

ORIGIN OF LIFE

A. Do these numbers ring a bell? 1809, 1859, 2009

B. What is evolution?

C. Do you know other theories?

Video answers - evolution: http://www.youtube.com/watch?v=IzlwIMZe2_k&feature=related
(timing 0:50-1:42)

D. Do you identify yourself with these statements? Give the reasons.

| | your opinion |
|---|--------------|
| 1. Natural selection is a random process but life could not have developed at random | |
| 2. All organisms have descended with modification from a common ancestor. | |
| 3. Genetic drift (or allelic drift) is the process of change in the gene frequencies of a population from one generation to the next due to statistical phenomena in which purely chance events determine which alleles (variants of a gene) within a reproductive population will be carried forward while others disappear. | |
| 4. If there is a lack of evidence in testing hypotheses, we accept the role of an intelligent designer. | |
| 5. This theory recognizes several mechanisms of evolution in addition to natural selection. One of these, random genetic drift, may be as important as natural selection. | |
| 6. Life on earth could not have developed at random. Intelligent causes exist. | |
| 7. This theory recognizes that characteristics are inherited as discrete entities called genes. Variation within a population is due to the presence of multiple alleles of a gene. | |
| 8. The Book of Genesis is literally true. The Earth and all forms of life were created by God in 6 days, around 10,000 years ago. | |
| 9. This theory postulates that speciation is (usually) due to the gradual accumulation of small genetic changes. | |

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| 10. Some features of living things are so complex that their existence is best explained as the result of an intelligent design. | |
| 11. There were two creations – one before Adam, and a second one, which included Adam and Eve, after a lengthy time gap. | |
| 12. Each day in the Biblical 6 days of creation wasn't really a day, but a period of millions of years. | |
| 13. God created the various 'kinds' of plant and animal one after another – according to the timetable shown by the fossil record. God created each kind of organism as we find it; different forms of organism are separate creations, not the result of evolution from an earlier form. Micro-evolution can take place within a kind of organism to produce subtle variations (eg. lions, tigers and cats within the cat family or different sizes of beak within the Galapagos finches.) | |
| 14. This theory claims that some sort of supernatural designer was involved in the creation of life on Earth. It divorces Creationist ideas from their roots in Scripture. | |
| 15. Natural selection is a mechanism of evolution. | |

E. Now try to match the statements to the following theories:

- a. Darwinism
- b. Modern Evolutionary Synthesis or Neo-Darwinism or Modern Theory of Evolution
- c. Old Earth creationism
- d. Progressive creationism
- e. Intelligent design (neo-Creationism)
- f. Day-Age creationism
- g. Young Earth creationism
- h. Gap creationism

F. In groups redistribute the cards under the appropriate headings, then formulate individual theories and compare. Write them on page 1/C.

ARGUMENTATION

| Advantages / disadvantages | | | |
|--|--|--|--|
| <ul style="list-style-type: none"> ▪ It has both (its) advantages and disadvantages ▪ One of the advantages / disadvantages of...is ▪ There are advantages / disadvantages to...-ing ▪ A further advantage (of) / problem (with)... is | <ul style="list-style-type: none"> ▪ There are certain drawbacks ▪ The (main) advantage / disadvantage of...is ... ▪ The (main) drawback (of) / problem (with) ... is ▪ What are the advantages and disadvantages of ... | | |
| Different points of view are included | | | |
| <ul style="list-style-type: none"> ▪ While it is true to say that ... ▪ On the other hand, ... ▪ It is not always the case that ... ▪ On the contrary, ... ▪ This (question) can be looked at from several points of view. Firstly ... ▪ Opponents of ... take a very different view ▪ It is often suggested that ... | <ul style="list-style-type: none"> ▪ This (problem) should be considered in relation to ... ▪ It can be examined in terms of ... ▪ Xxx. must be taken into account ... | | |
| Your own point of view | | | |
| <ul style="list-style-type: none"> ▪ In my opinion ▪ The first thing to be considered is ... ▪ It is a fact that ... ▪ There is no doubt that ... | <ul style="list-style-type: none"> ▪ I believe that (x I think) ▪ One of the main arguments in favour/against X is that ... | | |
| Agreement | Partial agreement | | |
| <ul style="list-style-type: none"> ▪ I agree with X when he says/writes that... | <ul style="list-style-type: none"> ▪ On the one hand on the other hand ▪ ... but ... ▪ ... however ... | | |
| Emphatic agreement | Cautious agreement | | |
| <ul style="list-style-type: none"> ▪ X is certainly correct when he says that ... ▪ I completely agree with X when he writes that... | <ul style="list-style-type: none"> ▪ X may be correct when he says that...// is saying that ... | | |
| Disagreement | Contrast with what has preceded | | |
| <ul style="list-style-type: none"> ▪ I disagree with X when he says that ... | <ul style="list-style-type: none"> ▪ instead ▪ in comparison ▪ on the contrary ▪ on the other hand ▪ by contrast | | |
| Conclusions | | | |
| <ul style="list-style-type: none"> ▪ in conclusion ▪ to conclude ▪ to sum up briefly | <ul style="list-style-type: none"> in brief to summarize altogether | <ul style="list-style-type: none"> overall then therefore | <ul style="list-style-type: none"> thus finally in addition |

