Appendix A

N-gram Condition Passages

**Passage 1**

\_\_\_\_\_\_ \_\_\_\_\_\_ to the \_\_\_\_\_\_ of the \_\_\_\_\_\_, carrier \_\_\_\_\_\_ have \_\_\_\_\_\_ their way through \_\_\_\_\_\_ fair and foul to \_\_\_\_\_\_ the vital messages of \_\_\_\_\_\_. \_\_\_\_\_\_, in spite of \_\_\_\_\_\_ and atomic \_\_\_\_\_\_, these \_\_\_\_\_\_ heroes are still an important communication link in any \_\_\_\_\_\_. \_\_\_\_\_\_ one could be \_\_\_\_\_\_ of this than the men at Fort \_\_\_\_\_\_, New \_\_\_\_\_\_, the \_\_\_\_\_\_ Army pigeon \_\_\_\_\_\_ and \_\_\_\_\_\_ \_\_\_\_\_\_ in this \_\_\_\_\_\_. On the \_\_\_\_\_\_ at Fort Monmouth \_\_\_\_\_\_ many \_\_\_\_\_\_ battle \_\_\_\_\_\_, among them \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_. In \_\_\_\_\_\_, one \_\_\_\_\_\_ British troops moved \_\_\_\_\_\_ ahead of the Allied \_\_\_\_\_\_ in Italy to take the small town of \_\_\_\_\_\_ \_\_\_\_\_\_. Since \_\_\_\_\_\_ could not be established in time to relay the victory to \_\_\_\_\_\_, the troops were \_\_\_\_\_\_ for a \_\_\_\_\_\_ \_\_\_\_\_\_ Allied \_\_\_\_\_\_ \_\_\_\_\_\_. \_\_\_\_\_\_, one of the men \_\_\_\_\_\_ carrier pigeon \_\_\_\_\_\_ \_\_\_\_\_\_. \_\_\_\_\_\_ a warning message on his \_\_\_\_\_\_, he \_\_\_\_\_\_ 20 miles in 20 \_\_\_\_\_\_, \_\_\_\_\_\_ just as the \_\_\_\_\_\_ were \_\_\_\_\_\_ up their \_\_\_\_\_\_. For \_\_\_\_\_\_ the day for the \_\_\_\_\_\_, the \_\_\_\_\_\_ \_\_\_\_\_\_ of \_\_\_\_\_\_ later \_\_\_\_\_\_ \_\_\_\_\_\_ Joe the \_\_\_\_\_\_ \_\_\_\_\_\_, \_\_\_\_\_\_ highest \_\_\_\_\_\_ to an \_\_\_\_\_\_. Even when \_\_\_\_\_\_ message \_\_\_\_\_\_ are set \_\_\_\_\_\_, equipment can \_\_\_\_\_\_ or be \_\_\_\_\_\_ or radio \_\_\_\_\_\_ must be \_\_\_\_\_\_. \_\_\_\_\_\_ the carrier pigeon comes into his \_\_\_\_\_\_. Ninety nine times out of a \_\_\_\_\_\_ he \_\_\_\_\_\_ his \_\_\_\_\_\_. In \_\_\_\_\_\_, Homer the \_\_\_\_\_\_ pigeon was \_\_\_\_\_\_ from the front to a rear \_\_\_\_\_\_ \_\_\_\_\_\_ when he developed \_\_\_\_\_\_ \_\_\_\_\_\_. \_\_\_\_\_\_, Homer made a \_\_\_\_\_\_ \_\_\_\_\_\_, \_\_\_\_\_\_ the last two miles and \_\_\_\_\_\_ his \_\_\_\_\_\_. For \_\_\_\_\_\_ and \_\_\_\_\_\_, Homer was \_\_\_\_\_\_ to \_\_\_\_\_\_ \_\_\_\_\_\_ First \_\_\_\_\_\_!

