Name: Period: Date:

Lesson 18: How do scientists tell if a behavioral trait is learned or inherited?

Procedure: Read the study, "Molecular Determinants of Scouting Behavior in Honey Bees." During and after reading, answer the following questions, citing the text where appropriate.

How does this study relate to our discussion about juncos in our last class?

Summarize the steps (methodology) scientists took to determine whether the behavior of the honey bees was learned or inherited.

These materials were developed with funding through a grant from the Gordon and Betty Moore Foundation to Northwestern University and the University of Colorado Boulder.

This work is licensed under a Creative Commons Attribution 4.0 License: http://creativecommons.org/licenses/by/4.0/





Developing a Model: How did scientists conduct their investigation in the honey bees study? Draw a model that represents the steps/methods taken by scientists to determine whether honey bees' "novelty-seeking" behavior was inherited or learned.

Read "Example of Inherited versus Learned Behavior in Baboons" and answer the questions.

How does this study relate to our discussion about juncos in our last class?

These materials were developed with funding through a grant from the Gordon and Betty Moore Foundation to Northwestern University and the University of Colorado Boulder. This work is licensed under a Creative Commons Attribution 4.0 License: <u>http://creativecommons.org/licenses/by/4.0/</u>





Summarize the steps (methodology) scientists took to determine whether the behavior of the baboons was learned or inherited.

Design an Investigation: Is the bold behavior of the city juncos learned or inherited?

Provide a written explanation, a model, or both to show how we could design and conduct an investigation to determine whether the juncos' behavior is inherited or learned.





Next Steps: Now that we have some ideas for how an investigation could be designed to answer our question. What kind of data would we need to analyze from such an investigation in order for us to conclude if junco behavior is learned or inherited?

These materials were developed with funding through a grant from the Gordon and Betty Moore Foundation to Northwestern University and the University of Colorado Boulder. This work is licensed under a Creative Commons Attribution 4.0 License: <u>http://creativecommons.org/licenses/by/4.0/</u>





These materials were developed with funding through a grant from the Gordon and Betty Moore Foundation to Northwestern University and the University of Colorado Boulder. This work is licensed under a Creative Commons Attribution 4.0 License: <u>http://creativecommons.org/licenses/by/4.0/</u>



