

## CATHOLIC CURRICULAR STANDARDS AND DISPOSITIONS RELATED TO SCIENTIFIC TOPICS 7-12<sup>7</sup>

*By the very nature of creation, material being is endowed with its own stability, truth and excellence, its own order and laws. These man must respect as he recognizes the methods proper to every science and technique...Whoever labors to penetrate the secrets of reality with a humble and steady mind, even though he is unaware of the fact, is nevertheless being led by the hand of God, who holds all things in existence, and gives them their identity.*

*Gaudium et Spes, 1965, #36*

<i>General Standards</i>			
CS	S.712	GS1	Exhibit a primacy of care and concern at all stages of life for each human person as an image and likeness of God.
CS	S.712	GS2	Explain and promote the unity of faith and reason with confidence that there exists no contradiction between the God of nature and the God of the faith.
CS	S.712	GS3	Value the human body as the temple of the Holy Spirit.
CS	S.712	GS4	Share how the beauty and goodness of God is reflected in nature and the study of the natural sciences.
<i>Intellectual Standards</i>			
CS	S.712	IS1	Articulate how science properly situates itself within other academic disciplines (e.g., history, theology) for correction and completion in order to recognize the limited material explanation of reality to which it is properly attuned.
CS	S.712	IS2	Demonstrate confidence in human reason and in one's ability to know the truth about God's creation and the fundamental intelligibility of the world.
CS	S.712	IS3	Analyze how the pursuit of scientific knowledge, for utilitarian purposes alone or for the misguided manipulation of nature, thwarts the pursuit of authentic Truth and the greater glory of God.
CS	S.712	IS4	Relate how the search for truth, even when it concerns a finite reality of the natural world or of man, is never-ending and always points beyond to something higher than the immediate object of study.
CS	S.712	IS5	Explain the processes of conservation, preservation, overconsumption, and stewardship as it relates to creation and to caring for that which God has given to sustain and delight us.
CS	S.712	IS6	Evaluate the relationship between God, man, and nature, and the proper role in the totality of being and creation.
CS	S.712	IS7	Describe humanity's natural situation in, and dependence upon, physical reality and how man carries out his role as a cooperator with God in the work of creation.
CS	S.712	IS8	Evaluate the errors present in the belief system of scientific naturalism or scientism <sup>8</sup> (which includes materialism <sup>9</sup> and reductionism <sup>10</sup> ), which posits that scientific exploration and explanation is the only valid source of meaning.
CS	S.712	IS9	Distinguish the difference between the use of the scientific method and the use of theological inquiry to know and understand God's creation and universal truths.

<sup>7</sup> The topics covered in these standards, while touching upon the natural world, nevertheless transcend the limits of strict scientific inquiry. Thus they may be explored in various disciplines. However, all science teachers in Catholic schools should be conversant in these issues from a Catholic perspective as they may arise in science class. See Appendix E for Science resources.

<sup>8</sup> Scientism – belief that only science can reveal the truth.

<sup>9</sup> Materialism – elements of the visible world are the only things that really exist.

<sup>10</sup> Reductionism –all of reality is reducible to its smallest physical parts.

CS	S.712	IS10	Articulate the limitations of science (the scientific method and constraints of the physical world) to know and understand God and transcendent reality.
CS	S.712	IS11	Identify key Catholic scientists such as Copernicus, Mendel, DaVinci, Bacon, Pasteur, Volta, St. Albert the Great, and others and the witness and evidence they supply against the false claim that Catholicism is not compatible with science.
CS	S.712	IS12	Analyze and articulate the Church's approach to the theory of evolution.
CS	S.712	IS13	Relate how the human soul is specifically created by God for each human being, does not evolve from lesser matter, and is not inherited from our parents.
CS	S.712	IS14	Explain how understanding the physiological properties of a human being does not address the existence of the transcendent spirit of the human person (see Appendix E).
CS	S.712	IS15	Explain the supernatural design hypothesis in terms of the Borde-Vilenkin-Guth Proof, the Second Law of Thermodynamics, entropy, and anthropic coincidences (fine tuning of initial conditions and universal constants) (see Appendix E).
CS	S.712	IS16	Articulate the details of the Galileo affair to counter the assumption that the Church is anti-science.
CS	S.712	IS17	Demonstrate an understanding of the moral issues involving <i>in vitro</i> fertilization, human cloning, human genetic manipulation, and human experimentation and what the Church teaches regarding work in these areas.
			<i>Dispositional Standards</i>
CS	S.712	DS1	Display a deep sense of wonder and delight about the natural universe.
CS	S.712	DS2	Share how natural phenomena have more than a utilitarian meaning and purpose and exemplify the handiwork of the Creator.
CS	S.712	DS3	Subscribe to the premise that nature should not be manipulated at will, but should be respected for its natural purpose and end as destined by the creator God.
CS	S.712	DS4	Share concern and care for the environment as part of God's creation.
CS	S.712	DS5	Adhere to the idea of the simultaneous complexity and simplicity of physical reality.