**Passage 2**

\_\_\_\_\_\_ zirconium is more \_\_\_\_\_\_ and \_\_\_\_\_\_ than the \_\_\_\_\_\_ \_\_\_\_\_\_ that went into \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_. \_\_\_\_\_\_ some \_\_\_\_\_\_, it can be \_\_\_\_\_\_ with a \_\_\_\_\_\_ \_\_\_\_\_\_, and it cannot be \_\_\_\_\_\_ with \_\_\_\_\_\_. \_\_\_\_\_\_ \_\_\_\_\_\_ once tried to \_\_\_\_\_\_ it into \_\_\_\_\_\_, but turned it down as too dangerous for even them to \_\_\_\_\_\_. But when this \_\_\_\_\_\_ metal is \_\_\_\_\_\_ into a \_\_\_\_\_\_ \_\_\_\_\_\_ or \_\_\_\_\_\_ or \_\_\_\_\_\_, as \_\_\_\_\_\_ as \_\_\_\_\_\_ \_\_\_\_\_\_, its \_\_\_\_\_\_ \_\_\_\_\_\_. It is so \_\_\_\_\_\_ that it can be used by \_\_\_\_\_\_ as a safe covering \_\_\_\_\_\_ for sensitive brain \_\_\_\_\_\_. It is almost as \_\_\_\_\_\_ as \_\_\_\_\_\_, and it can be \_\_\_\_\_\_ to \_\_\_\_\_\_ acid or \_\_\_\_\_\_ acid without \_\_\_\_\_\_. It is even used in \_\_\_\_\_\_ \_\_\_\_\_\_ because of its \_\_\_\_\_\_ to \_\_\_\_\_\_ \_\_\_\_\_\_. \_\_\_\_\_\_ is also safe and \_\_\_\_\_\_ when it is bound up with other \_\_\_\_\_\_ to form \_\_\_\_\_\_ \_\_\_\_\_\_. which occur in abundant \_\_\_\_\_\_ in North and South \_\_\_\_\_\_, \_\_\_\_\_\_, and \_\_\_\_\_\_. Although it is \_\_\_\_\_\_ as a rare \_\_\_\_\_\_, it is more abundant in the earth's \_\_\_\_\_\_ than \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, or \_\_\_\_\_\_. \_\_\_\_\_\_ not long \_\_\_\_\_\_, \_\_\_\_\_\_ a \_\_\_\_\_\_ people had ever seen zirconium in pure \_\_\_\_\_\_, but today it is the \_\_\_\_\_\_ metal of a \_\_\_\_\_\_ new \_\_\_\_\_\_, an \_\_\_\_\_\_ \_\_\_\_\_\_ material for \_\_\_\_\_\_ equipment and for \_\_\_\_\_\_ \_\_\_\_\_\_ and \_\_\_\_\_\_ \_\_\_\_\_\_, and a vital component of \_\_\_\_\_\_, \_\_\_\_\_\_ and radio \_\_\_\_\_\_. It may be most well known for its \_\_\_\_\_\_ in \_\_\_\_\_\_ \_\_\_\_\_\_, as \_\_\_\_\_\_ zirconium \_\_\_\_\_\_ resemble \_\_\_\_\_\_ in \_\_\_\_\_\_ but \_\_\_\_\_\_ for a \_\_\_\_\_\_ of the \_\_\_\_\_\_. \_\_\_\_\_\_ its \_\_\_\_\_\_ use in many different \_\_\_\_\_\_, some \_\_\_\_\_\_ uses for zirconium have been tried and \_\_\_\_\_\_. Its \_\_\_\_\_\_ properties make it a \_\_\_\_\_\_ \_\_\_\_\_\_ for \_\_\_\_\_\_ in skin \_\_\_\_\_\_, as \_\_\_\_\_\_ discovered when it was tried as a component in \_\_\_\_\_\_ skin \_\_\_\_\_\_ and \_\_\_\_\_\_.

**Passage 3**

\_\_\_\_\_\_ into the relay station with a \_\_\_\_\_\_, the Pony Express rider \_\_\_\_\_\_ down from his exhausted \_\_\_\_\_\_ and up \_\_\_\_\_\_ a \_\_\_\_\_\_ horse with his \_\_\_\_\_\_ \_\_\_\_\_\_, the \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ the \_\_\_\_\_\_.

