



Evolution Versus Creationism

Supporting Our Views With Evidence

What I Will Be Learning In This Mastery Badge:

In this master badge you will learn about the theory of evolution. You will then compare the principle parts of this theory to creationism. Finally, you will choose a side on the evolution vs. creationism debate, and support your opinion using evidence.

What This Packet Includes:

It is important that you complete all aspects of this packet so that you gain the knowledge and skills that we are working on.

I. **Discovering Lab**

A discovering lab is a fun, introductory lab, where we discover the knowledge on our own.

II. **Video Instruction**

You will watch a video presented by Mr. Bertoch, and answer questions about it.

III. **Literacy Practice**

Reading and writing are critical life skills, and also very important to science. You will read the assigned article and complete a writing prompt.

IV. **Applying Lab**

An applying lab is how you pass off the Mastery Badge. It serves as the quiz. It is a hands on demonstration that you have mastered the skills and content of this badge.

Key Things We Will Learn In This Mastery Badge

Some of the most important things we will learn in this mastery badge:

- The importance of supporting our views and opinions with evidence.
- The importance of not allowing our biases to interfere with the conclusions we draw.
- Science is about allowing the facts to lead us toward the truth, and not about supporting our biases.
- The theory of evolution.
 - Charles Darwin
 - Natural Selection
 - Genetic Mutations
 - Evidence that both support and counter-support this theory
 - Vestigial Organs & DNA Code
 - Divergent And Convergent Evolution
 - The Tree of Life
- Taking Sides On This Debate & Supporting Our Views With Evidence

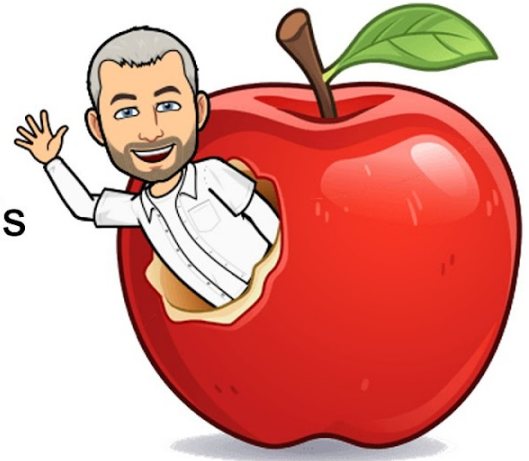
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Discovering Lab

Learning Through Hands On Activities



Activity: Preparing To Take A Side

Directions: Follow the directions below.



Video Instructions Available For This Assignment. Watch this video to learn how to do this assignment, and why it is important.

Scan This QR Code To Watch Mr. Bertoch Give You Directions For This Assignment

Goal: To think about the importance of remaining unbiased when doing science.

Evolution & Creationism - A Hotly Debated Topic

Few topics engender more discord both within and without science than the debate surrounding the topic of evolution. Feelings surrounding this topic can often be very strongly held, on both sides. As a result, there are very few who truly look at the issue with an open mind.

This includes scientists. Who very often utterly refuse to consider any possibility of there being a creator. It can also include creationists who dismiss evidence that may support evolution. In this lab, we are going to consider the importance of remaining unbiased, and of supporting our positions with evidence.

As you complete these assignments, try to remain neutral in your perspective. Do your best to truly think about the topics being discussed and allow the data to lead you, rather than looking to confirm what you already believe.

A Note To Parents: Evolution is an emotionally and politically charged topic. The purpose of this mastery badge is not to convince or promote any agenda. Rather it is to encourage everyone to remain neutral. Intelligent people look at the data thoughtfully. Nothing illustrates mankind's inability to do this more than this topic. Before you allow your student to complete this mastery badge please feel free to look over the material and watch the included video.

