

Pecking Order Brainstorming

Background

Many animal groups have unique behaviors to increase their survival odds. Some of these behavioral adaptations are complex interactions among members of the same community. One behavior is to develop a social order. In a social order, some community members are dominant (leaders). The dominant members have first access to resources, such as food, water, shelter, and mates.

Many poultry species, such as turkeys and chickens, form a social hierarchy, or leadership pyramid. This social hierarchy is known as a “pecking order.” In a pecking order, one chicken establishes a leading role. It struts around the flock, fluffs its feathers, and pecks chickens who challenge it. Every other chicken in the flock has a role, too. Some chickens are higher in the pecking order. Others are lower. Each chicken in the flock has a specific place in its pecking order.

Today, you will simulate the creation of a pecking order. You will also explore the impact of the pecking order on natural selection. Natural selection is the process by which certain organisms become better suited to their environment. As a result, they live to reproduce and pass on their traits to the next generation.

Word Bank

very aggressive	moderately aggressive	submissive, territorial	somewhat territorial
not territorial	very food-driven	food-driven	slightly food-driven

Brainstorming Space

Write predictions in the chart about the traits of chickens at the top, middle, and bottom of the pecking order. Use the Background information and Word Bank to help you. You may also brainstorm additional traits and add them to the chart.

Top of the Pecking Order Traits	
Middle of the Pecking Order Traits	
Bottom of the Pecking Order Traits	



Name _____ Date _____

Pecking Order Conclusions

1. What behavioral adaptations are likely to be seen at each level of the pecking order?

Why is this?

Conclusion:

2. Is there competition among chickens in the same level of the pecking order?

Why or why not?

Conclusion:

3. Which chickens are most likely to survive and pass on their traits to the next generation?

Explain your answer.

Conclusion:



Pecking Order Game Directions

1. Write your name on your sticky tab.
 2. Select a partner.
 3. Place your and your partner's name tabs next to each other on the lowest level of the Pecking Order Bracket.
 4. Retrieve a die.
 5. Roll the die until each partner has a different number.
 6. The partner who rolls the higher number goes on to compete for a higher position in the pecking order.
 7. The partner who rolled the lower number leaves their name tab on the bottom level of the bracket and exits the game space.
 8. The partner who rolls the higher number selects a new partner from the winning students.
 9. The new partners must move their name tabs from the first level of the pecking order bracket to the second level. Place your name tab next to your new partner's.
- Note:** As you move up the bracket, leave a blank space on the first level where your tab was. You do not need to fill in this space because that chicken has moved to the next level.
10. Repeat steps 5–7 to determine the winners of the second round, who then move on to the third round, and to determine those who remain at the second level of the pecking order.
 11. Continue playing rounds until one student remains. This student is the alpha chicken, the most dominant member of the flock.