He was off again without a moment's \_\_\_\_\_\_. He was \_\_\_\_\_\_ to \_\_\_\_\_\_ the next \_\_\_\_\_\_, and he \_\_\_\_\_\_, or he died \_\_\_\_\_\_. A rider might come into a station at \_\_\_\_\_\_ only to find that the station had been \_\_\_\_\_\_, the \_\_\_\_\_\_ \_\_\_\_\_\_, and the \_\_\_\_\_\_ run off by \_\_\_\_\_\_ \_\_\_\_\_\_. In that case he would continue to the next station without food or \_\_\_\_\_\_. \_\_\_\_\_\_ \_\_\_\_\_\_, a \_\_\_\_\_\_ of \_\_\_\_\_\_, made the \_\_\_\_\_\_ \_\_\_\_\_\_ run in the history of the Pony \_\_\_\_\_\_, \_\_\_\_\_\_ \_\_\_\_\_\_. By riding \_\_\_\_\_\_ miles in just 22 \_\_\_\_\_\_, \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ the \_\_\_\_\_\_ of having made the fastest \_\_\_\_\_\_. Ninety riders covered the trail at all times of the day and \_\_\_\_\_\_, often \_\_\_\_\_\_ their lives to get the mail through within the ten day \_\_\_\_\_\_. Most made it in eight \_\_\_\_\_\_. On the average, the riders could travel 11 miles an \_\_\_\_\_\_, a quick pace over terrain that might require the horse to \_\_\_\_\_\_ rivers or \_\_\_\_\_\_ foot its way along \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_. The pace of the mail delivery by Pony Express was \_\_\_\_\_\_ like by today's \_\_\_\_\_\_, but at the time of its \_\_\_\_\_\_ in \_\_\_\_\_\_, it offered the fastest cross-country communication that had ever been \_\_\_\_\_\_. \_\_\_\_\_\_ \_\_\_\_\_\_ was \_\_\_\_\_\_ \_\_\_\_\_\_ during that \_\_\_\_\_\_, and \_\_\_\_\_\_ to the Pony \_\_\_\_\_\_, \_\_\_\_\_\_ of California received news of \_\_\_\_\_\_ victory in just over a \_\_\_\_\_\_. The Pony Express riders carried the mail between Missouri and California for less than two \_\_\_\_\_\_. They \_\_\_\_\_\_ riding in \_\_\_\_\_\_ when a \_\_\_\_\_\_ line offered a \_\_\_\_\_\_ means of \_\_\_\_\_\_. The \_\_\_\_\_\_ of the riders are \_\_\_\_\_\_ at the Pony Express National \_\_\_\_\_\_, established in \_\_\_\_\_\_ \_\_\_\_\_\_, \_\_\_\_\_\_. According to the records of the \_\_\_\_\_\_, the Pony Express \_\_\_\_\_\_ only a single delivery of mail during the entire period of its \_\_\_\_\_\_.

**Passage 4**

An ancient dinosaur-like animal called the Archaeopteryx has long been considered to be the world's first \_\_\_\_\_\_. \_\_\_\_\_\_ on what has been \_\_\_\_\_\_ together from fossil \_\_\_\_\_\_, Archaeopteryx was more like a cross between a bird and a \_\_\_\_\_\_, rather than \_\_\_\_\_\_ \_\_\_\_\_\_ in one group or the \_\_\_\_\_\_. It had \_\_\_\_\_\_, a \_\_\_\_\_\_, and \_\_\_\_\_\_ on its \_\_\_\_\_\_-\_\_\_\_\_\_characteristics that more \_\_\_\_\_\_ resemble \_\_\_\_\_\_.

