**FSA Writing Student Sample Essay**

Thomas Edison once said that inventing was “1 percent inspiration and 99 percent perspiration.”

Inventing is hard work and takes a lot of preparation. Some people, from Sir Isaac Newton and Percy

Spencer, seemed lucky to be inspired by mistakes: apples dropped on their heads or chocolate melted in

their pockets. Mistakes seem to have led to discoveries. However, to say that mistakes like these are key

in making discoveries would not be true. Real discoveries come from careful experiments and study, and

those take time and work.

The text “In Praise of Careful Science” says “Most of the time, scientists work for decades and

make very few mistakes.” While doing an experiment, in order to make it accurate, multiple trials should

be performed to gather the correct data. Each trial isn’t a mistake. It’s simply a further study of the

experiment. Many scientists have to research for months or even years on end to conduct accurate

experiments. Discoveries aren’t always made in a day. John Denker, a famous scientist, once compared

slow discovery to popular music. He said, “I am reminded of the rock star who said it took him 15 years

to become an overnight sensation.” This rock star worked hard for a long time before he became

famous. That’s the same as with discoveries in science. A lot of work makes the discovery important, not

the mistake that may have led to it.

One example of a discovery that was only important because of hard work was the discovery of

radium. It took Pierre and Marie Curie almost five years to study the chemical before they received their

Nobel peace prize for Science in 1903. It was not a simple mistake that made the discovery mean

something, but the study they did afterwards. In this case, research was key to making the discovery

important.

Not all cases are as clear, though. In the 1940s, Percy Spencer, an electrical engineer in his

twenties, was about to discover the beginnings one of today’s most useful kitchen appliances—the

microwave. His company’s newest project was the Magnetron, a machine that uses electric and

magnetic currents. One day, while testing the Magnetron, Spencer had a chocolate bar in his pocket. He

stood too close to the Magnetron, and the chocolate melted. He was the first person to put together the

idea of using electric and magnetic currents to cook food. However, it took twenty more years before his

company made a functional microwave oven. While Percy’s mistake of having a chocolate bar in his

pocket eventually led to the invention of the microwave, 20 years researching and perfecting the

invention are truly to thank.

At the end of the day, to say “Without mistakes, no discoveries can be made” does not do

humankind justice. Every invention or discovery ever made comes with years of work. While the ideas

behind some inventions sometimes come from a mistake, the mistake is only a measly part of the

process. In the words of Carl Sagan, a space scientist, “Science is a self-correcting process,” and the

mistake is not as important as the corrections.

Grade 9 Student Scoring Sample

Have you ever wanted to wear a two piece fox pelt that is only held up by a belt? Nor have I. But

without important developments in the creation of clothes, we wouldn’t have much of a choice. During

the Industrial Revolution, style was largely a practical matter and was influenced by a person’s culture.

According to “Tailoring,” the Scottish had different patterns that showed what clan a person was in.

Polynesians would beat plant fibers and tree bark into tapa cloth, a process that had religious significant

for Hawaiians. There was also no sizing system, so they would use simple things like belts or sashes to

keep clothes on. Because the technology was basic, so was the style.

However, the author of “Tailoring” shows how this all began to change during the Renaissance.

Instead of using a sash to make clothes, they sewed several different pieces of fabric together which

gave them a more tailored fit. They still didn't have any buttons or zippers, though. As a result, people

were sewn into clothes. In the 1600s, making clothes became a lot more complicated with the addition

of more intricate patterns. Garments with embroideries, gemstones, and other new patterns took

longer to complete and were more difficult to make. The Civil War led to another change—the switch

from clothing being made in the home to clothing being made in factories. In order to meet the

demands of the increasing number of soldiers, factories made a lot of uniforms. They made them in

sizes that were averages of measurements taken from soldiers. This change was driven by need, not by

style.

Similarly, mass production of women’s clothes started in the late 1920s. With the rise of

urbanization, a new fashion emerged. Hand-made clothes were now considered old-fashioned and

ready-made clothes were considered more stylish. People started to order clothes or buy them in chain

stores. They were easier to get, faster to produce, and cheaper to buy. There was a downside, though.

Many clothing companies had their own sizes that were based off of little to no information. This

obviously caused problems for the producer and the consumer. Clothes didn't fit right and prices went

way up because alterations had to be made to the clothes. But, as the article from the National Institute

of Standards and Technology says, the government established a standardized sizing system in 1937 that

all companies had to follow.

Along with the new ways of making and purchasing clothes, new styles continued to emerge.

Instead of baggy shirts and pants for men, they wore suits. Women who used to wear big custom

dresses instead wore more trimmed dresses that closed with zippers and buttons. Tailoring didn’t just

shut down, though. Wealthier people still got their clothes from tailors, but it was now a luxury. It was

less expensive to get clothes from stores or catalogues. These clothing stores and catalogues sold the

same things to millions of other people, so a person’s clothes would be less unique. People adapted

quickly, though, because of how much more convenient it was. Trends changed more quickly as well.

Because it was so simple to make these clothes, the makers could have new styles quickly. All this new

technology led to new fashions. Without the advances in technology, clothing would look very different

than it does now. New technologies have directly resulted in changes in fashion. As technology

continues to advance, it’s likely that clothing styles will follow suit.