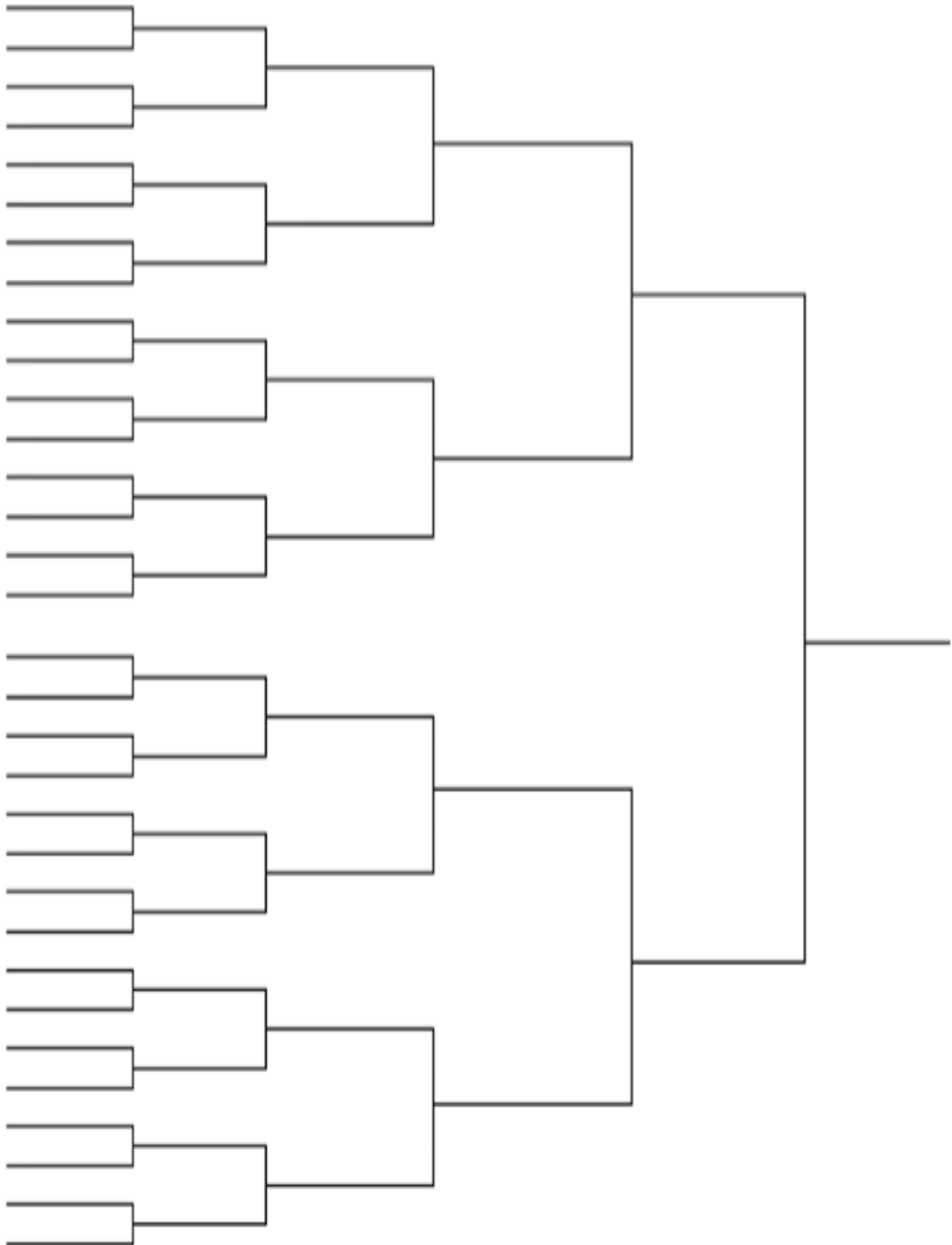


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Pecking Order Bracket



Animal Behavior Research and Report

Use these articles to research answers for Question Set 1:

- “Unlocking the Mysteries of the Pecking Order” at uc.edu/news/articles/2022/01/pecking-order--uc-biologist-explains-100-years-of-dominance-hierarchies.html
- “Feather Pecking and Cannibalism” at extension.umd.edu/resource/feather-pecking-and-cannibalism

When research time is completed, share your answers with your class.

Question Set 1: Define

- What is a pecking order?
- What is its purpose in nature?
- What is the difference between pecking order and “chicken bullying”?
- Does pecking order have any natural benefits?

Answer Space



Name _____ Date _____

Animal Behavior Research and Report (continued)

Use these articles to research answers for Question Set 2:

- “Poultry Cannibalism: Prevention and Treatment” at extension.psu.edu/poultry-cannibalism-prevention-and-treatment
- “Feather Pecking and Cannibalism in Small and Backyard Poultry Flocks” at extension.umd.edu/resource/feather-pecking-and-cannibalism

When research time is completed, share your answers with your class.

Question Set 2: Apply

How does animal behavior, such as pecking order, influence which organisms are able to reproduce and pass on their genes to the next generation?

Answer Space



Animal Behavior Research and Report (continued)

Use these articles to research answers for Question Set 3:

- “Poultry Cannibalism: Prevention and Treatment” at extension.psu.edu/poultry-cannibalism-prevention-and-treatment
- “Feather Pecking and Cannibalism in Small and Backyard Poultry Flocks” at extension.umd.edu/resource/feather-pecking-and-cannibalism

When research time is completed, share your answers with your class.

Question Set 3: Evaluate

- If pecking order is part of natural selection, why do farmers seek to lessen the effects of pecking order? Compare the goals of farmers with nature’s pattern of survival of the fittest.
- How would you manage pecking order if you were a poultry farmer?

Answer Space