You Will Be Taking A Position On This Debate

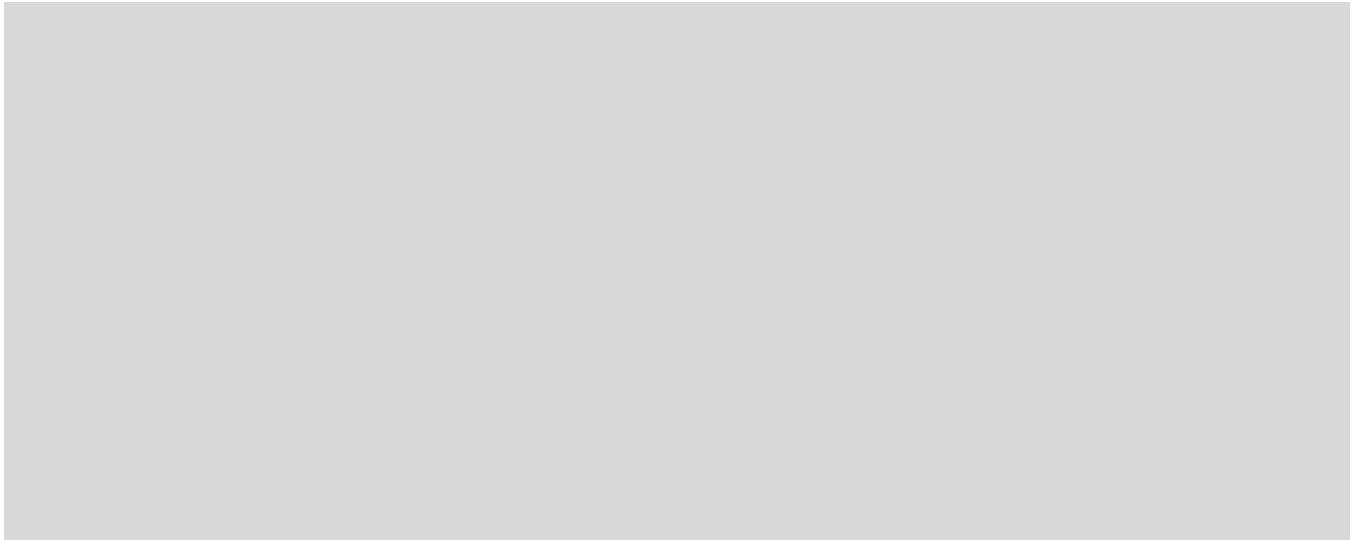
Later you will take a position on this debate. You will argue on behalf of those who advocate for creationism, those who advocate for evolution, or those who advocate for both. First, though we need to prepare our minds so that we can approach this with a fair and unbiased approach.

Read each scenario and then answer the questions.

