

Scientific Enquiry with Beetles

- a. Your name and affiliation: Robert Matthews, Professor of Entomology, *Emeritus*, University of Georgia, Athens, GA 30602. rmatthew@uga.edu
- b. A catchy name for the activity: **Gaining Traction – Use Bess Beetles to Engage Students in Scientific Inquiry**
- c. Targeted age-group: k-12
- d. A 1-2 page detailed description/instructions/supply list for the activity:

Introduction Bess beetles are large harmless insects that have tremendous strength. In this activity students hitch a 'sled' to a bess beetle and research how much weight a beetle can move. They then experiment with different materials to see whether they can further enhance beetle traction or reduce the friction of the sled on various substrates.

Procedures and sample data for this activity available from Carolina Biological Supply Co. – access slides #25-30 on <https://www.carolina.com/pdf/manuals/critters-nsta2018.pdf>

Published Resources with more detailed information:

Science & Children 54(9), Summer 2017, pp. 45-50, J. K. James and R. W. Matthews

American Entomologist 64(2), Summer 2018, pp. 83-39, R. W. Matthews, et al.

To learn more about how animal size affects its strength (i.e., the physics of strength) go to http://www.ftexploring.com/think/superbugs_p2.html



Materials source: Purchase bess beetles and penny pull kit from Carolina Biological
www.carolina.com/bessbugs/bessbug-penny-pull-kit/FAM_144145.pr
www.carolina.com/bessbugs/bessbugs-living-pack-12/144150.pr