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**TEACHER\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_GRADE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DEVELOPMENT OF THE EVOLUTIVE THOUGHT**

**Human beings had always questioned about their origins and the origin of life itself, that is why through history they had made hypotheses that have been tested in order to prove their veracity. Theory of Evolution was born this way. It is a theory that tries to explain the originof species, specially human beingsthrough remarkable evidence that shows the close relationship between living things and their environment.**

**The most important theories are shown in the next chart:**

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| --- | --- |
| CREATIONISM (SEVERAL CIVILIZATIONS) | All organisms were created simultaneously by God and that each distinct life-form remained fixed and unchanging from the moment of its creation. |
| LADDER OF LIFE (ARISTOTLE) | Organisms on Earth are arranged according to their complexity in an ascendant ladder in order of increasing closeness to perfection, with inferior types at the bottom and superior types above. |
| CATASTROPHISM (GEORGES COUVIER) | A vast supply of species was created initially. Successive catastrophes produced layers of rocks and destroyed many species fossilizing some of their remains. |
| UNIFORMITARIANISM (CHARLES LYELL) | The forces of wind, water and volcanoes are evidence of ordinary natural processes that occur repeatedly over long periods of time suggesting that Earth is very old |
| INHERITANCE OF ACQUIRED CHARACTERISTICS (JEAN-BAPTISTE LAMARCK) | **.** The bodies of living organisms are modified through the use or disuse of those parts, and these modifications are inherited by offspring |
| NATURAL SELECTION (CHARLES DARWIN AND ALFRED WALLACE) | When organisms compete for limited resources, those with favorable traits survive and pass those traits along to the next generation creating new species over time. |

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| **EVIDENCES OF EVOLUTION** | |
| **FÓSSILS** | Fossils Found by Edison |
| **COMPARED ANATOMY** | http://www.carampangue.cl/Biocarampangue/3-Organos-homologos.jpg |
| **COMPARED EMBRIOLOGY** | http://2.bp.blogspot.com/_9-RgcDP7DbI/SvYS7URIrmI/AAAAAAAAACw/OcTxZhd_eac/s1600/embrio.jpg |
| **VESTIGIAL STRUCTURES** | http://4.bp.blogspot.com/_EdiSPJX1jg8/ST20M_TtzTI/AAAAAAAAA8g/KTrJ1djOhoo/s400/vestigiales.jpg |
| **BIOCHEMICAL ANALYSIS** | **CARBON, HYDROGEN, OXYGEN, NITROGEN=CARBOHYDRATES, PROTEINS, LIPIDS, AMINOACIDS.** |
| **GENETIC ANALYSIS** | **The Differences between the genes of a mouse, a human and a dog is only of a 20% of genes connecting them with a common ancestor.** |

1. Distinguish between uniformitarianism and catastrophism. How did these hypotheses contribute to the evolutionary theory?

2. Describe Lamarck’s theory of inheritance of acquired characteristics. Why is it invalid?

3. How do biochemistry and molecular genetics contribute to the evidence that evolution occurred?

4. Which kind of evidence would the coccyx be?