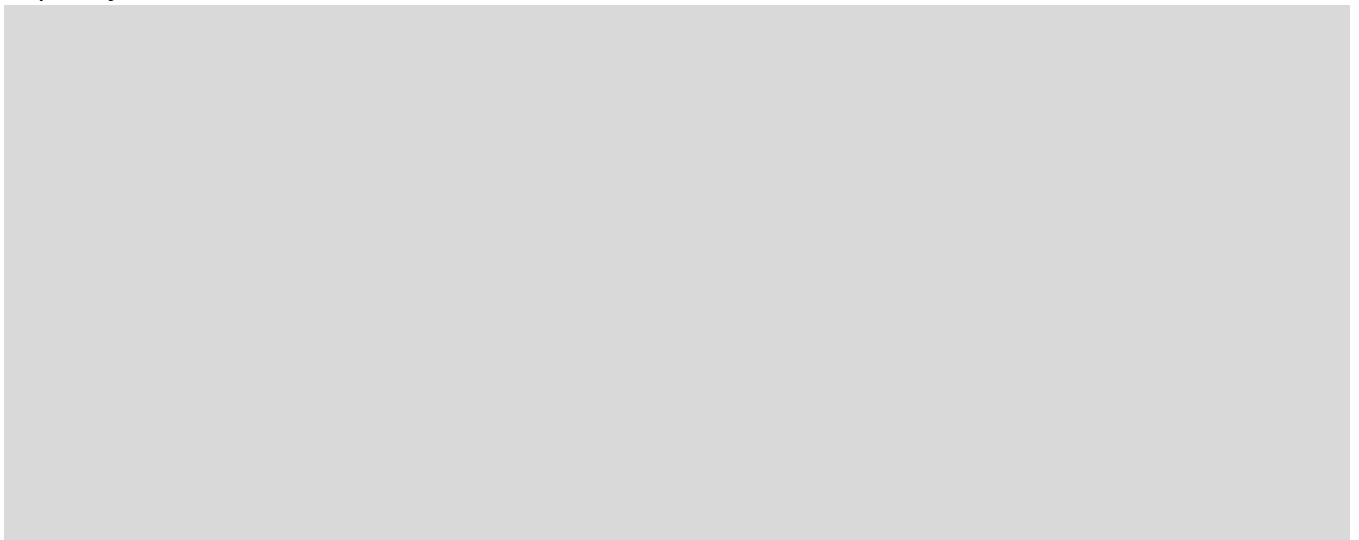
Scenario 1

Bill works in a company that sells SuperGreat Soda. He has spent the past 17 years as a sales rep, telling everyone how delicious SuperGreat is. Every time Bill makes a sale, he is awarded with a bonus check by his employer.

1. If you were to ask Bill which soda is the most delicious what do you think he would tell you? Explain your answer.



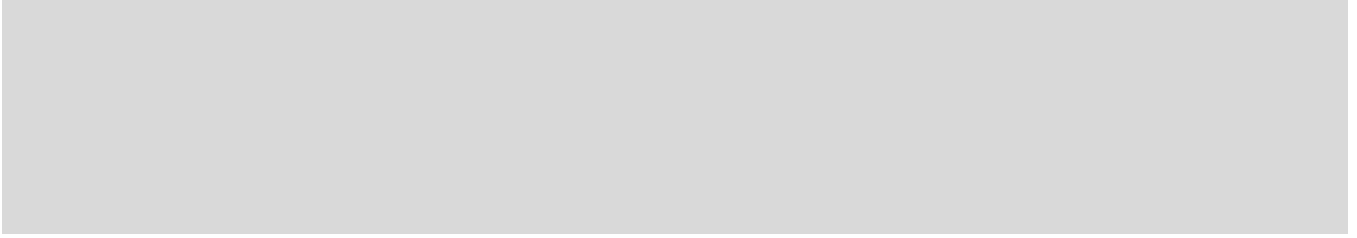
2. Do you think Bill is a trustworthy source when it comes to determining which soda is really the best? Explain your answer.



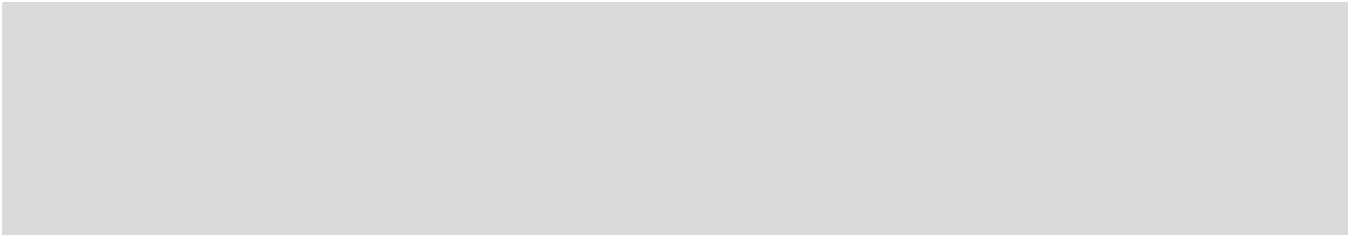
Scenario 2

Mandy absolutely does not believe in UFOs or aliens. She has written online social media posts making fun of people who do believe in aliens and once told you that there is absolutely nothing that anyone could show her that would ever convince her that aliens are real.

3. While walking home from school you find the body of an animal that you do not recognize. You wonder if it might be alien. What would Mandy tell you if you asked her for her opinion? Explain your answer.



