

Organization Name: Maryland Science Teachers Association (MAST)

Activity Name: How does temperature affect the respiration of crickets?

Activity Description: Students will compare the respiration rate of crickets in a cool area and a warm area by submerging their habitat in a cool water bath and a warm water bath. A Vernier probe and computer will be used to show respiration changes in the crickets. Teachers will help children reflect on stress on body systems due to temperature variations, and make the connection between the environment and biological systems.

Suggested Grade Level / Age Range: 6-8<sup>th</sup> grade level

Science Content Covered: biology, crickets, respiration, temperature

Time needed to complete the activity: 10 minutes

Materials Required (per student): All materials are reusable. Required materials are computer, carbon dioxide probe, temperature probe, respiration chamber, crickets, warm water bath, and cool water bath.

Activity Success Tips for Parents and Teachers: This activity encourages students to carefully observe and control variables in an experimental setting. At-home extensions may include trips to the zoo to carefully observe animals of different types (mammals, reptiles, amphibians), looking at and recording data to analyze (changes in moon phases over time, comparing daily temperature over seasons of time, recording careful measurements of plant growth over a season's time period).

Safety comments / considerations: Crickets are living creatures and need to be treated with respect.

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