

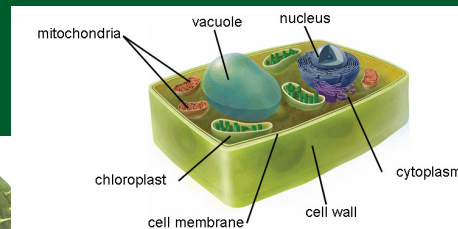
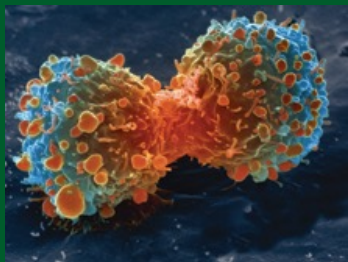
Animal and Plant Cells

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



Animal and Plant Cells 5E Lesson		
Grades 6-9	Animal and Plant Cells	Ongoing Lesson (4-6 hours)
Lesson Objective: Students will learn about the following biomes: • Function of Cells • Animal vs. Plant Cells • Common Cell Organelles • Animal and Plant-Specific Organelles • Photosynthesis Introduction		
Possible Student Misconceptions: • Cells are the same size as atoms • Plants and animals are comprised of only a few hundred different cells		
Materials: • 1 device (smartphone, Chromebook, laptop, tablet, or computer) per 3 students • A means of projecting a presentation • Internet access • General classroom objects		
Teacher Notes: ➢ The presentation as well as the student notes are in Google and Office format which can easily be used in class or online ➢ All videos can be accessed directly from the presentation. To retrieve them, click on the icon while in slideshow mode and it will automatically open for you. If it doesn't for some reason, right-click on the image and click Edit Hyperlink or something similar. ➢ 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 their focus, don't force it. Stop the presentation and give them a 5-minute break. If you'd like to show a quick video, I recommend my video collection here - http://www.teachwithfergy.com/science-videos/. There are tons of brain-break videos to choose from all grouped by category.		

Animal and Plant Cells – 5E Lesson	
Engagement Phase Your students will read and answer the questions for Stem Cell reading of your choice. Teacher Notes: - I've included two reading levels so you can decide what level your students should get. You can also differentiate between students of different levels if you prefer. - The reading is a good way to introduce cells to your students	Duration: 50 minutes Teacher Role – Facilitate learning and guide student understanding Goals ☐ Connect student's experiences ☐ Create interest ☐ Ask questions ☐ Understand the objectives of the lesson
Exploration Phase Exploration – Lab Station Activity • In groups of 2-3, have your students complete <i>Exploration – Lab Station Activity</i>. Once they're done, they will submit their passport to you. Teacher Notes: • The complete instructions for my Lab Station activity found in the START HERE – Instructions file.	Duration: 1 hour Teacher Role – Facilitate learning and guide student understanding
Explanation Phase Lesson • The two lessons come in Office and Google version • The lessons include – Animal Cells and Plant Cells • There are multiple embedded videos and plenty of engage, interact and check for your students' understanding throughout the lesson Teacher Notes: • All videos can be accessed directly from the presentation. To retrieve them, click on the video icon while in slide and it will automatically open for you. If they don't 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 – <i>Elaborate – Scavenger Hunt</i> . 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	Duration: 1 hour Teacher Role – Facilitate learning and keep students focused Goal ☐ Students use their newly obtained knowledge to propose solutions and extend their learning to new situations
Evaluate Phase Quiz Have your students complete one or both of - <i>Evaluate – Cell Structure Exit Ticket and Review Activity and/or Cell Theory Exit Ticket and Review Activity Quiz</i> Teacher Notes: ➢ The quizzes will be completed on Google Forms and will be automatically graded. This 1) Provide immediate feedback on the questions they just completed 2) Significantly reduce your marking time	Duration: 10 – 20 min Teacher Role – Distribute and collect evaluation Goal ☐ Students are given the opportunity to demonstrate their understanding and evaluate their own progress

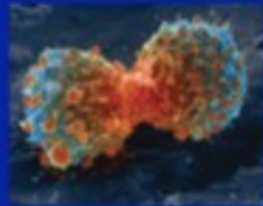
Each phase is clearly described

Two Complete Cell Lessons

TWF

Animal Cells

- Function of Cells
- The Cell Theory
- Animal Cells
- Cell Components and Organelles
 - Cytoplasm
 - Cell Membrane
 - Nucleus
 - Mitochondria
 - Endoplasmic Reticulum
 - Golgi Bodies
 - Vacuoles