It also had \_\_\_\_\_\_ and \_\_\_\_\_\_, like today's \_\_\_\_\_\_. \_\_\_\_\_\_ the creature was a bird with teeth or a \_\_\_\_\_\_ covered dinosaur is a matter of \_\_\_\_\_\_, but its existence proved that a link exists between birds and \_\_\_\_\_\_. A recent \_\_\_\_\_\_ leads us to question the \_\_\_\_\_\_ \_\_\_\_\_\_ of Archaeopteryx as the first known \_\_\_\_\_\_. According to an \_\_\_\_\_\_ in National \_\_\_\_\_\_ \_\_\_\_\_\_ by \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_, a creature known as Aurornis \_\_\_\_\_\_ was \_\_\_\_\_\_ by \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ in May of \_\_\_\_\_\_. Aurornis was discovered in \_\_\_\_\_\_. It is \_\_\_\_\_\_ to have lived \_\_\_\_\_\_ million years \_\_\_\_\_\_, about \_\_\_\_\_\_ million years before \_\_\_\_\_\_. Switek notes that \_\_\_\_\_\_ exists over \_\_\_\_\_\_ Archaeopteryx even was a \_\_\_\_\_\_. But for those who believe it \_\_\_\_\_\_, it appears that it may not have been the \_\_\_\_\_\_. Researchers cannot say with \_\_\_\_\_\_ that Aurornis was a bird \_\_\_\_\_\_. There are too few \_\_\_\_\_\_ in the fossil \_\_\_\_\_\_ to make this \_\_\_\_\_\_ \_\_\_\_\_\_. But one \_\_\_\_\_\_ based on these \_\_\_\_\_\_ is \_\_\_\_\_\_: birds are \_\_\_\_\_\_ of \_\_\_\_\_\_. \_\_\_\_\_\_ common bird \_\_\_\_\_\_ an ancestry with \_\_\_\_\_\_ dinosaurs such as the \_\_\_\_\_\_, \_\_\_\_\_\_ even more \_\_\_\_\_\_ to the \_\_\_\_\_\_ that the early bird gets the \_\_\_\_\_\_.

Appendix B

Phrase-Structure Parsing Phrase Condition Passages

**Passage 1**

From Gettysburg / to the Battle / of the Bulge / carrier pigeons / have winged / their way / through skies fair / and / foul / to deliver / the vital messages / of battle /

Today / in spite / of electronics / and / atomic weapons / these feathered heroes / are still / an important communication link / in any army /

No one / could be surer / of this / than the men / at Fort Monmouth / New Jersey / the sole army pigeon breeding / and / training center / in this country /

On the roosts / at Fort Monmouth perch many genuine battle heroes / among them veteran gi joe / in 1943 / one thousand British troops moved speedily ahead / of the allied advance / in Italy / to take / the small town / of Colvi Vecchia /

Since communications / could not be established / in time / to relay / the victory / to headquarters / the troops / were due / for a previously planned allied bombing raid /

Then / one / of the men released carrier pigeon G.I. Joe /

with a warning message / on his back / he flew 20 miles / in 20 minutes / arriving just / as the bombers / were warming up / their motors /

For saving / the day / for the British / the Lord / Mayor / of London later awarded G.I. Joe / the dickin medal / England's highest award / to an animal /

Even / when regular message channels / are set up / equipment / can break / or / be overloaded / or / radio silence / must be observed /

Then / the carrier pigeon comes / into his own /

Ninety nine times out / of a hundred / he completes / his mission /

In Korea / Homer / the homing pigeon / was flying / from the front / to a rear command post / when he developed wing trouble /

Undaunted / Homer made / a forced landing / hopped / the last two miles / and / delivered / his message /

For initiative / and / loyalty / Homer / was promoted / to Pfc.-Pigeon First Class /

**Passage 2**

Powdered zirconium / is more fiery / and / violent / than the magnesium powder / that went / into wartime incendiary bombs /

Under some conditions / it can be ignited / with a kitchen match / and / it cannot be extinguished / with water /

Munitions makers / once tried / to incorporate / it into explosives / but / turned / it down / as too dangerous / for even / them to handle /

But / when this strange metal / is transformed / into a solid bar / or / sheet / or / tube / as lustrous / as burnished silver / its temper changes /

It is / so docile / that / it can be used / by surgeons / as a safe covering plate / for sensitive brain tissues /

It is almost / as strong / as steel / and / it can be exposed / to hydrochloric acid / or / nitric acid / without corroding /

It is even used / in nuclear reactors / because / of its ability / to withstand corrosion /

Zirconium / is also safe / and / stable / when it is bound up / with other elements / to form mineral compounds / which occur / in abundant deposits / in North / and / South America / India / and / Australia /

Although / it is classified / as a rare metal / it is more abundant / in the earth's crust / than nickel / copper / tungsten / tin / or / lead /

Until / not long / ago / scarcely / a dozen people / had ever seen zirconium / in pure form / but / today / it is / the wonder metal / of a fantastic new industry / an exciting structural material / for chemical equipment / and / for super rockets / and / jet engines / and / a vital component / of television / radar / and / radio sets /

It may be most well known / for its role / in jewelry making / as cubic zirconium gems resemble diamonds / in appearance / but / sell / for a fraction / of the price /

