

DLMC STEMscopes Science Wow Kit

6th Grade Changes in Energy on the Molecular Level & Heat and Matter Scopes

Purpose: The purpose of this kit is to provide educators with the necessary resources to provide students hands-on, inquiry-based science learning opportunities. Marshall says, “*We learn more by participating than observing,*” (p. 52). Teachers may use **some or all** of the learning opportunities provided.

This kit is aligned to STEMscopes, with additional science and literacy connections to help create multiple entry points for students and to help make science as engaging as possible.

Aligned DCSD Priority Learning Outcome(s) [LINK](#)

Physical Science GLE 1 EO d. **Develop a model** that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.

Scopes: Changes in Energy on the Molecular Level & Heat and Matter

Explore	Kit Resources	Additional Needed Consumable Resources NOT Part of the Kit
Changes in Energy... Explore 2: Kinetic Energy and Temperature	1 Hot plate 2 500 mL Glass beakers 8 100 mL Graduated cylinders (1 per group) 8 Thermometers (1 per group) 8 Funnels (1 per group) 24 Styrofoam cups (3 per group)	1 Copy per student of <i>Kinetic Energy and Temperature</i> (found in STEMscopes or the STEMscopes Teacher Guide in this kit) - Water - Ice
Heat and Matter Explore 1: Modeling Temperature and Heat	8 Empty plastic bottles (1 per group) - Beads (24 per group) 8 Paper plates (1 per group)	1 Copy per group of <i>Modeling Temperature and Heat</i> (found in STEMscopes or the STEMscopes Teacher Guide in this kit)

Reference:

Marshall, J. (2019). *Rise to the challenge: Designing rigorous learning that maximizes student success*. Alexandria, VA: ASCD.

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Explore	Kit Resources	Additional Needed Consumable Resources NOT Part of the Kit
Heat and Matter Explore 2: Energy Transfer	12 500 mL Beakers 6 250 mL Beakers 6 Heat resistant gloves 12 Thermometers 3 Laser Thermometers - Aluminum foils - Construction paper - Wax paper 3 Ceramic tiles 1 Hot plate 2 1000 mL Beakers 2 Large buckets	1 Copy per student of <i>Energy Transfer</i> (found in STEMscopes or the STEMscopes Teacher Guide in this kit) 1 Copy per student of the <i>CER</i> (found in STEMscopes or the STEMscopes Teacher Guide in this kit) - Water - room temp, ice water, hot water

Additional Science Connections

Science Connection	Kit Resources	Additional Needed Consumable Resources NOT Part of the Kit
	Hand Boilers can be used as a demonstration	None

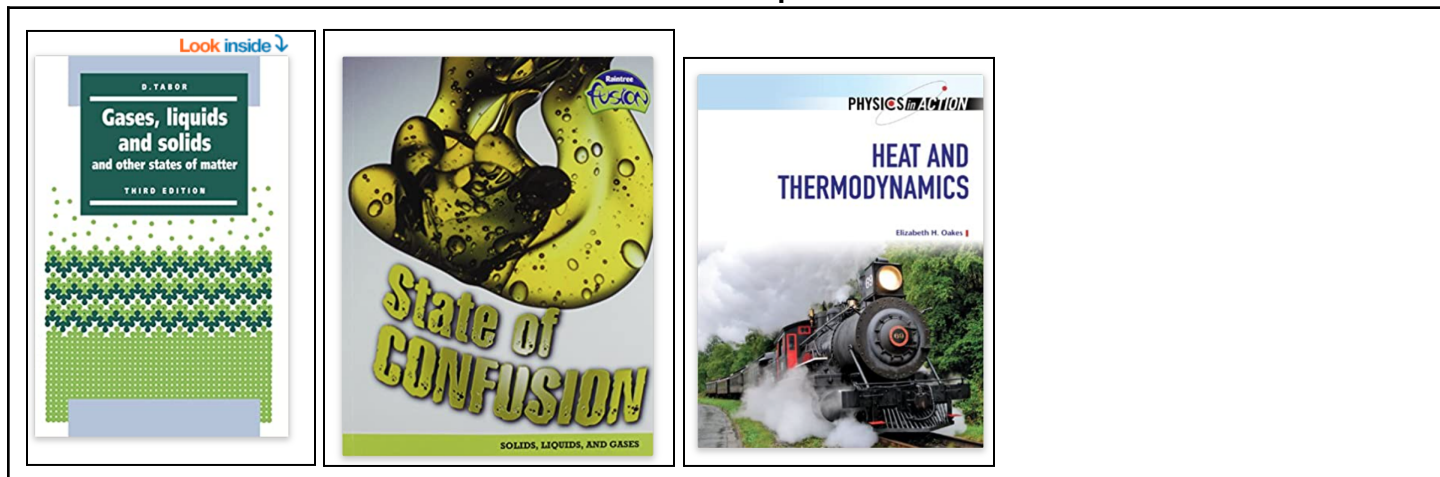
Literacy Connections

Benchmark Advance and Benchmark Workshop	Wonders
Unit 5: Technology in the 21st Century How do we take responsibility in making advances in technology? Loosely Connected	Unit 5 Loosely Connected
Additional Books:	

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Please return all resources in the kit as you found them. Please let the DLMC know if there are any problems with the kit.

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