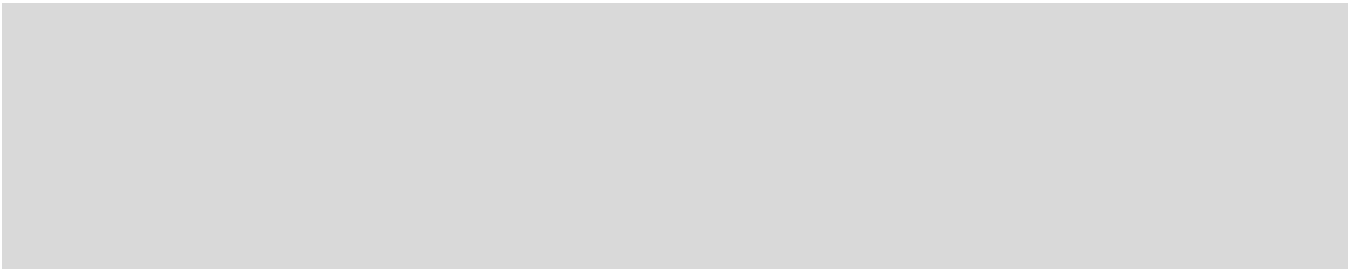
4. Who could you ask that might give you a more fair and unbiased opinion? Explain your answer.



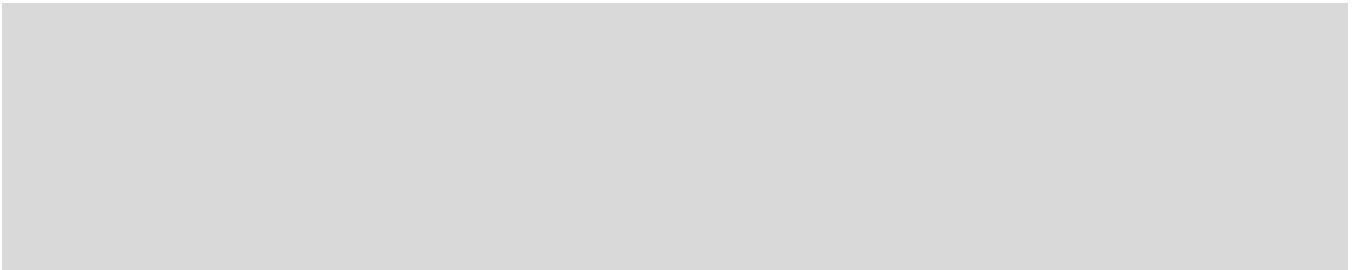
Being Thoughtful About Managing Biases

Scientists try to maintain an unbiased approach to their research. This means that they do not allow their biases to interfere with the conclusions that they might draw about how the Universe operates.

5. Why do you think it is important for scientists to be unbiased in their research? Explain your answer.

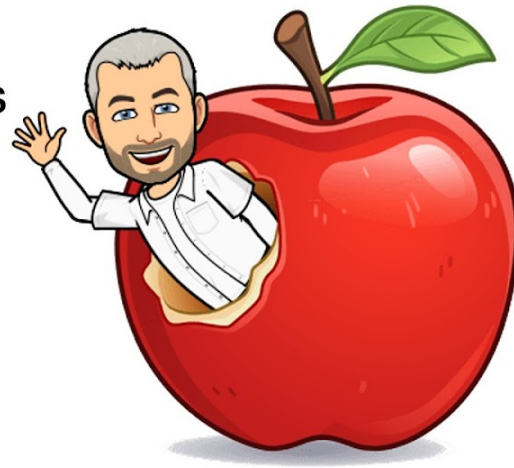


6. If a scientist allows their conclusions to be biased by their own beliefs how valid do you think their conclusions are? Explain your answer.



Video Instruction

Reviewing The Teacher's Instruction At My Own Pace



Handsome Science Teacher One Take Videos

Now that you have completed the Discovering Lab let's watch the video that goes with it. In this video Mr. Bertoch will help connect the discoveries that you made during the lab to the broader concepts covered under this badge, and will also introduce the vocabulary that goes with these concept.

Take Your Time, Pause And Rewind As needed

You are not in a hurry! It is more important that you understand the concepts in this video than that you finish it quickly. Take your time. If you don't understand something, pause the video and use the Internet or other resources to look up the concept that has you confused.

