

LIFE SCIENCE	
From Molecules to Organisms: Structures and Processes	MIDDLE SCHOOL
SCRIPTURE	
<i>You formed my inmost being; you knit me in my mother's womb. I praise you, because I am wonderfully made; wonderful are your works! Ps 139:13-14</i>	
STANDARD	
<p>S.1. Conduct an investigation exploring the order of God's creation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells. (MS-LS1-1)</p> <p>S.2 Just as we are all one body, though many parts with respect to the Church, develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function. (MS-LS1-2)</p> <p>S.3. Every part of a system works more successfully when it carries out its intended purpose, just as we are fulfilled when we carry out God's purpose in our lives. Use arguments supported by evidence for how the body is a system of interacting subsystems composed of groups of cells working together for the same purpose. (MS-LSI-3)</p> <p>S.4. God's creation provides evidence of order; use an argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively. (MS-LSI-4)</p> <p>S.5. Through observation of the beautifully created Earth and our natural surroundings, construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. (MS-LSI-5)</p> <p>S.6. Knowing the perfectly beautiful balance of all God's creation, construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms. (MS-LSI-6)</p> <p>S.7. Understanding the Law of Conservation of Energy, understand that God created all energy in the beginning and unique relationships among all organisms, develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism. (MS-LSI-7)</p> <p>S. 8. Just as God knew you before he formed you, gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories. (MS-LSI-8)</p>	
EXAMPLES	
Catholic Scientists/Saints , Catechism , Scripture	
ESSENTIAL QUESTIONS	
<p>S.1 What is the basis of cell theory and how does it define the function of cells?</p> <p>S.2 How do you construct a model of cell to accurately display the function of the organelles?</p>	

S.3 How are cells, tissues, organs and organ systems support each other in an organism?

S.4 How does the environment and the network of organisms within the environment allow for successful survival? (Students should consider how behaviors like nest building, herding of young or bright plumes of mates allow for successful survival and opportunities to reproduce. Students should also understand that animals facilitate the fertilization of plants.)

S.5 How does the availability of local environmental conditions impact animal growth? (Students should understand that local environmental conditions impact animal growth. Consider drought and availability of resources, along with fertilizer and the abundance of resources available.)

S.6 Knowing God created plants before animals, how do the waste products of plants allow for the necessary components for animal life? (Students should understand that the waste products of photosynthesis are the essential components necessary for human/animal life.)

S.7 How does digestion allow for the release of energy? (Students should understand that when chemical bonds are broken during digestion energy is released.)

ESSENTIAL VOCABULARY

organelles, nucleus, nucleolus, nuclear membrane, chromosome, chromatin, cytoplasm, mitochondria, smooth endoplasmic reticulation, rough endoplasmic reticulation, golgi body, ribosomes, DNA, RNA, organ, system, tissue, cell wall, cell membrane, chloroplast, centriole, mitosis, meiosis, adaptation, organism, unicellular, multicellular, plants, animals, human body systems, circulatory, immune, respiratory, endocrine, integumentary, skeletal, muscular, digestive, excretory, reproductive, nervous, hygiene, diet, nutrition, exercise, photosynthesis, cell respiration,

STREAM ACTIVITIES

- Build a model of the plant and animal cells
<https://sciencespot.net/Media/constructionzone.pdf>
- Microscope observation of unicellular organisms, cheek samples and cells undergoing Mitosis
- Build diagrams of Mitosis and Meiosis using pasta noodles and string
- Photosynthesis Virtual Lab: Color of the light vs. the growth of plants
http://www.glencoe.com/sites/common_assets/science/virtual_labs/LS12/LS12.html
- Photosynthesis Lab: Photosynthetic rate: Bubbles as a function of CO₂, light
- Dissection to relate to human body systems
- Photosynthesis and respiration lab with water plants and bromothymol blue indicator solution to support the idea that plants cells undergo both respiration and photosynthesis.
- The Organ Trail - <https://sciencespot.net/Media/organtrail.pdf>
- The Human Body Quest - <https://sciencespot.net/Pages/kdzeagles.html>

