

CLIL Lesson: Beginnings of the scientific revolution

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Timing: 45 min

Age of students: 12 - 13

Context and Prior Knowledge: Ss have already been taught about political and economic situation in Europe in Late Middle Ages. Ss have already been taught about Renaissance and humanism.

Lesson Steps

1. 4' 0 - 3'	<p>Lead in and Connection to previous learning: Ss sit in groups of four members. Teacher quickly repeats the previous topic with special focus on humanism as a key prerequisite for the beginning of the scientific revolution. Ss are introduced to the topic of the lesson.</p>
2. 3' 4 - 6'	<p>Warming-up (hidden picture game): Picture in PPT on the whiteboard with hidden parts. Step by step the picture is uncovered. Ss guess what is in the picture.</p>
3. 2' 7 - 8'	<p>Pictures: T shows Ss picture 2 (the geocentric system). Ss discuss about differences between picture 1 (the heliocentric system – uncovered picture from the previous activity) and picture 2. Then T shows another 4 pictures of geocentric and heliocentric systems. Ss decide which picture displays heliocentric and geocentric system. Ss write their answers to their worksheets.</p>
4. 5' 9 - 13'	<p>Discussion: T shows Ss picture 2 (the geocentric system). Ss discuss about three key questions in groups (4 members). <i>Is there any logic behind the geocentric model? Had people believed in the geocentric system until the time of the scientific revolution? Why are we talking about the geocentric and heliocentric system now?</i> Questions are visible on the whiteboard. Ss have them in their worksheets. Ss can take notes on the worksheets. Groups share their suggestions. T manages discussion and explains key concepts (see in the Expected answers file). More info about the topic: https://en.wikipedia.org/wiki/Heliocentrism, https://en.wikipedia.org/wiki/Geocentric_model</p>
5. 6' 14 - 19'	<p>Videos: T shows Ss two videos. Video about Copernicus and video about Galileo (1url.cz/ut0lg, 1url.cz/Pt0lQ)</p>
6. 5' 20 - 24'	<p>T or F statements: SS answer T or F statements in the worksheet. T or F statements are related to the videos.</p>
7. 3' 25 - 27'	<p>Evaluation: Oral evaluation of Ss answers from activity 6 (correct answers are in Expected answers file).</p>

<p>8. 13´ 28 - 40´</p>	<p>Game (Live picture):</p> <p>Simulation of the situation in 1600 AD. Ss choose their roles (the Sun, the Earth, Moon, Mercury, Venus, Mars, Jupiter, Saturn, Copernicus, Galileo, the Catholic Church). Roles are written on small papers and Ss pick them out of the small box. Everybody plays the role in the middle of empty classroom (planets are circulating, Galileo observing with telescope, Copernicus writing a book, the Catholic Church is angry). When T explains the role of the Catholic Church, emphasizes negative attitude of Catholic Church to new discoveries in astronomy. T can repeat information from the video about Galileo, who was imprisoned because of the attitude of the Catholic Church, or T can mention Giordano Bruno, who was even burned. If there is more than 11 pupils in the class, the role of the Catholic Church can be played by more pupils. If there is more than 15 pupils in the class, another role can be played – the role of Copernicus’s and Galileo’s learners, who support Copernicus and Galileo. Teacher asks questions: <i>Why are Uranus and Neptune not involved? Are planets circulating in circle way? Is Moon circulating around the Earth or around the Sun?</i></p>
<p>9. 4´ 41 - 45´</p>	<p>Recapitulation and homework:</p> <p>T summarizes orally new key information from the lesson.</p> <p>T asks Ss to think at home, why the situation (simulated in the activity 8) could never happen.</p>