When you finish this video, you should have a good understanding of the concepts that have been taught. If you find yourself confused, rewind, and rewatch.

The Video For This Mastery Badge Can Be Opened Using This QR Code

This Mastery Badge includes one video:



Watch The Assigned Science Video

Scan This QR Code To Open And Watch The Assigned Video For This Mastery Badge

Check Point

Let's make sure that you really did take your time and watch the video carefully! Remember that it is important to hold yourself accountable to a high standard and to take pride in your own success as a learner.

I watched the video carefully, and paused to look up anything I didn't understand.

Recording Your Learning

On the next page, you will record your learning and connect it to things you already know.

Ten Things I Learned From This Video

A powerful tool to help you retain what you learn is to take notes. Notes give you something that you can look back at later, to quickly remind your brain reinforcing the memories for the concepts you have learned. Record ten things that you learned or that you perhaps already knew that were discussed in this video.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

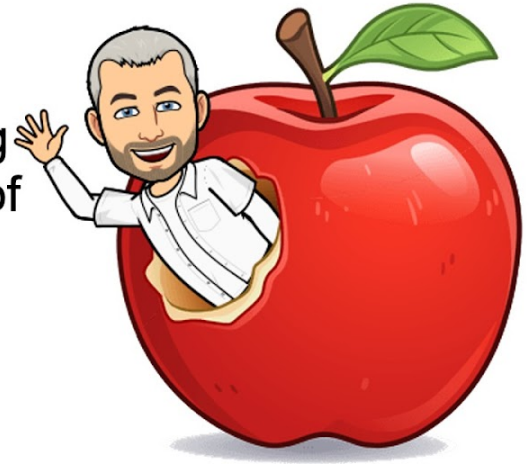
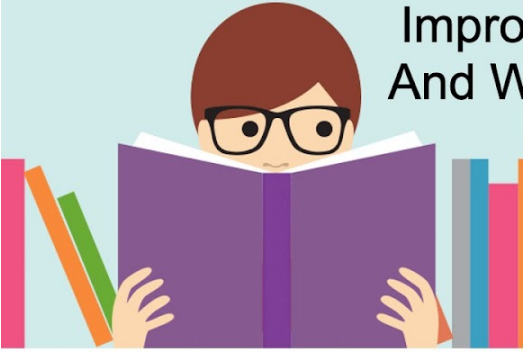
Now, Let's Connect These New Concepts To Things You Already Knew

Another great way to help your brain retain new things is to connect these new concepts to other things that you already know. This gives your mind a place to store the new knowledge. Imagine that you are placing the new knowledge on a shelf in your brain next to facts that are already in there.

Write a paragraph explaining how the concepts taught in this video relate to things you already knew. There are no wrong answers. What are some things that you already knew that this video reminded you of?

Literacy Practice

Improving Our Reading
And Writing In Search of
Knowledge



Activity: Reading And Writing About This Topic

Directions: Reading and writing are very important life skills. Good scientists must be able to learn through reading and communicate their own discoveries through writing.



Video Instructions Available For This Assignment. Watch this video to learn how to do this assignment, and why it is important.

Scan This QR Code To Watch Mr. Bertoch Give You Directions For This Assignment

1. Practice Reading For Understanding

Read the article below **for understanding**. Reading for understanding means that you take your time and monitor your own learning. If you get to the end of a sentence and you do not remember or understand what you read, **re-read it**.

2. Practice Writing To Communicate

Complete the writing prompt below. Do your very best to write clearly so that others will understand what you are saying. This means using correct spelling, grammar, and writing, taking your time to think about the best ways to clearly communicate to others the main ideas that you are trying to get across to them.

Article:



Read The Assigned Article Carefully For Understanding.
<https://handsomescienceteacher.com/Online-science-classes-kids/evolution/>

Scan This QR Code To Open And Read The Article That Goes With This Mastery Badge

Check Point

Let's make sure that you really did read for understanding! Remember that it is important to hold yourself accountable to a high standard and to take pride in your own success as a learner.

