Elaborate: Evolution Museum: Your Evidence, Your Story

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Objective

In this assignment, you will create one Google Slide to showcase one piece of evidence for evolution. You will choose either the fossil record, biogeography, or homologies to explain how this evidence shows that all living things are related and have changed over time. Your slide should be easy to understand and will help teach others about your topic.

What You Need to Do

1. **Choose a Topic**
   You will pick one of the following topics to focus on for your slide:

   - **Fossil Record**
     Show a fossil (like a *Tiktaalik* or a fossil of an ancient animal) and explain what it tells us about the past. Fossils help us understand how animals have changed over millions of years.

   - **Biogeography**
     Show a map or picture of animals in different parts of the world. You will explain how animals in different places have changed because of their environment and where they live.

   - **Homologies**
     Show how animals or plants look similar in body parts, DNA, or in the way they develop (how they grow). This shows that different animals share a common ancestor.

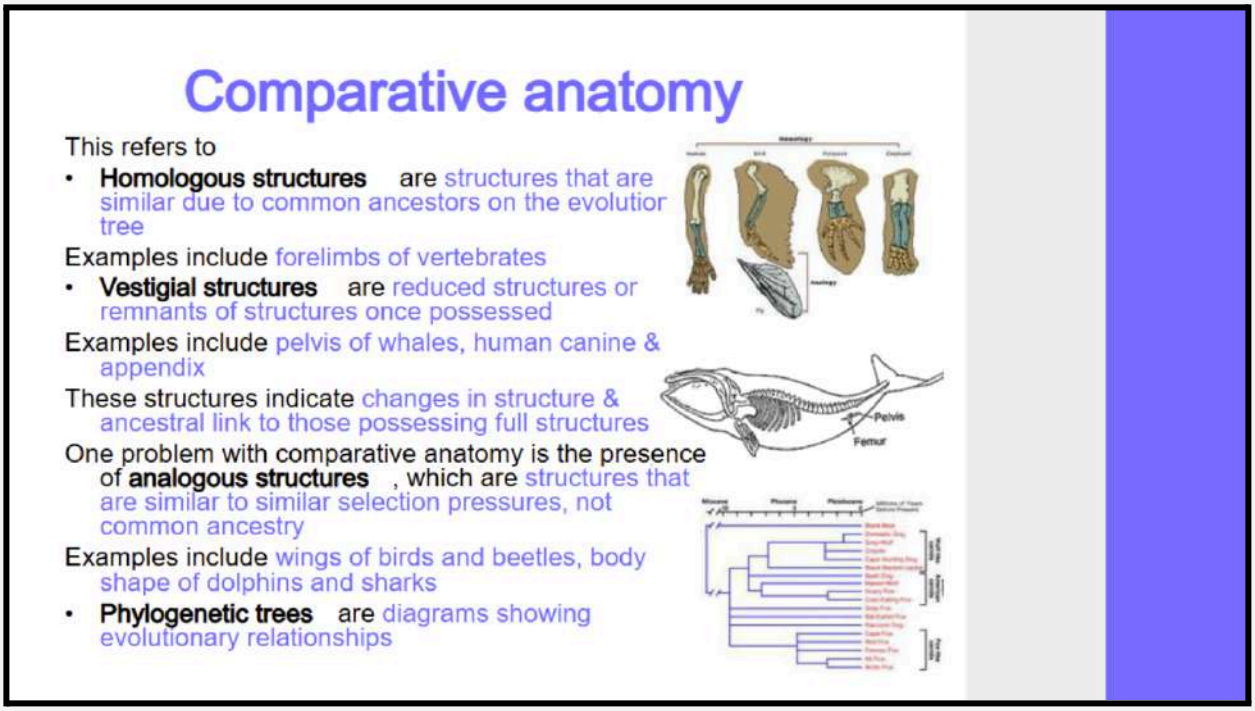
     - **Anatomical Homologies**: Similar body parts in different animals (like human arms and bat wings).
     - **Molecular Homologies**: Similar DNA in different animals (like humans and chimpanzees).
     - **Developmental Homologies**: Similar stages in how animals grow (like how embryos from different animals look alike).

Name: _____ Date: _____

2. **Create Your Google Slide**
    - Add a title to your slide that says the name of your topic (e.g., "Fossil Record" or "Homologies").
    - Include an image: Find a picture or diagram that helps explain your topic (for example, a picture of a fossil, map, or body part).
    - Write a short explanation: Write 2-3 sentences that explain:
        - What the picture shows.
        - How it helps us understand evolution.
        - Why it's important to know about it.
    - Make your slide clear and easy to read: Use simple words and big text. Your slide should be easy for others to understand.