2. Make connections. Decide which of the ideas (a-g) will logically follow the lead sentences (1-7).

- | | |
|---|--|
| <p>a. an untestable alternative hypothesis, grounded in religion</p> <p>b. intelligent design is a religious view, a mere re-labeling of creationism</p> <p>c. unconstitutional to teach intelligent design</p> | <p>d. for lying under oath</p> <p>e. disguise the real purpose behind the intelligent design policy</p> <p>f. to get creationism into science classrooms</p> <p>g. intelligent design is not science</p> |
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Chapter 12: Closing Arguments

NARRATOR: The 139-page opinion ruled that **1**.....
Finding it had been introduced for religious reasons, Judge Jones decided it was **2**..... in Dover science classes.

JUDGE JOHN E. JONES, III: Both defendants and many of the leading proponents of intelligent design make a bedrock assumption which is utterly false. Their presupposition is that evolutionary theory is antithetical to a belief in the existence of a supreme being and to religion in general.

To be sure, Darwin's theory of evolution is imperfect. However, the fact that a scientific theory cannot yet render an explanation on every point should not be used as a pretext to thrust **3**....., into the science classroom or to misrepresent well-established scientific propositions. The citizens of the Dover area were poorly served by the members of the Board who voted for the intelligent design policy.

NARRATOR: Citing what he called the "breathtaking inanity" of the school board's decision, he found that several members had lied "to cover their tracks and **4**.....

JUDGE JOHN E. JONES, III: The crushing weight of the evidence indicates that the board set out **5**....., and intelligent design was simply the vehicle that they utilized to do that.

NARRATOR: Jones recommended to the U.S. Attorney that he investigate bringing perjury charges against Buckingham and Bonsell **6**.....
And "the overwhelming evidence at trial," he said, "established that **7**....., and not a scientific theory.

JUDGE JOHN E. JONES, III: In an era where we're trying to cure cancer, where we're trying to prevent pandemics, where we're trying to keep science and math education on the cutting edge in the United States, to introduce and teach bad science to ninth-grade students makes very little sense to me. You know, garbage in garbage out. And it doesn't benefit any of us who benefit daily from scientific discoveries.

NARRATOR: The school district was permanently forbidden to teach intelligent design in its science curriculum. The administration was ordered to pay the plaintiff's legal fees, totaling

more than a million dollars. And the election of a new school board, opposed to intelligent design, meant no appeal of the ruling would be mounted.

In the wake of the trial, *TIME Magazine* named Judge Jones one of the 100 most influential people of the year, but not everyone was so pleased with the Judge's decision.

Vocabulary

| | |
|-------------|---|
| proponent | a person who puts forward a proposition or proposal |
| bedrock | the fundamental principles, as of a teaching, belief, or science: Let's strip away the cant and get down to bedrock |
| pretext | something that is put forward to conceal a true purpose or object; an ostensible reason; excuse: The leaders used the insults as a pretext to declare war |
| proposition | the act of offering or suggesting something to be considered, accepted, adopted, or done |
| inanity | lack of sense, significance, or ideas; silliness |
| vehicle | a means of accomplishing a purpose |

3. Watch the video and check your answers

Chapter 12: Closing Arguments (timing 0:20-3:20)

http://www.youtube.com/watch?v=_15CofVo77k&feature=related

Judgement Day: Intelligent Design on Trial – video links

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|------------------------------------|---|
| 1. A town divided | http://www.youtube.com/watch?v=HD6TKE_bIFc&feature=related |
| 2. What is evolution? | http://www.youtube.com/watch?v=6sJOEkVDEew&feature=related |
| 3. Introducing ID | http://www.youtube.com/watch?v=FR5MkRAr3AQ&feature=related |
| 4. The trial begins | http://www.youtube.com/watch?v=YJYnxwyZtGc&feature=related |
| 5. The fossil record | http://www.youtube.com/watch?v=IzlwlMZe2_k&feature=related |
| 6. A very successful theory | http://www.youtube.com/watch?v=kgawjgRM4O0&feature=related |
| 7. The nature of science | http://www.youtube.com/watch?v=RMGyWfS5ccU&feature=related |
| 8. Examining ID | http://www.youtube.com/watch?v=I3dDXkzZaIo&feature=related |
| 9. Faith and reason | http://www.youtube.com/watch?v=UO5v-7ha6Jw&feature=related |
| 10. Separation of church and state | http://www.youtube.com/watch?v=P3_qqnsi1C8&feature=related |
| 11. A culture conflict | http://www.youtube.com/watch?v=1nBM0lZuPw8&feature=related |
| 12. Closing arguments | http://www.youtube.com/watch?v=_l5CofVo77k&feature=related |

Follow up panel discussion <http://www.youtube.com/watch?v=1Ngh-J8suL8>

ARGUMENTATION