LIFE SCIENCE	
Ecosystems: Interactions, Energy, and Dynamics	Middle School
SCRIPTURE	
<p><i>If, then, you truly listen to my commandments which I give you today, loving and serving the LORD, your God, with your whole heart and your whole being, I will give the seasonal rain to your land, the early rain and the late rain, that you may have your grain, wine and oil to gather in; and I will bring forth grass in your fields for your animals. Thus you may eat and be satisfied.</i> Dt 11:13-15</p>	
STANDARD	
<p>S.1. God gave man intelligence and reason and the responsibility to care for and understand the ordered world. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. (MS-LS2-1)</p> <p>S.2. God himself created the visible world in all its richness, diversity and order. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. (MS-LS2-2)</p> <p>S.3. After discussing ecological spirituality, develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem which show the harmony of the created world. (MS-LS2-3)</p> <p>S.4. Construct an argument supported by empirical evidence that show how changes to physical or biological components of an ecosystem affect populations. Discuss man's place in creation and the responsibility of man to care for the environment. (MS-LS2-4)</p> <p>S.5. Man has a unique role in caring for creation, using this knowledge, evaluate competing design solutions for maintaining biodiversity and ecosystem services. (MS-LS2-5)</p>	
EXAMPLES	
<p>Catholic Scientists/Saints, Catechism, Scripture</p>	
ESSENTIAL QUESTIONS	
<p>S.1 How does the presence, and abundance or deficiency, of natural resources determine the success of all organisms in that ecosystem?</p> <p>S.2 Why is it important to observe and predict patterns in our ordered world?</p> <p>S.3 Why is the sun the source of all energy and why does each level of consumers have only 1/10th of the available energy of the consumer/producer level below? (Use the energy pyramid to support this claim as well as the statement that there will always be more producers than consumers in an ecosystem.)</p> <p>S.4 Why would a small change in an ecosystems cause a much larger change within another part of the ecosystem?</p> <p>S.5 How does the diversity of organisms and the relationship among them allow for order and harmony of the world?</p>	
ESSENTIAL VOCABULARY	

ecosystem, habitat, biotic, abiotic, producer, consumer, decomposer, scavenger, kingdom, phylum, class, order, family, genus, species, extinction, adaptation, biodiversity, symbiosis, commensalism, parasitism, mutualism, energy pyramid, food chain, food web, natural resources, population, community, population density, succession, limiting factor

STREAM ACTIVITIES

- Water filtering activity [epa.gov](http://water.epa.gov/learn/kids/drinkingwater/teachers_4-8.cfm)
http://water.epa.gov/learn/kids/drinkingwater/teachers_4-8.cfm
- Construct a food web to show the cycling of energy through an ecosystem.
<https://ngss.nsta.org/Resource.aspx?ResourceID=1094>
- Research bald eagles and make a powerpoint outlining solutions to extinction, including possible habitat changes. <https://sciencespot.net/Pages/kdzeagles.html>

LIFE SCIENCE	
Heredity: Inheritance and Variation of Traits	Middle School
SCRIPTURE	
<i>His divine power has bestowed on us everything that makes for life and devotion, through the knowledge of him who called us by His own glory and power. Through these, he has bestowed on us the precious and very great promises, so that through them you may come to share in the divine nature, after escaping from the corruption that is in the world. 2Pt 1:3-4</i>	
STANDARD	
<p>S.1. God created the world according to His wisdom and not by fate or chance. He created all in goodness and order as a sign of Him. Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism. (MS-LS3-1)</p> <p>S.2. Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation, since God wills the interdependence of creatures and their countless diversities to exist in dependence with one another. (MS-LS3-2)</p>	
EXAMPLES	
Catholic Scientists/Saints , Catechism , Scripture	
ESSENTIAL QUESTIONS	
<p>S.1 How does a change in the DNA sequence or protein production result in a harmful, beneficial or neutral effect in the structure or function of an organism? (Consider that all human organisms descended from Adam and Eve, so all humans have a common relation. After the great flood, man was not obedient to God and we have the story of Babel and the confusion of languages and distinctions between humans became apparent as regional traits became dominant. All of these changes and distinctions are related to chromosomes and patterns of inheritance.)</p> <p>S.2 Why does the process of meiosis result in an exact replication of DNA?</p>	
ESSENTIAL VOCABULARY	
dominant, recessive, Punnett square, genotype, phenotype, allele, heterozygous, homozygous, codominance, blood type, karyotype, pedigree, autosomal, sex-linked, probability, DNA, chromosome, gene, asexual and sexual reproduction, adaptation, heredity, mutation, biological diversity, natural selection, artificial selection, selective breeding, genetic engineering, cloning	
STREAM ACTIVITIES	
<ul style="list-style-type: none"> ● Create a 3D model of the double helix DNA strand ● DNA Replication: Paper Clip Activity- use colorful paper clips to represent base pairs to demonstrate DNA replication ● DNA keychains https://sciencespot.net/Media/Genetics_DNAKeychainGuide.pdf ● Virtual lab on transcribing and translating DNA http://learn.genetics.utah.edu/content/molecules/transcribe/ ● Virtual lab on gel electrophoresis http://learn.genetics.utah.edu/content/labs/gel/ 	

