



Science Virtual Learning

LEP Science

Evidence of Evolution

April 23, 2020



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Lesson: April 23, 2020

Objective/Learning Target: I can describe the different forms of Evidence that shows Evolution taking place.



Let's get started.

Watch the [video](#) and write the definition of Evolution given.



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Any change in the heritable traits within a population across generations.



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Now, re-watch the [video](#) and at the end answer this question.

HOW do you think Evolution takes place?



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HOW do you think Evolution takes place? **Answers will vary, but should be along the lines of needing to reproduce and pass on variations in traits that occur either by mutation or sexual reproduction within populations. Evolution can also take place by humans selecting traits and breeding animals for those traits.**

Now that you know what evolution is, let's look at the evidence present that shows that it takes place. Watch the video and answer the questions below.

1. Comparative Anatomy

- What is it?
- Give at least 4 examples mentioned in the video

2. Embryology

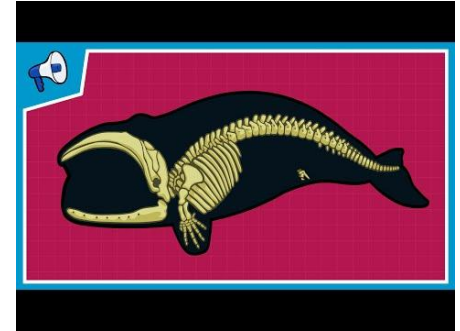
- What is it?
- Give 2 examples mentioned in the video

3. Fossil Record

- Why is *Maiacetus Inuus* considered a whale and not a land mammal?

4. DNA

- What is the closest match of the whale to a land mammal?





Let's check those answers

1. Comparative Anatomy
 - a. What is it? Looking at anatomical body features of differing organisms to see similarities and differences
 - b. Give at least 4 examples mentioned in the video Placenta and live birth, feed young with milk, warm-blooded, no gills, have hair, have arm, wrist, hand, and finger bones, have hind limbs (not legs)
2. Embryology
 - a. What is it? Studying organisms before birth during developmental stages
 - b. Give 2 examples mentioned in the video arm and leg buds, nostrils on dolphin



Let's check those answers

3. Fossil Record

- a. Why is *Maiacetus Inuus* considered a whale and not a land mammal? **It's skeleton was found with sea creatures, has short legs with long fingers and toes that indicate swimming, skull matches that of whales.**

4. DNA

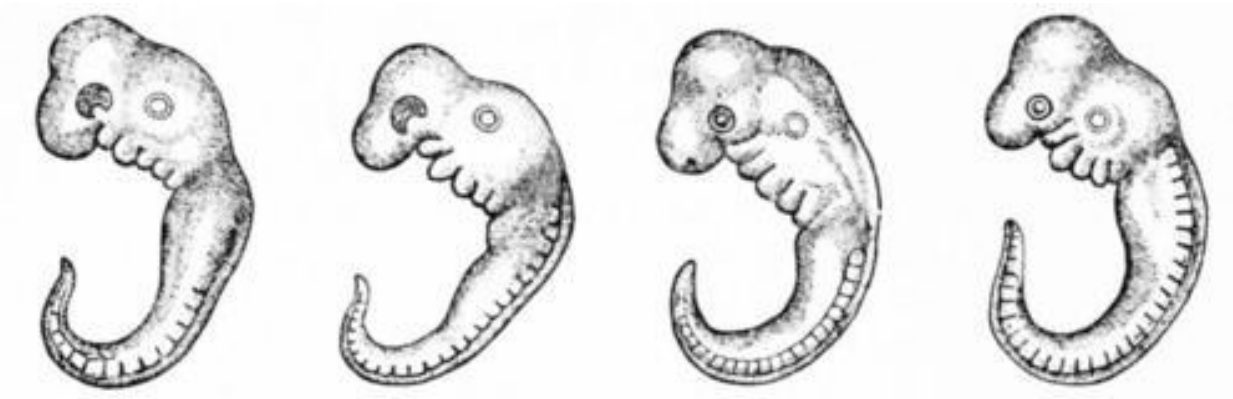
- b. What is the closest match of the whale to a land mammal? **Hippopotamus**

Additional Practice

These are all pictures of embryos that are developing of a chicken, turtle, pig, and human.

Which one is which species?

What type of evidence is this?