Tips for Your Slide

- Keep it simple: Use easy words and short sentences. Think about how you would explain your topic to a friend.
- Choose a good picture: The picture should show something important for your topic. Make sure it helps explain your idea.
- Be creative: You can use colors and shapes to make your slide look nice, but don't make it too busy. The focus should be on your explanation.



Name: _____ Date: _____

Presenting Your Slide

Once your slide is ready, you will present it to a classmate or your teacher. When you present, you should explain your slide like you are teaching them about your topic. Here's what to include:

- ***What is your topic?***
- ***What does your picture show?***
- ***How does this help explain evolution?***
- ***Why is this evidence important?***

Feedback

After you present your slide, you will also give feedback to a classmate about their slide. When you give feedback, think about:

- **Was it easy to understand?**
- **Was the picture helpful?**
- **Was the explanation clear?**

You can say things like:

- *"I liked your picture of the fossil! It helped me understand how animals changed over time."*
- *"Maybe you could explain more about how this shows evolution."*

Name: _____ Date: _____

What You Will Be Graded On

Here's how your slide will be graded:

Criteria	Excellent (4)	Good (3)	Needs Work (2)	Needs Improvement (1)	Points Earned
Design & Clarity	The slide is clear, organized, and easy to understand.	The slide is mostly clear but could use a little improvement.	The slide is hard to follow or messy.	The slide is very difficult to understand.	
Content Accuracy & Simplicity	The explanation is clear and easy to understand.	The explanation is mostly clear but could be simpler.	The explanation is unclear or too hard to understand.	The explanation is missing or wrong.	
Picture	The picture is perfect for the topic and helps explain it.	The picture is good but could be more helpful.	The picture doesn't fit well with the explanation.	No picture, or the picture doesn't help explain the topic.	
Presentation Skills	You explain the slide clearly and confidently.	You explain the slide but need more confidence.	You are unsure or unclear when explaining the slide.	You are unable to explain the slide.	
Feedback	Gives helpful and thoughtful feedback to others.	Gives basic feedback that is helpful.	Feedback is unclear or not very helpful.	Doesn't give feedback.	
				Total Points	

Materials You Will Use

- **Google Slides** (you can access this through Google Drive).
- Pictures or diagrams that help explain your topic (your teacher will help you find some).

- Simple explanations that you can use or modify (your teacher can give you examples).

Timeline

- **Day 1:** Introduction to the assignment, choose your topic, and start working on your slide.
- **Day 2:** Finish your slide, add explanations, and get ready to present.
- **Day 3:** Present your slide to a classmate or your teacher and give feedback on other students' slides.

Important Reminder

- **Ask for Help:** If you need help at any time, ask your teacher or a classmate. We are all here to help you!

Good luck and have fun designing your Evolutionary Museum Slide!

Name: _____ Date: _____

Teacher Instructions: Evolutionary Museum Design Assignment

Objective

In this assignment, students will create a **single Google Slide** to showcase one piece of evidence for evolution: either **fossil record**, **biogeography**, or **homologies** (anatomical, molecular, or developmental). The goal is for students to explain their chosen topic in clear, simple language and visually demonstrate how this evidence supports the theory of evolution. Students will present their slide to peers or the teacher, reinforcing their understanding of how evolution works and how evidence supports it.

Materials Needed

- **Google Slides** (Students will need access to Google Drive).
- **Images**: Provide students with a selection of images for fossils, maps, DNA comparisons, and anatomical diagrams.
- **Explanations**: Simple descriptions of fossil records, biogeography, and homologies to help guide student understanding.
- **Feedback Rubric**: A rubric for peer feedback and self-reflection.

Steps for Teaching the Assignment

1. Introduction to Evolutionary Evidence (Day 1)

- **Objective**: Introduce students to the three key pieces of evidence for evolution: **Fossil Record**, **Biogeography**, and **Homologies** (Anatomical, Molecular, Developmental).
- **Method**:
    - Begin with a short, engaging video or visual that explains the theory of evolution.
    - Follow this with a class discussion or quick activity that explains how each piece of evidence demonstrates evolution. For example:
        - **Fossil Record**: Show examples of fossils like *Tiktaalik* or the horse evolution timeline.
        - **Biogeography**: Show maps with animal distributions (e.g., Darwin's finches on the Galápagos Islands, marsupials in Australia).
        - **Homologies**: Discuss how similar body parts across species (e.g., human hands, bat wings, whale fins) point to a common ancestor.
- **Differentiation**:

- **Visual Learners**: Use diagrams and images to explain each concept.
- **Verbal Learners**: Read out the explanations for each evidence type.
- **Kinesthetic Learners**: Have students act out how animals might evolve based on different environments or conditions.