Despite its widespread use / in many different applications / some contemporary uses / for zirconium / have been tried / and / discarded /

Its irritating properties make / it a poor choice / for inclusion / in skin products / as manufacturers discovered / when it was tried / as a component / in topical skin treatments / and / deodorants /

**Passage 3**

Coming / into the relay station / with a rush / the Pony Express rider swung down / from his exhausted mount / and / up / onto a fresh horse / with his precious mochilla / the saddle bag containing / the mail /

He was off again / without a moment's delay /

He was expected / to reach / the next station /

and / he did / or / he died trying /

A rider / might come / into a station / at dawn only / to find / that the station / had been burned / the keepers killed / and / the horses run off / by attacking Indians /

In that case / he would continue / to the next station / without food / or / rest /

“Buffalo Bill” / a boy / of 18 / made / the longest continuous run / in the history / of the Pony Express /

By riding 280 miles / in just 22 hours / Jim Moore earned / the distinction / of having made / the fastest run /

Ninety riders covered / the trail / at all times / of the day / and / night / often risking / their lives / to get / the mail / through within the ten-day limit /

Most made / it in eight days /

On the average / the riders / could travel 11 miles / an hour / a quick pace / over terrain / that / might require / the horse / to swim rivers / or / cat foot / its way / along narrow cliff trails /

The pace / of the mail delivery / by pony express / was snail like / by today's standards / but / at the time / of its commencement / in 1860 / it offered / the fastest cross-country communication / that had ever / been achieved /

Abraham Lincoln / was elected president / during that year / and / thanks to the pony express / residents / of California received news / of / Lincoln's victory / in just / over a week /

The pony express riders carried / the mail / between / Missouri / and / California / for less / than two years

They stopped riding / in 1861 / when a telegraph line offered / a swifter means / of communication /

The efforts / of the riders / are memorialized / at the / Pony Express National Museum / established / in St. Joseph / Missouri /

According / to the records / of the museum / the pony express lost only / a single delivery / of mail / during the entire period / of its operation /

**Passage 4**

An ancient dinosaur like animal called / the Archaeopteryx / has long / been considered / to be / the world's first bird /

Based / on / what has been pieced together / from fossil evidence / archaeopteryx / was more like / a cross / between a bird / and / a dinosaur / rather / than fitting clearly / in one group / or / the other /

It had teeth / a tail / and / claws / on its wing-all characteristics / that more closely resemble dinosaurs /

It also / had feathers / and / wings / like today's birds /

Whether the creature / was / a bird / with teeth / or / a feather-covered dinosaur / is / a matter / of debate / but / its existence proved / that a link exists / between birds / and / reptiles /

A recent discovery leads / us to question / the accepted wisdom / of Archaeopteryx / as the first known bird /

According / to an article / in National / Geographic magazine / by author Brian Switek / a creature known / as Aurornis xui / was described / by paleontologist Pascal Godefroit / in May of 2013 /

Aurornis / was discovered / in China /

It is believed / to have lived 160 million years / ago / about 10 million years / before Archaeopteryx /

Switek notes / that controversy exists / over whether Archaeopteryx even / was / a bird /

But / for those / who believe / it was / it appears / that / it may not have been / the first /

Researchers / cannot say / with certainty / that Aurornis / was / a bird either /

There are too few details / in the fossil record / to make / this determination definitively /

But / one thing based / on these discoveries / is clear / birds / are descendants / of dinosaurs /

Today's common bird shares / an ancestry / with predator dinosaurs such / as the velociraptor / lending even more meaning / to the idea / that the early bird gets / the worm /