- Virtual lab comparing the reproduction cycles of normal cells and cancer cells
http://www.mhhe.com/biosci/genbio/virtual_labs/BL_23/BL_23.html
- Punnett Square practice calculating probability of inheriting traits.

LIFE SCIENCE	
Biological Evolution: Unity and Diversity	Middle School
SCRIPTURE	
<i>For everything created by God is good, and nothing is to be rejected when received with thanksgiving, for it is made holy by the invocation of God in prayer. 1 Tim 4:4</i>	
STANDARD	
<p>S.1. Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms physically throughout the history of life on Earth under the assumption that natural laws operate today as in the past; however, the human spiritual soul is not the product of evolution but is created directly by God and conferred into the human body at the moment of conception. (MS-LS4-1)</p> <p>S.2. Understanding the aim of scientific research is the search for truth, which ultimately leads to God, apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships. (MS-LS4-2)</p> <p>S.3. Understanding God’s divine design, analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy. (MS-LS4-3)</p> <p>S.4. The natural world is created through divine design. This means that God does not “intervene” in nature, rather nature responds as it was created and ordered to respond. Use this knowledge to construct an explanation based on evidence that describes how genetic variations of traits in a population increase some organism’s probability of surviving and reproducing in a specific environment.. (MS-LS4-4)</p> <p>S.5. Understanding that humans were created with an intellect, gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired physical traits in organisms. (Consider the moral obligations of a Catholic with this section.) (MS-LS4-5)</p> <p>S.6. Understanding that nature is ordered in a way that leads to truth, use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific physical traits in populations over time. (MS-LS4-6)</p>	
EXAMPLES	
Catholic Scientists/Saints , Catechism , Scripture	
ESSENTIAL QUESTIONS	
S.1 How do patterns in the fossil record support evolution of organisms today?	

S.2 How do similarities of modern organisms and evidence from the fossil record support evolutionary relationships?
S.3 How does similar embryological development across various species support the idea of common ancestors and evolution?
S.4 and S.6 How does mathematics support natural selection and the increase or decrease in physical traits over time?
S.5 How does technology used by humans influence the inheritance of desired physical traits in organisms?

ESSENTIAL VOCABULARY

adaptation, natural selection, heredity, mutation, biological diversity, artificial selection, evolutionary trees, Darwin's Theory, extinction, fossil record, embryo, anatomy, conception

STREAM ACTIVITIES

- Research how an environment affected the natural selection of a species: compare how the jack rabbit in the desert is different than the cottontail in Kansas
- NOVA Guess the Embryo game helps show similarities in embryonic development across species: <http://www.pbs.org/wgbh/nova/evolution/guess-embryo.html>
- Argumentation of fossils
http://scienceandliteracy.org/sites/scienceandliteracy.org/files/presentation/MS_SG-Supporting_Claims_with_Evidence-Fossils.pdf

From Molecules to Organisms: Structures and Processes

Scriptures:

- Gen 1:26, Then God said: Let us make human beings in our image, after our likeness. Let them have dominion over the fish of the sea, the birds of the air, the tame animals, all the wild animals, and all the creatures that crawl on the earth.

