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| **Learning Objectives** |
| Students will. . .1. Summarize and differentiate between “evolving from monkeys” and divergence from a common ancestor2. Define ancestral and derived traits and be able to categorize them through the scope of human evolution3. Describe trends that take shape in the human lineage and make inferences about what encouraged them4. Relate our own body mechanics to our arboreal origins5. Recall the chronological sequence of major events6. Extrapolate the benefits of bipedalism7. Explain how fossil evidence can demonstrate if an organism walks upright8. Demonstrate an understanding of the traits unique to specific fossils9. Attempt to predict how Neanderthals went extinct10. Understand that evolution is a dynamic and continual process |
| **Plan of activities** |
| Time (in minutes) | Lecturer activity | Learner activity  | Learning objectives met |
| **4 mins***Introduction**Class**Participation question* | Provide the “March of Progress” graphic and a human phylogeny diagramBriefly ask students to explain which is correct and why | Hopefully the students will engage and make some guesses as to why “March of Progress” is inaccurate. | 1. Summarize and differentiate between “evolving from monkeys” and divergence from a common ancestor |
| **4 mins***Divergence and Evidence* | Explain divergenceUse a phylogeny for demonstration of relationships.Explain the evidence, i.e. Similar anatomy, behaviour, Diet, DNA | Listen and observe demonstration | 2. Define ancestral and derived traits and be able to categorize them through the scope of human evolution4. Relate our own body mechanics to our arboreal origins5. Recall the chronological sequence of major events |
| **2 mins***Early chronological milestones* | Define hominids and homininsTell where and when divergence happened. Explain the change in climate that led to a transition out of the trees | Listen | 1. Summarize and differentiate between “evolving from monkeys” and divergence from a common ancestor3. Describe trends that take shape in the human lineage and make inferences about what encouraged them5. Recall the chronological sequence of major events |
| Time (in minutes) | Lecturer activity | Learner activity  | Learning objectives met |
| **2 mins***Lecture*  | Explain pros and cons of bipedalismAsk how we can determine fossils were bipedal to transition to demonstration | Listen | 4. Relate our own body mechanics to our arboreal origins6. Extrapolate the benefits of bipedalism |
| **7 mins**Demonstration | Demonstrate the broomstick skull activityPossibly briefly talk about Laetoli footprints if there is time | Have a student volunteer to help with the demonstration | 2. Define ancestral and derived traits and be able to categorize them through the scope of human evolution3. Describe trends that take shape in the human lineage and make inferences about what encouraged them4. Relate our own body mechanics to our arboreal origins7. Explain how fossil evidence can demonstrate if an organism walks upright |
| **15 mins***Transition fossils* | Review about 10 slides on specific transition fossils | Listen and answer active learning questions | 2. Define ancestral and derived traits and be able to categorize them through the scope of human evolution3. Describe trends that take shape in the human lineage and make inferences about what encouraged them5. Recall the chronological sequence of major events8. Demonstrate an understanding of the traits unique to specific fossils |
| **2 mins***What makes us different* | Explain collective learning and brain glucose allocationExplain how collective learning in combination with high protein diet acerated brain growth at a rapid pace | Answer active learning questions | 3. Describe trends that take shape in the human lineage and make inferences about what encouraged them5. Recall the chronological sequence of major events8. Demonstrate an understanding of the traits unique to specific fossils |
| **3 mins***Neanderthal extinction* | Ask what might have happened to the Neanderthals | Hopefully they engage with predictions  | 9. Attempt to predict how Neanderthals went extinct |
| **2 mins***Recent evolution* | Explain the ancestral trait of lactose intolerance | Listen and ask questions | 10. Understand that evolution is a dynamic and continual process |

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