Appendix C

Full Text Condition Passages

**Passage 1**

From Gettysburg to the Battle of the Bulge, carrier pigeons have winged their way through skies fair and foul to deliver the vital messages of battle. Today, in spite of electronics and atomic weapons, these feathered heroes are still an important communication link in any army. No one could be surer of this than the men at Fort Monmouth, New Jersey, the sole Army pigeon breeding and training center in this country. On the roosts at Fort Monmouth perch many genuine battle heroes, among them veteran G.I. Joe. In 1943, one thousand British troops moved speedily ahead of the Allied advance in Italy to take the small town of Colvi Vecchia. Since communications could not be established in time to relay the victory to headquarters, the troops were due for a previously planned Allied bombing raid. Then, one of the men released carrier pigeon G.I. Joe. With a warning message on his back, he flew 20 miles in 20 minutes, arriving just as the bombers were warming up their motors. For saving the day for the British, the Lord Mayor of London later awarded G.I. Joe the Dickin Medal, England's highest award to an animal. Even when regular message channels are set up, equipment can break or be overloaded or radio silence must be observed. Then, the carrier pigeon comes into his own. Ninety-nine times out of a hundred, he completes his mission. In Korea, Homer the homing pigeon was flying from the front to a rear command post when he developed wing trouble. Undaunted, Homer made a forced landing, hopped the last two miles and delivered his message. For initiative and loyalty, Homer was promoted to Pfc.—Pigeon First Class!

**Passage 2**

Powdered zirconium is more fiery and violent than the magnesium powder that went into wartime incendiary bombs. Under some conditions, it can be ignited with a kitchen match, and it cannot be extinguished with water. Munitions makers once tried to incorporate it into explosives, but turned it down as too dangerous for even them to handle. But when this strange metal is transformed into a solid bar or sheet or tube, as lustrous as burnished silver, its temper changes. It is so docile that it can be used by surgeons as a safe covering plate for sensitive brain tissues. It is almost as strong as steel, and it can be exposed to hydrochloric acid or nitric acid without corroding. It is even used in nuclear reactors because of its ability to withstand corrosion. Zirconium is also safe and stable when it is bound up with other elements to form mineral compounds, which occur in abundant deposits in North and South America, India, and Australia. Although it is classified as a rare metal, it is more abundant in the earth's crust than nickel, copper, tungsten, tin, or lead. Until not long ago, scarcely a dozen people had ever seen zirconium in pure form, but today it is the wonder metal of a fantastic new industry, an exciting structural material for chemical equipment and for super rockets and jet engines, and a vital component of television, radar, and radio sets. It may be most well-known for its role in jewelry making, as cubic zirconium gems resemble diamonds in appearance but sell for a fraction of the price. Despite its widespread use in many different applications, some contemporary uses for zirconium have been tried and discarded. Its irritating properties make it a poor choice for inclusion in skin products, as manufacturers discovered when it was tried as a component in topical skin treatments and deodorants.

**Passage 3**

Coming into the relay station with a rush, the Pony Express rider swung down from his exhausted mount and up onto a fresh horse with his precious mochilla, the saddle bag containing the mail. He was off again without a moment's delay. He was expected to reach the next station, and he did, or he died trying. A rider might come into a station at dawn only to find that the station had been burned, the keepers killed, and the horses run off by attacking Indians. In that case he would continue to the next station without food or rest. "Buffalo Bill," a boy of 18, made the longest continuous run in the history of the Pony Express, 384 miles. By riding 280 miles in just 22 hours, Jim Moore earned the distinction of having made the fastest run. Ninety riders covered the trail at all times of the day and night, often risking their lives to get the mail through within the ten-day limit. Most made it in eight days. On the average, the riders could travel 11 miles an hour, a quick pace over terrain that might require the horse to swim rivers or cat-foot its way along narrow cliff trails. The pace of the mail delivery by Pony Express was snail-like by today's standards, but at the time of its commencement in 1860, it offered the fastest cross-country communication that had ever been achieved. Abraham Lincoln was elected president during that year, and thanks to the Pony Express, residents of California received news of Lincoln's victory in just over a week. The Pony Express riders carried the mail between Missouri and California for less than two years. They stopped riding in 1861 when a telegraph line offered a swifter means of communication. The efforts of the riders are memorialized at the Pony Express National Museum, established in St. Joseph, Missouri. According to the records of the museum, the Pony Express lost only a single delivery of mail during the entire period of its operation.