Gen 1:28 God blessed them and God said to them: Be fertile and multiply; fill the earth and subdue it. Have dominion over the fish of the sea, the birds of the air, and all the living things that crawl on the earth.
- Gen 2:15 The LORD God then took the man and settled him in the garden of Eden, to cultivate and care for it.
- Col 1:16 For in him were created all things in heaven and on earth, the visible and the invisible, whether thrones or dominions or principalities or powers; all things were created through him and for him.
- Eph 4:16 from whom the whole body, joined and held together by every supporting ligament, with the proper functioning of each part, brings about the body's growth and builds itself up in love.

- 1Cor 12:12-26 As a body is one though it has many parts, and all the parts of the body, though many, are one body, so also Christ. For in one Spirit we were all baptized into one body, whether Jews or Greeks, slaves or free persons, and we were all given to drink of one Spirit. Now the body is not a single part, but many. If a foot should say, "Because I am not a hand I do not belong to the body," it does not for this reason belong any less to the body. Or if an ear should say, "Because I am not an eye I do not belong to the body," it does not for this reason belong any less to the body. If the whole body were an eye, where would the hearing be? If the whole body were hearing, where would the sense of smell be? But as it is, God placed the parts, each one of them, in the body as he intended. If they were all one part, where would the body be? But as it is, there are many parts, yet one body. The eye cannot say to the hand, "I do not need you," nor again the head to the feet, "I do not need you." Indeed, the parts of the body that seem to be weaker are all the more necessary,²³ and those parts of the body that we consider less honorable we surround with greater honor, and our less presentable parts are treated with greater propriety, whereas our more presentable parts do not need this. But God has so constructed the body as to give greater honor to a part that is without it, so that there may be no division in the body, but that the parts may have the same concern for one another. If [one] part suffers, all the parts suffer with it; if one part is honored, all the parts share its joy

Catechism of the Catholic Church:

- **364** The human body shares in the dignity of "the image of God": it is a human body precisely because it is animated by a spiritual soul, and it is the whole human person that is intended to become, in the body of Christ, a temple of the Spirit:²³²
 - Man, though made of body and soul, is a unity. Through his very bodily condition he sums up in himself the elements of the material world. Through him they are thus brought to their highest perfection and can raise their voice in praise freely given to the Creator. For this reason man may not despise his bodily life. Rather he is obliged to regard his body as good and to hold it in honor since God has created it and will raise it up on the last day. ²³³
- **365** The unity of soul and body is so profound that one has to consider the soul to be the "form" of the body:²³⁴ i.e., it is because of its spiritual soul that the body made of matter becomes a living, human body; spirit and matter, in man, are not two natures united, but rather their union forms a single nature.
- USCCB Ecological Spirituality <http://www.usccb.org/issues-and-action/human-life-and-dignity/environment/an-ecological-spirituality.cfm>

Catholics making contribution to the topic:

- Albertus Magnus (c.1206–1280) – Patron saint of natural sciences
- Giovanni Alfonso Borelli (1608–1679) – Often referred to as the father of modern biomechanics
- Mateo Realdo Colombo (1516–1559) – Discovered the pulmonary circuit, which paved the way for Harvey's discovery of circulation
- Louis Pasteur (1822–1895) – Father of bacteriology
- Theodor Schwann (1810–1882) – Founder of the theory of the cellular structure of animal organisms
- Johannes Peter Müller (1801–1858) – Founder of modern physiology
- Leonardo Da Vinci (1492- 1519) As an artist, he quickly became master of topographic anatomy, drawing many studies of muscles, tendons and other visible anatomical features.
- Fr. Damien of Molok'ai (1840-1889) Catholic priest who won recognition for his ministry in the Kingdom of Hawai'i to people with leprosy
- Andreas Vesalius (1514–1564) – Father of modern human anatomy
- Francesco Redi (1626–1697) – His experiments with maggots were a major step in overturning the idea of spontaneous generation

Ecosystems: Interactions, Energy, and Dynamics

Scriptures:

- Gen 1:26, Then God said: Let us make human beings in our image, after our likeness. Let them have dominion over the fish of the sea, the birds of the air, the tame animals, all the wild animals, and all the creatures that crawl on the earth.

