

## Questions from last class

- What is evolution
  - How do you define it?
  - What are living examples of evolution?
- Is evolution JUST a theory?
  - What does it mean to say this?

1

## Assignment I

- Essay Assignment
- 3+ pages, typed, double spaced, reasonable font
- Due Monday February 7
- Grading - 15 pts - 10 on content and clarity, 5 on writing

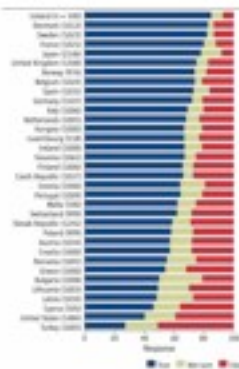
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## Creationism in School

- <http://www.livescience.com/culture/biology-teachers-avoid-evolution-stance-with-students-110127.html>
- "The majority of high-school biology teachers don't take a solid stance on evolution with their students, mostly to avoid conflicts, and fewer than 30 percent of teachers take an adamant pro-evolutionary stance on the topic, a new study finds. Also, 13 percent of these teachers advocate creationism in their classrooms."

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## Belief in Evolution



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## Evolution and the Vatican

- 1950 - Pope Pius XII - Evolution is a valid scientific approach to the development of humans
- Reiterated by Pope John Paul II in 1996
- Sept. 2008 The theory of evolution is compatible with the Bible.
- Theistic evolution: accepts evolution as a scientific theory and sees no reason why God could not have used a natural evolutionary process in the forming of the human species

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## Debate over Evolution



W/Time 11/20/08

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## The Great Chain of Being

- Every animal that could exist, did exist
- Every species can be organized along a line
- Every species on that line grades imperceptibly into the species above and below it



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## Ussher and Lightfoot

- Ussher calculated the age of the earth in 1658
- Lightfoot actually did it first - 1644



"the result of his most profound and exhaustive study of the Scriptures, that 'heaven and earth, ocean and circumference, were created all together, in the same instant, and clouds full of water,' and that 'this work took place and man was created by the Trinity on October 23, 4004 B.C., at nine o'clock in the morning.'"

9

## Linnaeus

- NEW Taxonomy WAY of organizing
- Binomial Nomenclature



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## Comte de Buffon

(1707-1788)

Accepted the notion of biological change

Animals change in response to new environments



11



## Georges Cuvier

### Catastrophism

There have been multiple creations interspersed by great natural disasters

12

## Jean-Baptiste Lamarck



### Inheritance of Acquired Characteristics

proposes that changes occur during the lifetime of an individual, through use or disuse, can be passed on to the next generation

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## Elephant's Child?



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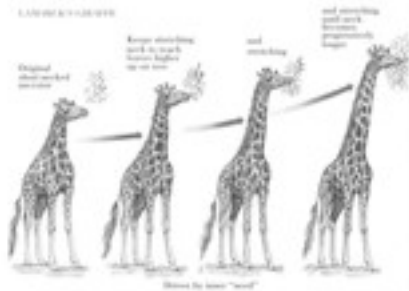
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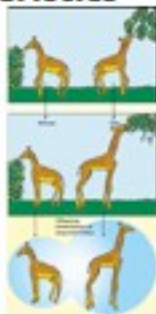
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## Inheritance of Acquired Characteristics

1. Frequent and continuous use of an organ strengthens and enlarges it, permanent disuse causes it to weaken, deteriorate and disappear

2. Acquisitions and losses are preserved through reproduction



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