

25 Acknowledgements

26 We would like to thank Kathryn Hartfield, Ashley Haut, Taylor Johnson, and Ryan Hassett for
27 their help during data collection. We would also like to thank Beth Atkinson for creating the
28 diagrams used in the lesson.

29 Funding: The research reported here was supported by the Institute of Education Sciences, U.S.
30 Department of Education, through Awards #R305B150003 to the University of Wisconsin-
31 Madison. The opinions expressed are those of the authors and do not represent views of the U.S.
32 Department of Education. This research was also supported in part by a core grant to the
33 Waisman Center from the National Institute of Child Health and Human Development (U54
34 HD090256). This work was also supported by the National Science Foundation (Award
35 #1760940). Finally, this research was also supported by an undergraduate Senior Thesis Award
36 awarded to the first author by the Department of Psychology at the University of Wisconsin-
37 Madison.

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Abstract

People often have difficulty understanding processes of biological change, and they typically reject drastic life cycle changes such as metamorphosis, except for animals with which they are familiar. Even after a lesson about metamorphosis, people often do not generalize to animals not seen during the lesson. This might be partially due to the perceptual richness of the diagrams typically used during lessons on metamorphosis, which serves to emphasize the individual animal rather than a class of animals. In two studies, we examined whether the perceptual richness of a diagram influences adults' learning and transfer of knowledge about metamorphosis. One study was conducted in a laboratory setting and the other online. In both studies, adults who saw the bland diagram during the lesson accurately transferred more than adults who saw the rich diagram during the lesson.

Keywords: Biological reasoning; Diagrams; Perceptual Richness; Transfer; Prior Knowledge

