105
The process of refining the and marketing the phonograph is very similar to the development of the Audio Spotlight. The first similarity is that the designers for both the devices didn't seem to know what to use it for when they first created it. In the first article "The Incredible Talking Machine," it states in paragraph two, "From the first, they thought it would be used to reproduce the human voice, but they had no clear idea of its exact purpose. In the second article, "The History of the Edison Cylinder Phonograph," it states a list of possible ideas for the invention, but not a clear goal. In the third article, it states they only managed to "generate highly distorted audible signals." Marketing was also similar between the two devices as well. In both cases, the public never seems to be completely satisfied with the completed product. In the first excerpt, "The Incredible Talking Machine," it states "When he introduced it to the market, however, in 1889, it was anything but perfect as the dictation device he still thought it to be." In the second excerpt, "The History of the Edison Cylinder Phonograph" it says "Eventually the novelty of the invention wore off for the public." In the third article, "Psst...Hey, You," it states "Military and sonor researchers tried to harness the phenomenon as far back as the 1960s but only managed to generate highly distorted audible signals." In all cases, the public was not pleased with the final result.
The marketing of the phonograph is similar to the development of the audio spotlight. It is similar because it took time to figure out both of them and Edison didn't quite know the point of his invention. Edison quit for ten years because he didn't like his invention but then when a competitor came he started working on it again because he didn't like the fact of someone else trying to improve his invention. In the text it says "to him, the idea that his most cherished invention faced competition was unendurable."
Everyone knows Thomas Edison invented the telegraph and phonograph, but did you know another technological breakthrough dealing with sound is developing? In the past, citizens were appalled by the fact a machine could speak. Nowadays, talking machines are nothing exciting. Edison's inventions and the marketing of a new technology - the Audio Spotlight's processes of refining and marketing are incredibly similar. This is because they both started out as original ideas, both had problems with perfection, and both have had trouble becoming popular. Although both these inventions deal with sound, sound can be emitted in many ways.

To begin with, both inventions started out being nothing more than an idea being added on to. Thomas Edison had no idea how much the telegraph/phonograph would effect the world. According to "The Incredible Talking Machine," Thomas Edison came up with the idea of a phonograph while messing around with a telegraph with his friends. In a similar way, the idea of the Audio Spotlight came from military researchers trying to harness ultrasound waves in the 1960s, states "Psst... Hey, You." As you can see, both of these inventions came from other ideas.

In the process of perfecting the both the phonograph and the Audio Spotlight, many mistakes occurred. "The Incredible Talking Machine" states that instead of hearing "Mary had a little lamb," like they wanted to, they instead listened to "ary ad ell am." Also, the recording would only play a few times before the foil was no longer good. While military researches were trying to harness the powers of ultrasound, high pitch noises were emitted instead. Furthermore, headphones could be used in place of expensive overhead speakers. Both theses inventions clearly have their ups and downs.

According to all three articles, these inventions have had a hard time becoming popular. "The History of the Edison Cylinder Phonograph" states that "...the novelty of the invention wore off for the public...." Although Edison believed the phonograph belonged in an office, it had not become useful until after his death. According to "Psst... Hey, You," department stores are trying out the Audio Spotlight, yet I have never once heard one. Clearly, both of these inventions are not as popular as they could be.

To conclude, the processes of refining and marketing the phonograph and Audio Spotlight are similar for quite a few reasons. Both of them started out as an idea that sprung from another. Also, both experienced issues with perfecting and marketing. As you can see, when you think
about it, the phonograph and the Audio Spotlight are not that different.
Their similar because they both try to make sounds. Also and new things. Phonographs make sound through a cone. Audio is making sound just plain ordinary things such as your mouth, hitting something, or beating on a drum. They both are alike. Even though there used in different ways. They both do the same thing and make sound.
The process of refining and marketing the phonograph is similar to the development of the Audio Spotlight. They are similar because both the phonograph and the Audio Spotlight had a company that represented them. The phonograph had "The Edison Speaking Phonograph Company" and the Audio Spotlight had "Holosonics, Inc." I know this because in the story "The History of the Edison Cylinder Phonograph" it said that "The Edison Speaking Phonograph Company was established on January 24, 1878, to exploit the new machine by exhibiting it." Then in the story "Psst... Hey, You" it said that "He (Joseph Pompei) trademarked the technology Audio Spotlight and started Holosonics, Inc., In Watertown, Mass., in 1999." Also both of these products had competition. The phonograph had commercial radio as its competition and the Audio Spotlight had HyperSonic as its competition. I know this because it stated in the story "The Incredible Talking Machine" it says "In the 1920s, Edison's phonograph faced a new challenge, commercial radio." Also it states in "Psst. Hey, You" "Rival inventor Woody Norris markets a competing product called HyperSonic Sounds from this American Technology Corporation in San Diego." Finally in both stories Psst. Hey you and The History of the Edison Cylinder Phonograph it talks about how both machines when sold would be very profitable. In the story The History of the Edison Cylinder Phonograph it states "Edison received $10,000 for manufacturing and sales rights and 20% of the profits." Then in Psst. Hey, You it states "Systems can run from $600 to $1,000 or more."

This reminds me of a time when my uncle was selling homemade beef jerky. There was also a man 2 streets down from him selling bacon. They would always compete to see who could sell the most of their product and who could earn the most money.

In conclusion both the phonograph and the Audio Spotlight are very similar in many different ways.
### Practice Set

(order of scores: Reading Comprehension, Written Expression, Conventions)

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<th>Paper</th>
<th>Score</th>
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