Plant Cells

- Function of Cells
- Animal vs. Plant Cells
- Common Cell Organelles
- Plant Specific Organelles
 - Large Vacuoles
 - Cell Wall
 - Chloroplasts
- Photosynthesis



Interactive and Engaging Activities

TWF

Device-Based Scavenger Hunt
Cells and the Cell Theory



Includes

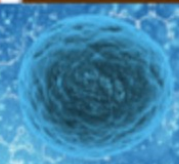
- 5 Unique Locations
- Online forms
- Answer Key

Works on all smartphones, tablets, Chromebooks

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

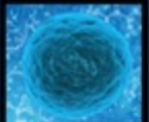


Stem Cells
Scientific Reading
Comprehension Article and
Extension Activity – Grades 5-7



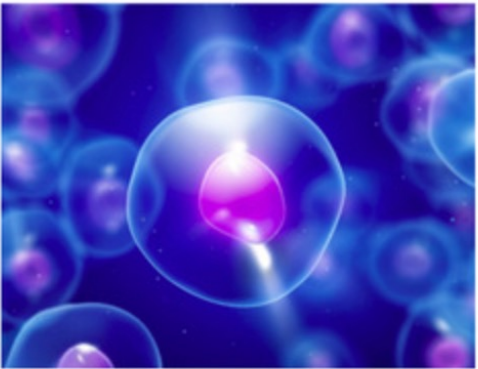
Improve your students **Literacy** and **Analysis Skills**, use as an **Emergency Substitute Plan** or create **Applicability** in your classroom

Stem Cell Therapy: The Future of Medicine?
Scientific Reading
Comprehension Article



Improve your students **Analysis Skills**, use as a **Plan** or create **Applicability**

Cells and the Cell Theory
Lab Station Activity



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

Automatically Graded Assessments



Cell Structure - Exit Ticket



- ✓ One-click to place the form in your Google Drive
- ✓ Includes 4 topic-specific questions
- ✓ Automatically graded and data presented via graphs
- ✓ Can be accessed from any device or projected to class
- ✓ Can be used as exit tickets or start of class review



Cell Theory - Exit Ticket



- ✓ One-click to place the form in your Google Drive
- ✓ Includes 4 topic-specific questions
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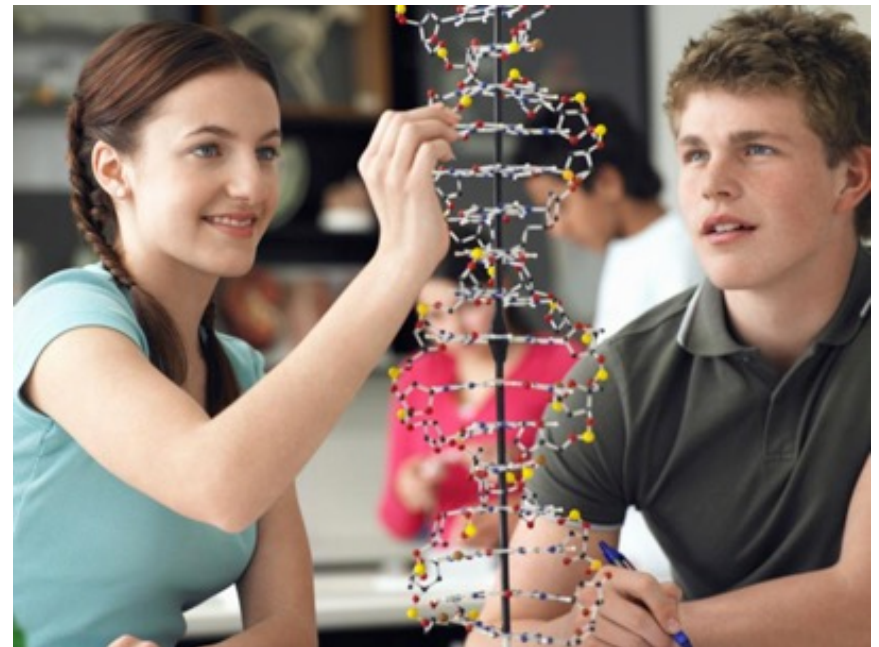
Get away from tired practices and unengaged students



TWF

Provide a Scientifically-Proven means of instruction

TWF



Incorporate Technology and Increase Collaboration



TWF



**click here
to START**