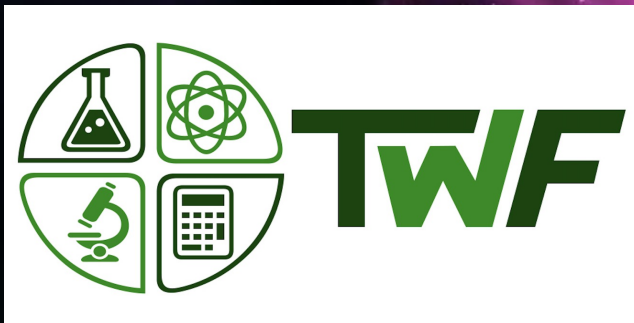


Introduction to Evolution

5E Lesson

The 5E model is a scientifically proven method to improve student engagement and learning in your classroom

- ✓ Engagement
- ✓ Exploration
- ✓ Explanation
- ✓ Elaborate
- ✓ Evaluate



Complete Teacher Instructions

Introduction to Evolution

5E Lesson

Grades 7-10	Introduction to Evolution	Ongoing Les
Lesson Objective: Students will learn about: • Evolution • Natural Selection • Scientific Theories • The Scientific Method • Evidence for Evolution • Charles Darwin • Adaptations • Fitness • Biodiversity • Other Mechanisms of Evolution • Human Influence • Human Evolution		
Possible Student Misconceptions: • Evolution is just a theory • Darwin had a eureka moment while in the Galápagos Islands • Humans evolved from chimpanzees/monkeys • No new information can be added to DNA through natural processes • Evolution cannot be tested or confirmed • Evolution results in progress; organisms are always getting better thro • Individual organisms evolve during a single lifespan • Humans cannot influence evolution • The fittest organisms in a population are those that are strongest, hee • largest • All traits of organisms are adaptations • Natural selection and evolution are the same thing		
Materials: • 1 device (smartphone, Chromebook, laptop, tablet, or computer) per • A means of projecting a PowerPoint presentation • Internet access • General classroom objects		
Teacher Notes: ➤ All videos can be accessed directly from the PowerPoint. To retrieve i ➤ icon while in slideshow mode and it will automatically open for you. If ➤ reason, right-click on the image and click Edit Hyperlink or somethin ➤ I've created a video walkthrough if needed. It can be accessed here - ➤ https://youtu.be/oCIKIP9SaDQ ➤ I don't believe in long lessons. If you feel your students are losing the ➤ Stop the PowerPoint and give them a 5-minute break. If you'd like to: ➤ recommend my video collection here - http://www.teachwithafervy.com/ ➤ are tons of brain-break videos to choose from all grouped by category		

Introduction to Evolution – 5E Less

Engagement Phase

Your students will watch the video 'The Evolution of Life on Earth' and complete the questions found in the file – Engagement – The Evolution of Life on Earth Video.

Teacher Notes:

- The video is about two and a half minutes long
- You may need to show the video more than once or pause when an answer is given to one of the questions.

Exploration Phase

Exploration – Lab Station Activity

- In groups of 2-3, have your students complete Exploration – Lab Station Activity. Once they're done, they will submit their passport to you.

Teacher Notes:

- The complete instructions for my Lab Station activity can be found in the *START HERE – Instructions* file.

Explanation Phase

PowerPoint Lessons

- The lesson is found in the folder – Explanation – Evolution Lesson
- This lesson is designed to be completed over one day
- There are multiple embedded videos and plenty of opportunity to engage, interact and check for your students' understanding throughout the lesson
- The lesson covers the following topics:
 - What is Evolution?
 - Just a Theory?
 - Evidence for Evolution
 - Natural Selection
 - Biodiversity
 - Adaptation
 - Other Mechanisms
 - Human Influence

Teacher Notes:

- All videos can be accessed directly from the PowerPoint. To retrieve them, click on the video icon while in slideshow mode and it will automatically open for you. If they don't open, right-click the image and select Edit Hyperlink or something similar.
- I've created a video walkthrough if needed. It can be accessed

here - <https://youtu.be/oCIKIP9SaDQ>

- I have also enclosed a .PDF version of both the teacher and student versions.