I Read For Understanding. I did not skim the article. I understood the material that the article discussed.

Quiz Time

Complete the quiz at the end of the article and post your score in the box below. Your goal is to get at least 75% on the quiz. Did you accomplish this goal?

%

Now Let's Write To Communicate

Remember that when you write to communicate you are taking your time, and explaining the topic in a detailed and concise way. Don't rush! You are not in a hurry. Think about what you are going to say, and plan how you will say it. So that someone else who reads your paragraphs will understand them easily.

Writing Prompt: Write two paragraphs in your own words explaining how scientists believe that evolution occurs.

Blank writing area for the student's response.

Name: _____

Date: _____



Applying Lab

Proving That We Can Do It Ourselves



Activity: Evolution Essay

Directions: In this lab, you are going to write an essay supporting why you either do or do not believe in the theory of evolution.



Video Instructions Available For This Assignment. Watch this video to learn how to do this assignment, and why it is important.

Scan This QR Code To Watch Mr. Bertoch Give You Directions For This Assignment

Goal: To demonstrate your understanding of the theory of evolution.

Support Your Position With Evidence

You have now completed an exhaustive study of evolution. Including the theory, as well as the evidence both supporting this theory and the evidence that stands against it. It is time for you to make your own judgment call.

What do you think about the theory of evolution?

Write a five-paragraph (minimum) essay stating your views on evolution versus creationism. There are no wrong answers. However, make sure to support the positions you take with strong evidence. This is especially important on a topic like this, where there are a lot of different strongly held views.

- Make your arguments as strong as you can, so that they will withstand examination by others.
- Discuss the theory of evolution in detail, including natural selection, gene mutation, punctuated equilibrium, and divergent and convergent evolution.
- Share evidence for why you either do or do not believe in the theory of evolution.



Congratulations! You Have Completed The Entire Mastery Badge

You have worked really hard to earn this mastery badge. More importantly, you have worked hard to earn your knowledge!

Time To Evaluate Your Work

Check each of the following to evaluate your work:

1. Did you do every assignment?
2. Did you read the assigned article?
3. Did you watch the assigned video?
4. Did you answer all the questions using complete sentences?
5. Are your answers accurate?

My Self-Evaluation:

Based on the criteria listed above, I believe I have passed off this Mastery Badge because...

(Be detailed and specific)

Mastery Badge Counselor Evaluation:

I have reviewed this student's work. Based on the criteria listed above I hereby certify that they have passed off the Mastery Badge because... (Be detailed and specific) Note: Any adult may serve as a Mastery Badge Counselor, so long as they are committed to ensuring the highest standards of excellence.

Student's Signature

Date

Signature of Mastery
Badge Counselor

Date

Certificate For Your Homeschool Records

The following certificate which has been awarded through self-evaluation by the student, and also certified by a mastery badge counselor proves that the student listed thereon has completed all the work and has mastered all the concepts for the specified topic.

Keep this on file as evidence of your successful completion of this topic.

If audited by the State, these certificates stand as evidence that you have worked on and successfully completed a rigorous science curriculum.



The certificate is framed by a decorative, repeating pattern of stylized faces. In the top-left corner, there is a circular logo featuring a cartoon man's face, with the text "Handsome Science Teacher" arched above and "Industries" below. The logo also includes an illustration of a planetarium with various planets. The main title "Mastery Badge Certificate" is centered in a large, bold, black font. Below the title, the topic "Topic: Evolution" is written in a purple font. A line for the student's name is preceded by the text "Student Name:". The central text reads: "This certificate certifies that the person named above has completed all of the requirements to earn this Mastery Badge." At the bottom, there are two horizontal lines for signatures. The left line is labeled "MASTERY BADGE COUNSELOR SIGNATURE" and the right line is labeled "DATE AWARDED". In the bottom-right corner, there is a smaller version of the "Handsome Science Teacher" logo.

Mastery Badge Certificate

Topic: Evolution

Student Name: _____

This certificate certifies that the person named above has completed all of the requirements to earn this Mastery Badge.

MASTERY BADGE COUNSELOR SIGNATURE

DATE AWARDED