

Plant Reproduction

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

Plant Reproduction 5E Lesson

Grades 7-10	Plant Reproduction	Ongoing Less
Lesson Objective: Students will learn about: - Why plants reproduce - Sexual vs. asexual reproduction - Sexual reproduction in plants - Gametophytes and sporophytes - Gymnosperms and angiosperms - Asexual reproduction in plants - Asexual reproduction using fragments - Asexual reproduction using special structures - Pollinators - Mitosis and meiosis		
Possible Student Misconceptions: - Plants are dependent on humans. - Only birds and insects pollinate flowers. - Plants cannot reproduce sexually. - Plants cannot self-pollinate. - You cannot use leaf cuttings to propagate a plant. - Plants are not alive.		
Materials: 1 device (smartphone, Chromebook, laptop, tablet, or computer) per 3 - 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 the icon while in slideshow mode and it will automatically open for you. If for reason, right-click on the image and click Edit Hyperlink or something. I've created a video walkthrough if needed. It can be accessed here - https://youtu.be/oCkIP9SaDQ - I don't believe in long lessons. If you feel your students are losing their Stop the PowerPoint and give them a 5-minute break. If you'd like to recommend my video collection here - http://www.teachwithfergy.com There are tons of brain-break videos to choose from all grouped by ca		

Plant Reproduction – 5E Lesson

Engagement Phase Your students will watch the video 'Pollination: Trading food for fertilization in 3 minutes' and complete the following. 1. Watch the video and answer the questions. The video can be found here - https://www.youtube.com/watch?v=Lu7AjOvznh8 Teacher Notes: - The video is about three minutes long - You may need to pause a few times so students can write down their answers.	Du Te lea unc
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 can be found in the <i>START HERE – Instructions</i> file.	Du Te lea unc
Explanation Phase PowerPoint Lessons - The lessons are found in the folder – <i>Explanation – Plant Reproduction – Lesson</i> - These lessons are 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: - Why reproduce? - Sexual vs. asexual reproduction - Sexual reproduction in plants - Gametophytes and sporophytes - Gymnosperms and angiosperms - Asexual reproduction in plants - Asexual reproduction using fragments - Asexual reproduction using special structures 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.	Du Te cor ma pre

- I've created a video walkthrough if needed. It can be accessed here - <https://youtu.be/oCkIP9SaDQ>
- I have also enclosed a .PDF version of both the teacher and student versions.
- I have created two versions of the lesson: one for upper middle school to high school students, and a simpler version for middle schoolers or older students with lower developed learning levels. Choose the version you think best fits your students.

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

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 - *Evaluate – Plant Reproduction 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
 - Provide immediate feedback on the questions they just completed
 - Significantly reduce your marking time
- Peer evaluation is not needed, only suggested when appropriate

Duration: 30 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 Lessons

Asexual Reproduction in Plants

- Two basic types



1. Using fragments of the plant



2. Using specialized reproductive structures



← Make sure your students are on track

Videos embedded right into your slideshow

Student copies with blanks



Asexual Reproduction in Plants

- _____
- Does not involve joining of cells.
- Creates new plants identical to parent plant.



Interactive and Engaging Activities

Device-Based Scavenger Hunt Plant Reproduction

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



Plant Sexual and Asexual Reproduction Lab Station Activity

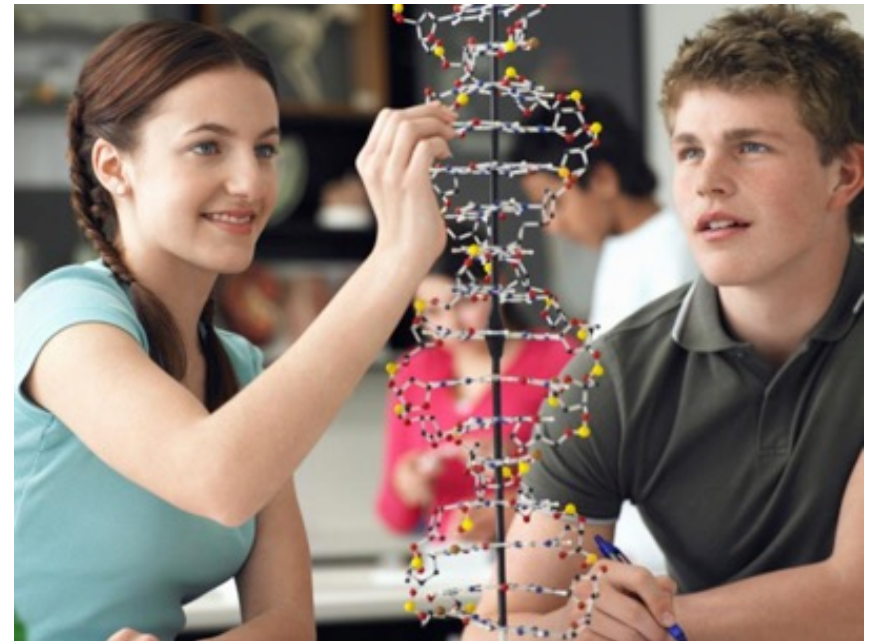


7 Lab Station Activities to get your kids
out of their seats and engaged in their
learning

Get away from tired practices and unengaged students



Provide a Scientifically-Proven means of instruction



Incorporate Technology and Increase Collaboration