Elaborate Phase

Elaborate – Scavenger Hunt

Your students will complete – Elaborate – Scavenger Hunt. This activity will require your students to move beyond what was covered directly in the lesson and allow them to further develop their understanding.

Teacher Notes:

- Students will work individually or in small groups
- Students will need one device per group

Evaluate Phase

Quiz

Have your students complete - Evaluate – Introduction to Evolution Quiz

Teacher Notes:

- It's sometimes best to have the students peer evaluate
- Placing students in small groups and having them exchange papers to mark will accomplish two things
 - 1) Provide immediate feedback on the questions they just completed
 - 2) Significantly reduce your marking time
- Peer evaluation is not needed, only suggested when appropriate

Duration: 1 hour

Teacher Role – Facilitate learning and keep students focused

	Goal
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- ☐ Students use their newly obtained knowledge to propose solutions and extend their learning to new situations

Duration: 30 min

Teacher Role – Distribute and collect evaluation

	Goal
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- ☐ Students are given the opportunity to demonstrate their understanding and evaluate their own progress

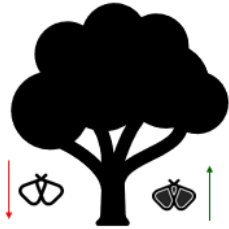
☐ Students are able to connect the content presented to previous experiences

Each phase is clearly described

A Complete Lesson

What is Evolution?

- Charles Darwin and Alfred Russel Wallace
 - Changes that make an organism better able to survive and reproduce increase
 - Changes that put an organism at a disadvantage decline

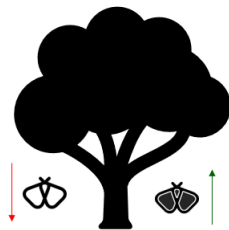


← Make sure your students are on track

Student copies with blanks
Videos embedded right into your slideshow

What is Evolution?

- Charles Darwin and Alfred Russel Wallace
 - _____
 - Changes that put an organism at a disadvantage decline



Evidence for Evolution

- One of the most extensively studied and strongly supported scientific ideas



11-minute, more in-depth explanation



5-minute overview

Interactive and Engaging Activities

Device-Based Scavenger Hunt Introduction to Evolution



Includes

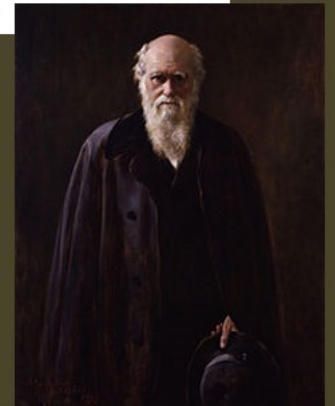
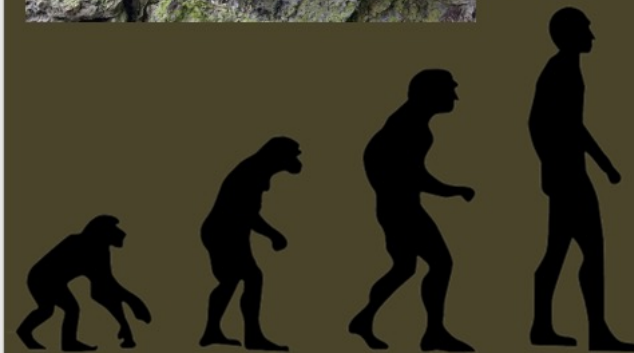
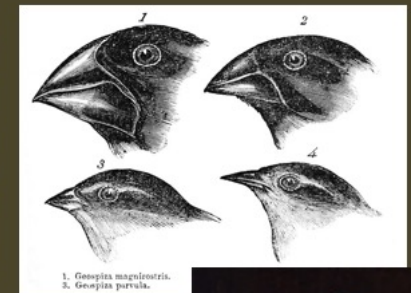
- 5 Unique Locations
- Online form submission
- Answer Key

Works on all smartphones, tablets, Chromebooks, and laptops

- **100% Digital**
- Simulations
- Quizzes
- Videos
- Games
- and more



Introduction to Evolution Lab Station Activity



7 Lab Station Activities to get your kids out of their seats and engaged in their learning

Get away from tired practices and unengaged students



Provide a Scientifically-Proven means of instruction



Incorporate Technology and Increase Collaboration

