



SEXUAL EVOLUTION



BACKGROUND

Have you ever wondered why almost all living things **reproduce sexually**? It seems complicated and risky, so why not just make copies of yourself? This lesson will take your students on a fascinating journey to explore the hidden benefits of sexual reproduction!

Through engaging activities and discussions, students will delve into the evolutionary dynamics that make sex a winning strategy for most organisms. They'll better understand natural selection and how sexual reproduction **fosters genetic diversity**, a crucial weapon for adapting to changing environments.

By examining symbiotic relationships and species interactions, students will discover the evolutionary advantages sex provides. They'll not only solidify their grasp of evolutionary biology but also appreciate the diverse strategies organisms employ to ensure survival and maintain genetic variation in a **constantly evolving world**.

This lesson is designed to be **informative, interactive, and thought-provoking**. Get ready to explore the captivating world of sex in the natural world alongside your students!

NGS STANDARD

MS-LS4-4.

- Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.





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MATERIALS

1. [Power Point](#)



2. [Worksheet Printable](#)

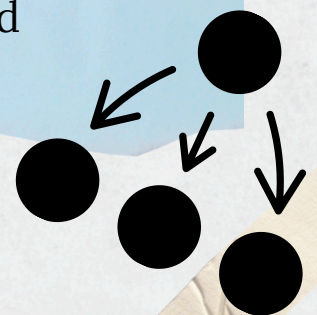
LESSON TIMELINE

Introduction (10 minutes)

- Begin with a brief discussion on the diversity of life on Earth. Ask students what they know about different species and their methods of reproduction.

Activity 1: Asexual vs. Sexual Reproduction (15 minutes)

- Discuss asexual and sexual reproduction:
 - Define asexual reproduction: reproduction involving a single parent, where offspring are genetically identical to the parent.
 - Define sexual reproduction: reproduction involving two parents, where offspring inherit genetic material from both parents.
 - Use simple illustrations to explain the differences.
 - Ask students to brainstorm the advantages and disadvantages of each form of reproduction.





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LESSON TIMELINE

Activity 2: Active Classroom Game (PowerPoint lead)

- Have students manage an asexual vs sexual population, and have different events happen like disease and extreme weather.
 - Why might sexual reproduction be an advantage for a species?
 - Are there any disadvantages?

Class Discussion (5 minutes)

- Each group presents their findings, and the class discusses the advantages and disadvantages of sexual reproduction based on the case studies.

Conclusion (5 minutes)

- Summarize the key points of the lesson. Emphasize that sexual reproduction has evolved as an advantageous method due to the benefits it offers in terms of genetic diversity and adaptability.



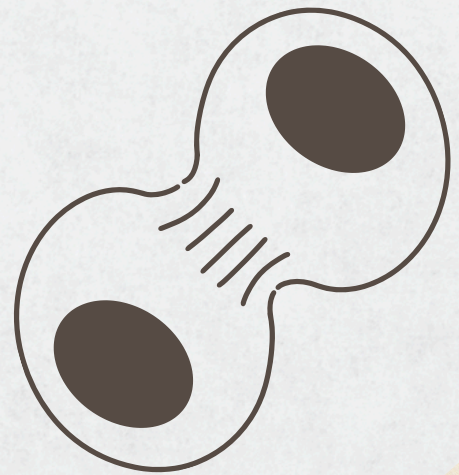
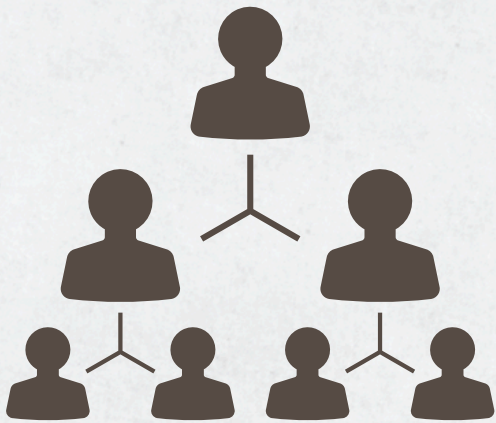


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DISCUSISON QUESTIONS

1. What do asexual and sexual reproduction mean? Give an example organism for each and list a few pros and cons.
2. Is one reproduction strategy better than the other? List some situations where populations of either type thrive.
3. Do you think more living species reproduce sexually or asexually? Explain your reasoning





CITATIONS AND ACKNOWLEDGEMENTS



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