Gen 1:28 God blessed them and God said to them: Be fertile and multiply; fill the earth and subdue it. Have dominion over the fish of the sea, the birds of the air, and all the living things that crawl on the earth.
- Gen 2:15 The LORD God then took the man and settled him in the garden of Eden, to cultivate and care for it.

- Col 1:16 For in him* were created all things in heaven and on earth, the visible and the invisible, whether thrones or dominions or principalities or powers; all things were created through him and for him.
- Eph 4:16 from whom the whole body, joined and held together by every supporting ligament, with the proper functioning of each part, brings about the body's growth and builds itself up in love.

Catechism of the Catholic Church:

- God wills the *interdependence of creatures*.
 - **340** The sun and the moon, the cedar and the little flower, the eagle and the sparrow: the spectacle of their countless diversities and inequalities tells us that no creature is self-sufficient. Creatures exist only in dependence on each other, to complete each other, in the service of each other.
- Forest Fire and Purgatory - As students explore ecosystems and the value of forest fire to allow for new life and purging away of disease, just as purgatory offers the same for the soul of a human person. St. Catherine of Genoa
 - **1030** All who die in God's grace and friendship, but still imperfectly purified, are indeed assured of their eternal salvation; but after death they undergo purification, so as to achieve the holiness necessary to enter the joy of heaven.
 - **1031** The Church gives the name *Purgatory* to this final purification of the elect, which is entirely different from the punishment of the damned.⁶⁰⁶ The Church formulated her doctrine of faith on Purgatory especially at the Councils of Florence and Trent. The tradition of the Church, by reference to certain texts of Scripture, speaks of a cleansing fire:⁶⁰⁷ As for certain lesser faults, we must believe that, before the Final Judgment, there is a purifying fire. He who is truth says that whoever utters blasphemy against the Holy Spirit will be pardoned neither in this age nor in the age to come. From this sentence we understand that certain offenses can be forgiven in this age, but certain others in the age to come.⁶⁰⁸
 - **1032** This teaching is also based on the practice of prayer for the dead, already mentioned in Sacred Scripture: "Therefore [Judas Maccabeus] made atonement for the dead, that they might be delivered from their sin."⁶⁰⁹ From the beginning the Church has honored the memory of the dead and offered prayers in suffrage for them, above all the Eucharistic sacrifice, so that, thus purified, they may attain the beatific vision of God.⁶¹⁰ The Church also commends almsgiving, indulgences, and works of penance undertaken on behalf of the dead:

Catholics making contribution to the topic:

- Antoine Laurent de Jussieu (1748–1836) – The first to propose a natural classification of flowering plants
- St. Kateri Tekakwitha (1656-1680) model ecologist
- St. Francis of Assisi (1182-1226) He is known as the patron saint of animals, the environment
- St. John Paul II (1920-2005) wrote encyclicals on ecological thoughts
- Pierre André Latreille (1762–1833) – Pioneer in entomology

Heredity: Inheritance and Variation in Organisms

Scriptures:

- Genesis Chapter 25
 - Isaac entreated the LORD on behalf of his wife, since she was sterile. The LORD heard his entreaty, and his wife Rebekah became pregnant. But the children jostled each other in the womb so much that she exclaimed, “If it is like this, why go on living!” She went to consult the LORD,²³and the LORD answered her: Two nations are in your womb, two peoples are separating while still within you; But one will be stronger than the other, and the older will serve the younger. When the time of her delivery came, there were twins in her womb. The first to emerge was reddish, and his whole body was like a hairy mantle; so they named him Esau.²⁶Next his brother came out, gripping Esau’s heel;^{*} so he was named Jacob. Isaac was sixty years old when they were born.
- Genesis Chapter 11:1-9
 - The whole world had the same language and the same words. When they were migrating from the east, they came to a valley in the land of Shinar and settled there. They said to one another, “Come, let us mold bricks and harden them with fire.” They used bricks for stone and bitumen for mortar. Then they said, “Come, let us build ourselves a city and a tower with its top in the sky and so make a name for ourselves; otherwise we shall be scattered all over the earth.” The LORD came down to see the city and the tower that the people had built. Then the LORD said: If now, while they are one people and all have the same language, they have started to do this, nothing they presume to do will be out of their reach. Come, let us go down and there confuse their language, so that no one will understand the speech of another. So the LORD scattered them from there over all the earth, and they stopped building the city. That is why it was called Babel, because there the LORD confused the speech of all the world. From there the LORD scattered them over all the earth.