**Passage 4**

An ancient dinosaur-like animal called the Archaeopteryx has long been considered to be the world's first bird. Based on what has been pieced together from fossil evidence, Archaeopteryx was more like a cross between a bird and a dinosaur, rather than fitting clearly in one group or the other. It had teeth, a tail, and claws on its wing—all characteristics that more closely resemble dinosaurs. It also had feathers and wings, like today's birds. Whether the creature was a bird with teeth or a feather-covered dinosaur is a matter of debate, but its existence proved that a link exists between birds and reptiles. A recent discovery leads us to question the accepted wisdom of Archaeopteryx as the first known bird. According to an article in National Geographic magazine by author Brian Switek, a creature known as Aurornis xui was described by paleontologist Pascal Godefroit in May of 2013. Aurornis was discovered in China. It is believed to have lived 160 million years ago, about 10 million years before Archaeopteryx. Switek notes that controversy exists over whether Archaeopteryx even was a bird. But for those who believe it was, it appears that it may not have been the first. Researchers cannot say with certainty that Aurornis was a bird either. There are too few details in the fossil record to make this determination definitively. But one thing based on these discoveries is clear: birds are descendants of dinosaurs. Today's common bird shares an ancestry with predator dinosaurs such as the velociraptor, lending even more meaning to the idea that the early bird gets the worm.

Appendix D

Reading Comprehension Questions

**Passage 1**

1. The writer of this passage evidently believes that carrier pigeons

A. have no usefulness in modern warfare.

B. should be forced to fly only in emergencies.

C. are remarkably reliable as message carriers.

D. should receive regular promotions.

2. G.I. Joe was rewarded for

A. preventing unnecessary loss of life.

B. guiding a bomber's flight.

C. returning in spite of an injured wing.

D. bringing the news of an allied defeat.

3. G.I. Joe's reward was a

A. promotion.

B. reception given by the Lord Mayor.

C. chance to retire to Fort Monmouth.

D. medal.

4. The word vital means

A. extremely important.

B. frequent.

C. recent.

D. written.

**Passage 2**

1. Which title best expresses the main idea of this selection?

A. A Vital Substance

B. A Safe, Stable Substance

C. Zirconium's Uses in Surgery

D. Characteristics of Zirconium

2. The word docile means

A. calm.

B. pliable.

C. strong.

D. profuse.

3. The selection emphasizes that

A. zirconium rusts easily.

B. chemists have found many uses for zirconium.

C. keys are often made of zirconium nowadays.

D. zirconium is less abundant in the earth's crust than lead.

4. Zirconium is not safe to handle when it is

A. lustrous.

B. powdered.

C. in tubes.

D. in bar form.

5. The selection tells us that zirconium

A. is a metal.

B. is fireproof.

C. dissolves in water.

D. is stronger than steel.

6. Zirconium is likely to be useful in all of these fields EXCEPT

A. surgery.

B. television.

C. atomic research.

D. the manufacture of fireworks.

**Passage 3**

1. The Pony Express rider stopped at a station to

A. get a few hours of sleep.

B. get a fresh mount.

C. sort the mail.

D. escape Native American attacks.

2. The mochilla refers to the

A. Pony Express rider's saddle bags.

B. Pony Express horses.

C. stations.

D. trails.

3. This passage implies that most of the Pony Express riders were

A. sure-footed.

B. faithful to their jobs.

C. mountain-bred.

D. killed.

4. Those sending mail by Pony Express could expect that it would reach its destination within

A. ten days.

B. five days.

C. a month.

D. before dawn.

5. The longest continuous run was

A. completed within 22 hours.

B. 280 miles.

C. made by traveling 11 miles per hour.

D. 384 miles.

6. Which of the following statements is most likely true, based on the passage?

A. The Pony Express was reliable at delivering the mail.

B. The Pony Express was operational throughout the 1860s.

C. Mail was delivered by Pony Express from east coast to west coast.

D. The Pony Express was less expensive than other forms of mail delivery.

**Passage 4**

1. Which title best expresses the topic of this selection?

A. Studying Dinosaurs

B. The Earliest Birds

C. Birds versus Dinosaurs

D. The History of the Velociraptor

2. According to the passage, Archaeopteryx could best be described as

A. an ancient bird without feathers.

B. more like a dinosaur than a bird.

C. part bird and part dinosaur.

D. more like a mammal than a reptile.

3. In the context of the passage, the phrase accepted wisdom most nearly means

A. invalid theory.

B. historical myth.

C. helpful advice.

D. widely held view.

4. According to the passage, today's birds are descendants of

A. dinosaurs that hunted other animals.

B. land-based dinosaurs without tails.

C. dinosaurs that ate vegetarian diets.

D. ancient Egyptian and Asian reptiles.