**A Scientist Challenges the Past Name:**

**Date: Block:**

**Directions:**

1. READ the introduction and the story.
2. ANNOTATE while you read the introduction AND the story (circle unknown words, underline important phrases, “talk back” by writing your thoughts)
3. ANSWER the questions at the end of the reading.

Talk Back Below!

In the 1500s and 1600s, inspired by the Renaissance, daring scientists had new ideas about how to study and understand the world. They challenged what the ancient writers and the Catholic Church had said about the workings of the universe. These scientists looked around them. They observed nature, saw how people lived, and learned that the earth moved around the sun.

They asked questions and searched for answers. Sometimes they found the answers. If they did not, they kept searching. One of these searchers for truth was Galileo Galilei, who made several important discoveries.

In the story that follows, Galileo is about to appear before the Inquisition (Church court) to explain his discoveries. This court seeks to uphold the teachings of the Church. Galileo will be given a choice of life or death. If he insists that the earth moves around the sun, he will die. If he denies what he knows to be true, he will live. Given these same choices, what would you have done? How can Galileo be so sure that he is right and that the teachings of the Church are wrong?

**To think that I have come to this! If I do not admit that I am wrong, I will be executed! I will be remembered for all time as a heretic (an enemy of the Church) who denied the truth of the teachings of the Catholic Church. Yet I, Galileo Galilei, have always been faithful to my Church and to the discoveries of science. Now I am told that I cannot believe in both science and God.**

 **The Church says that the earth is the center of the universe. I know better. I have read and tested the theories of Copernicus. A hundred years ago, he proved by mathematics that the earth moved around the sun. I made my own telescope because I wanted to test his theories. People asked how the astronomy of the Bible could be wrong. It was an insane idea to think that the teachings of the Church have been false for so many centuries. The earth is not the center of the universe. How excited I was when I saw the rings of Saturn, the moons of Jupiter, and the countless stars of the Milky Way. These were my eyes, my telescope, my discoveries!**

 **We know the things we can see and prove. Is there any other possibility? There cannot be. Perhaps I was wrong to think that I could know more than the great scholars of my Church. If it is true that we are made in God’s image, then we must be at the center of the universe. Are there not mysteries that we cannot understand? Only God knows all. The leaders of his Church can explain the meaning of life to us.**

 **That is what I am supposed to believe. But in my heart of hearts I know that there is much to be discovered and explored. No one, not even the holy Church, knows the answers to all the mysteries!**

 **If we are to find the answer to the riddle of the universe, we must never stop looking. We must experiment and experience as much as we can. Blind faith is not my way of life. I cannot accept whatever I am told simply because it has been said by the Church.**

 **When I wanted to find the speed of falling objects, I dropped some weights from the top of the Leaning Tower of Pisa. I experimented, I saw, and I made my conclusions.**

 **The other day I heard an argument on the street. Five grown men were arguing about the number of teeth in a horse’s mouth. The horse was standing right there, but no one thought of opening the animal’s mouth and counting its teeth. In fact, no one even looked at the horse! This argument went on for over an hour. I suggested checking the horse’s mouth, and I was rewarded by being pushed rudely aside. There was no conclusion to the argument. The people went away confused and angry. Is that a way to learn the answers?**

 **Enough of these wandering thoughts! I must make up my mind. I know that I can have faith in my God and still search for answers. The Church fathers do not agree. They say I must give up my search for learning, destroy my book, agree that the sun moves around the earth. They want me to stop my experiments and accept the ways of God and of the Church.**

 **I don’t want to accept blindly, but if I am to see another sunrise, I must give in. I must pretend to believe. I wonder – is it better to live a lie than to die and face the unknown?**

 To save his life, Galileo told the judges of the Inquisition that the earth was at the center of the universe. However, as he left the courtroom, he whispered, “All the same, the earth does move.” Galileo was placed under house arrest at his home near Florence, Italy. He remained there until his death in 1642.

 Many agree that Galileo, more than any other person, deserves to be called the founder of modern science. His work on the laws of motion were extremely important, as were his discoveries of sunspots and the moons of the planet Jupiter. He discovered that the Milky Way was a vast array of stars. Galileo’s experiments were skillful, and his measurements were highly accurate.

**Questions for Review: Answer the following on a separate sheet of paper.**

1. How did the scientists of the 16th and 17th centuries challenge ideas of the past?
2. What was the achievement of Copernicus?
3. Why did Galileo find it impossible that the earth was the center of the universe?
4. Why did Galileo tell the Inquisition that he was wrong, that the earth was the center of the universe?
5. Why do many people believe that he deserves to be called the founder of modern science?
6. Imagine that you are Galileo. You are accused of heresy (going against the Church) by the Church. Would you act in the same way that Galileo did? Explain your answer. Are there people today who, like Galileo, are placed on trial for their ideas? Explain.

**Activities: Choose one of the following activities to answer.**

1. Make a drawing of Galileo sitting in his jail cell. What is he thinking (can be a caption or thought bubble)? Be sure to title your drawing.
2. Imagine you are a lawyer. Would you rather defend or prosecute Galileo? Why? What would the main points of your case be?
3. Pretend that you are Galileo. You have been arrested by the Inquisition. Write a letter to a friend explaining why you are in prison.