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2. Assignment Explanation and Topic Selection (Day 1)

- **Objective**: Explain the assignment instructions and allow students to choose their topic for the slide (Fossil Record, Biogeography, or Homologies).
- **Method**:
  - Provide students with a handout or visual guide outlining the project, including the instructions for the slide and the grading rubric.
  - **Topic Selection**: Allow students to select one of the three topics for their slide. Provide support for students who may have trouble deciding by offering them examples or explaining each topic in more depth.
- **Differentiation**:
  - **Advanced Learners**: Encourage students to include additional details, such as a deeper dive into the historical significance of the chosen evidence.
  - **Struggling Learners**: Offer more structured prompts and simpler language for each topic. Provide a list of suggested websites or resources for them to use.
  - **Students with Visual Impairments**: Provide verbal explanations of images and diagrams.

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3. Creating the Google Slide (Days 1-2)

- **Objective**: Students will create a single slide showcasing one piece of evidence for evolution, complete with an image, title, and a simple explanation.
- **Method**:
  - Students will use **Google Slides** to create their presentation, inserting images and writing 2-3 sentences that explain their chosen piece of evidence.
  - Encourage creativity in the design of their slide, but stress that the focus should be on clarity and ease of understanding.
  - Walk around the classroom providing one-on-one support as needed, especially for students who may need help with the technology or have difficulty expressing ideas.
- **Differentiation**:

- **Support for Struggling Learners**: Offer pre-made templates in Google Slides with placeholders for students to fill in. These templates could include instructions for how to add images and text.
- **Provide Tools for English Language Learners (ELLs)**: Encourage students to use a translation tool, such as Google Translate, if they need support with language. Provide simple sentence starters (e.g., "This fossil shows...").
- **Assistive Technology**: For students who may struggle with typing or writing, allow them to use voice-to-text tools or work with a peer for support.

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4. Presenting the Slide (Day 3)

- **Objective**: Students will present their slide to the class, teaching others about their chosen piece of evidence for evolution.
- **Method**:
  - Each student will present their slide in a brief, 2-3 minute explanation. They should describe the image, explain its relevance to evolution, and provide a simple understanding of how it supports the theory of evolution.
  - Allow for questions or discussion after each presentation, encouraging peer feedback.
- **Differentiation**:
  - **Shy or Anxious Students**: Allow students to present in small groups or with a partner to ease their nerves.
  - **Advanced Learners**: Ask these students to expand on their explanation or make connections between their topic and other evidence for evolution.
  - **Struggling Learners**: Allow these students to present with a script or notes to help them stay focused during the presentation.

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5. Peer Feedback and Reflection (Day 3)

- **Objective**: Students will provide constructive feedback to peers on their slide presentations and reflect on what they learned.
- **Method**:
  - After each presentation, students should offer positive feedback and at least one suggestion for improvement. Use the provided feedback rubric to guide responses.
  - Have students write a brief reflection on what they learned from the presentations, focusing on how each piece of evidence supports evolution.
- **Differentiation**:

- **Verbal Feedback**: For students who struggle with written feedback, allow them to give verbal feedback to a peer instead.
- **Simplified Reflection Prompts**: Provide sentence starters or visual organizers for students to fill out as they reflect (e.g., "I learned that..." or "The most interesting thing was...").

Assessment

Use the following rubric to grade both the student's slide and their presentation:

Criteria	Excellent (4)	Good (3)	Needs Work (2)	Needs Improvement (1)
Slide Design & Clarity	The slide is clear, organized, and visually appealing.	The slide is mostly clear but could use a little improvement.	The slide is hard to follow or messy.	The slide is difficult to understand.
Content Accuracy & Simplicity	Clear, accurate explanation that is easy to understand.	Explanation is mostly clear but could be simplified.	Explanation is unclear or too complex.	Explanation is missing or incorrect.
Picture & Relevance	The picture fits perfectly with the explanation.	The picture is good but could be more relevant.	The picture doesn't fit well with the explanation.	No picture, or the picture doesn't help.
Presentation Skills	Confidently explains the slide in a clear, engaging way.	Explains the slide but lacks some confidence.	Struggles to explain the slide clearly.	Unable to explain the slide.
Peer Feedback & Reflection	Provides helpful, thoughtful feedback and reflection.	Gives basic feedback and reflection.	Feedback and reflection are unclear or minimal.	No feedback or reflection.

Differentiation Strategies Summary

- **For Struggling Learners**: Provide extra support with sentence starters, simplified instructions, and pre-made templates. Allow extra time for research or creation.
- **For Advanced Learners**: Encourage deeper research or more complex explanations in their slides, and ask them to make connections between different evidence for evolution.
- **For ELL Students**: Offer translation tools and visual aids. Use simple language and allow peer collaboration to support understanding.
- **For Shy/Anxious Students**: Allow smaller groups or paired presentations for comfort. Provide opportunities for practice or rehearsing with a partner before presenting.

This assignment is designed to be flexible, offering different levels of support to meet the diverse needs of your students while ensuring all of them can actively engage with the topic and demonstrate their understanding of evolution.