Catechism of the Catholic Church:

- **302** Creation has its own goodness and proper perfection, but it did not spring forth complete from the hands of the Creator. The universe was created "in a state of journeying" (*in statu viae*) toward an ultimate perfection yet to be attained, to which God has destined it. We call "divine providence" the dispositions by which God guides his creation toward this perfection:
- **1700** The dignity of the human person is rooted in his creation in the image and likeness of God (*article 1*); it is fulfilled in his vocation to divine beatitude

Catholics making contribution to the topic:

- Jérôme Lejeune (1926–1994) – Pediatrician and geneticist, best known for his discovery of the link of diseases to chromosome abnormalities
- Gregor Mendel (1822–1884) – Father of genetics
- Marcello Malpighi (1628–1694) – Father of comparative physiology

Biological Evolution: Unity and Diversity

Scriptures:

- James 2: 1-4 My brothers, show no partiality as you adhere to the faith in our glorious Lord Jesus Christ. For if a man with gold rings on his fingers and in fine clothes comes into your assembly, and a poor person in shabby clothes also comes in, and you pay attention to the one wearing the fine clothes and say, "Sit here, please," while you say to the poor one, "Stand there," or "Sit at my feet," have you not made distinctions among yourselves and become judges with evil designs?
- Gen 1:26 Then God said: Let us make human beings in our image, after our likeness. Let them have dominion over the fish of the sea, the birds of the air, the tame animals, all the wild animals, and all the creatures that crawl on the earth.

Gen 1:28 God blessed them and God said to them: Be fertile and multiply; fill the earth and subdue it. Have dominion over the fish of the sea, the birds of the air, and all the living things that crawl on the earth.
- Gen 1:11-12 Then God said: Let the earth bring forth vegetation: every kind of plant that bears seed and every kind of fruit tree on earth that bears fruit with its seed in it. And so it happened:12the earth brought forth vegetation: every kind of plant that bears seed and every kind of fruit tree that bears fruit with its seed in it. God saw that it was good
- Gen 2:15 The LORD God then took the man and settled him in the garden of Eden, to cultivate and care for it.

- Col 1:16 For in him were created all things in heaven and on earth, the visible and the invisible, whether thrones or dominions or principalities or powers; all things were created through him and for him.
- Eph 4:16 from whom the whole body, joined and held together by every supporting ligament, with the proper functioning of each part, brings about the body's growth and builds itself up in love.

Catechism:

- **356** Of all visible creatures only man is "able to know and love his creator".²¹⁹ He is "the only creature on earth that God has willed for its own sake",²²⁰ and he alone is called to share, by knowledge and love, in God's own life. It was for this end that he was created, and this is the fundamental reason for his dignity:
- **358** God created everything for man,²²² but man in turn was created to serve and love God and to offer all creation back to him:
- Dominican Friars <http://www.thomisticevolution.org/>

Catholics making contribution to the topic:

- St. Thomas Aquinas *Summa Theologiae*
- Jean-Baptiste Lamarck (1744–1829) – French naturalist, biologist and academic whose theories on evolution preceded those of Darwin
- Wilhelm Heinrich Waagen (1841–1900) – Geologist and paleontologist
- Johann Joachim Winckelmann (1717–1768) – One of the founders of scientific archaeology
- Pope Pius the XII (1875-1958) Confirmed no intrinsic conflict between evolution and Christianity
- Fr. Robert Spitzer (Current) New Proofs from the Existence of God
- Gregor Mendel (1822–1884) – Father of genetics
- Cardinal Christoph Schönborn-(1945- present) writer on Church's stance on evolution
- Nicholas Steno (1638-1686) - Convert to Catholicism, Bishop, Father of Geology, anatomist, Dutch born
 - Text support: THE SEASHELL ON THE MOUNTAINTOP: A Story of Science, Sainthood, and the Humble Genius Who Discovered a New History of the Earth, **Alan Cutler, Author**