

The Scientific Revolution: Primary Source Connections

Directions: Use the following primary sources to complete the chart below. Be sure to highlight, annotate, and define any underlined words.

Document A - Source: 1615

"Some years ago I discovered in the heavens many things that had not been seen before our own age. The novelty of these things...stirred up several professors against me. They hurled various charges and published numerous writings filled with vain arguments, and they made the grave mistake of sprinkling these with passages taken from places in the Bible, which they failed to understand properly..

The reason given for attacking the opinion that the earth moves and the sun stands still is that in many places in the Bible one may read that the sun moves and the earth stands still. Since the Bible cannot err, it follows that anyone who claims that the sun is motionless and the earth movable takes an erroneous and heretical position.

With regard to this argument, I think in the first place that it is very pious to say and prudent to affirm that the holy Bible can never speak untruth – whenever its true meaning is understood. But I believe nobody will deny that the Bible is often very complex, and may say things which are quite different from what its bare words signify....

I do not believe that the same God who has given senses, reason and intellect has intended us to not use them....He would not require us to deny sense and reason in physical matters of direct experience....Can an opinion be heretical and yet have no concern with the salvation of souls?."

1. According to the author, why do some people think his teachings are heretical?
2. How does the author defend against these charges?

Document B - Source: 1615

"As you know, the Council [of Trent] prohibits interpreting the Scriptures contrary to the common agreement of the holy Fathers. And if you would read not only the Fathers but also the commentaries of modern writers on Genesis, Psalms, Ecclesiastes and Joshua, you would find that all agree in explaining that the sun is in the heavens and moves swiftly around the earth, and that the earth is far from the heavens and stands immobile in the center of the universe....

It would be just as heretical to deny that Abraham had two sons and Jacob twelve, as it would be to deny the virgin birth of Christ, for both are declared by the Holy Ghost through the mouths of the prophets and apostles....

I say that if there were a true demonstration that the sun was in the center of the universe and the earth in the third sphere, and that the sun did not travel around the earth but the earth circled the sun, then it would be necessary to proceed with great caution in explaining the passages of Scripture which seemed contrary, and we would rather have to say that we did not understand the Scripture than to say that something was false which has been demonstrated. But I do not believe that there is any such demonstration; none has been shown to me....[One] clearly experiences that the earth stands still and that his eye is not deceived when it judges that the moon and stars move."

1. Explain two reasons the author gives for believing in geocentric theory?
2. How does the author respond to the following arguments?
 - a. The Bible passages about the sun standing still should not have been interpreted literally?
 - b. The model of the universe (heliocentric or geocentric is not a matter of salvation?

Document C - Source: The Crime of Galileo: Indictment and Abjuration of 1633

In 1632, Galileo, who had been teaching and writing about the idea that the Earth moved around the sun, was summoned to Rome to stand trial. After questioning the relevant witnesses, the judges issued the following condemnation of Galileo.

“You, Galileo of Florence, were denounced in 1615, by this Holy Office, for holding as true a false doctrine taught by many, namely, that the sun is immovable in the center of the world, and that the earth moves...also, for explaining the Scriptures according to your own meaning. Therefore...by the desire of his Holiness and the Most Eminent Lords, Cardinals of this supreme and universal Inquisition, the two propositions of the stability of the sun, and the motion of the earth, were qualified as follows:

1. The proposition that the sun is in the center of the world and immovable from its place is absurd, philosophically false, and formally heretical; because it is expressly contrary to the Holy Scriptures.

2. The proposition that the earth is not the center of the world, nor immovable, but that it moves is also absurd, philosophically false, and theologically considered, at least erroneous in faith.

Therefore, in the most holy name of our Lord Jesus Christ and of His Most Glorious Mother Mary, We pronounce, judge, and declare, that you Galileo...have made yourself suspected by this Holy Office of heresy, that is, of having believed and held the doctrine (which is falsely and contrary to the Holy and Divine Scriptures) that the sun is the center of the world, and that it does not move from east to west, and that the earth does move, and is not the center of the world; also, that an opinion can be held and supported as probably, after it has been declared contrary to the Holy Scripture.”

1. By the end of the trial, what was the Catholic Church’s position on the heliocentric theory?
2. What two reasons did the Church give for declaring Galileo was a heretic?

Document D – Source: “Vatican Science Panel Told By Pope: Galileo Was Right,” New York Times, November 1, 1992.

“Moving formally to right a wrong, Pope John Paul II acknowledged in a speech today that the Roman Catholic Church had erred in condemning Galileo 359 years ago for asserting that the Earth revolves around the Sun.

The address by the Pope before the Pontifical Academy of Sciences closed a 13-year investigation into the Church’s condemnation of Galileo in 1633, one of history’s most notorious conflicts between faith and science. Galileo was forced to recant his scientific findings to avoid being burned at the stake and spent the remaining eight years of his life under house arrest.

John Paul said the theologians who condemned Galileo did not recognize the formal distinction between the Bible and its interpretation.

‘This led them to move a question which in fact pertained to scientific investigation into the realm of doctrine of faith.’

Though the Pope acknowledges that the Church had done Galileo wrong, he said the 17th century theologians were working with the knowledge available to them at the time.”

1. Why did Pope John Paul say the Church’s treatment of Galileo was wrong?
2. Why was it easier for the Church to side with Galileo in 1992?