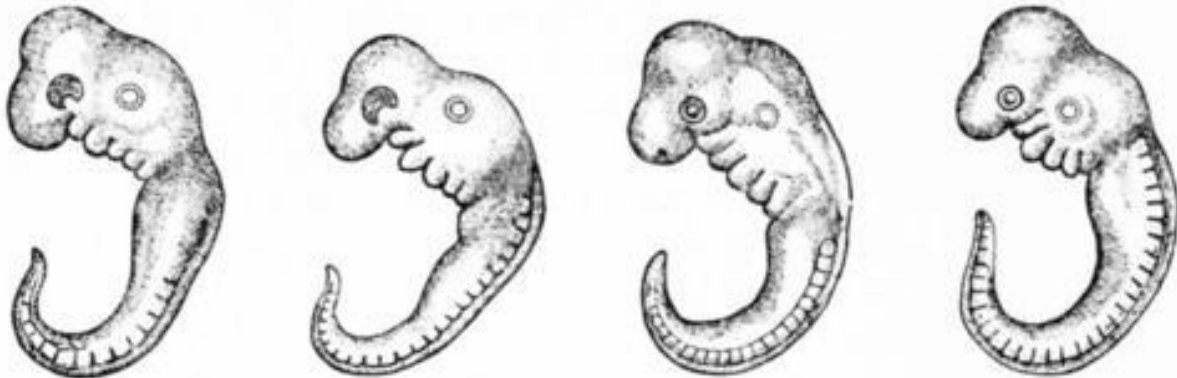


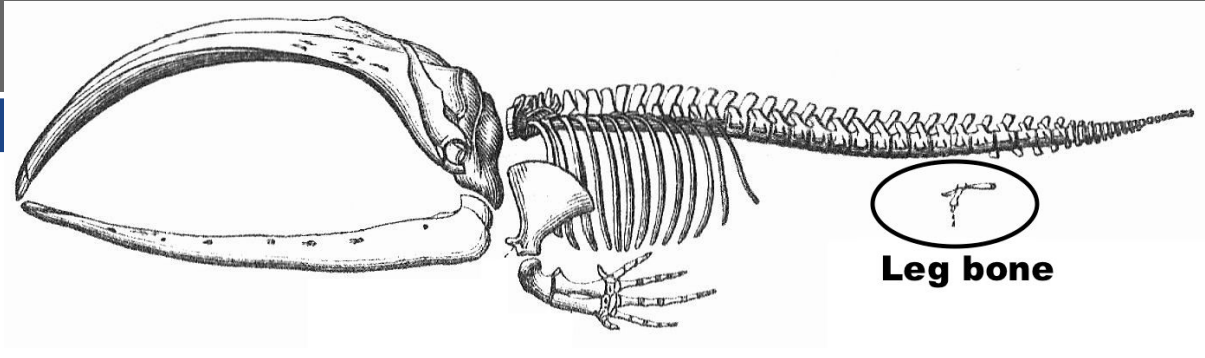
Additional Practice

These are all pictures of embryos that are developing of a chicken, turtle, pig, and human.

Which one is which species? **From left to right, embryos of a chicken, turtle, pig, and human being**

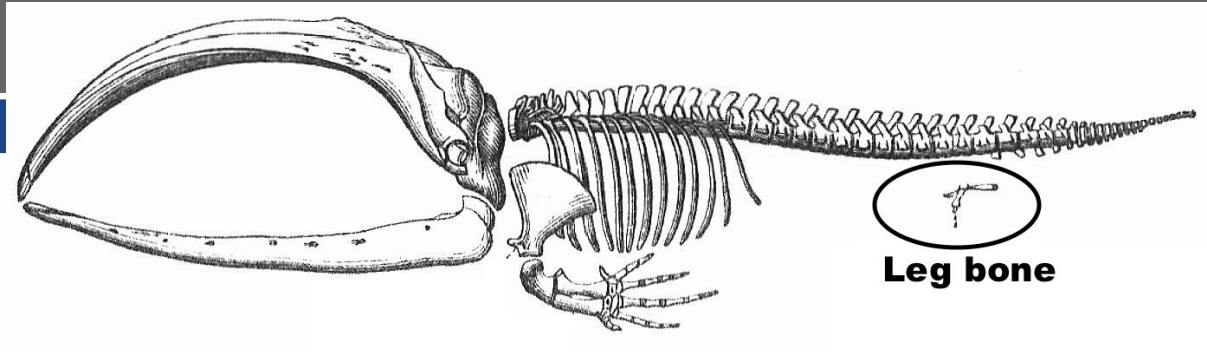
What type of evidence is this? **Embryological**





**What best describes the hind leg bones seen in the whale?
Choose 1 answer:**

- a. Homologous structures to the wings of butterflies
- b. Vestigial structures that had a function in an ancestor
- c. Analogous structures to the fins of living fish



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Choose 1 answer:

- a. Habitat distribution
- b. Stem lengths
- c. Flowering times
- d. DNA sequences



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Which of the following statements is accurate?
 Choose 1 answer: Hint: The more similar the bands are to each other the more closely related they are.

- a. Species X evolved from Species Y.
- b. Species A and Z share a recent common ancestor.
- c. Species A and Species Y are the same.
- d. Species Y and Species Z can interbreed.

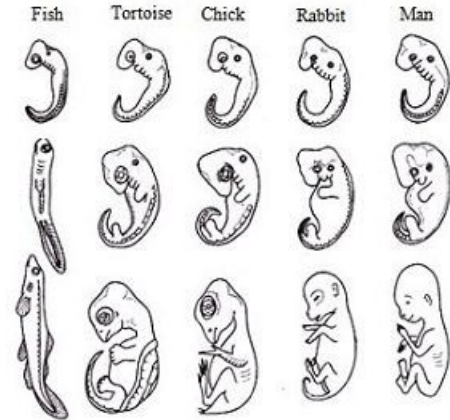
Species A	Species X	Species Y	Species Z
—	—	— —	— —
—	— —	—	— —
—	—	—	— —
—	—	—	—
—	—		—

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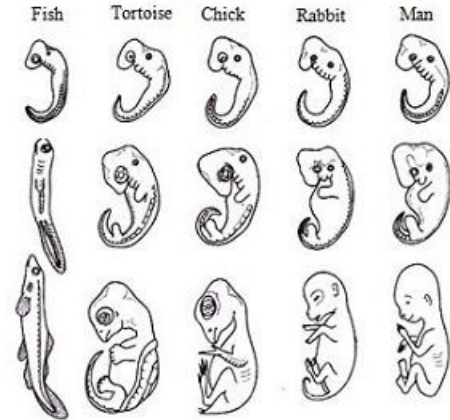
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The diagram represents embryonic development in 5 organisms. The similarities in embryonic development shown in the diagrams suggest...



- A. They all undergo external development
- B. They have evolved from a common ancestor
- C. They are all members of the same species
- D. They have adaptations for the same environment as adults

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Some additional practice

[Evidence of Evolution Video](#)

[Khan Academy](#)