



Mini-Map for SCI.EE.MS.PS3-3

Subject: Science

Physical

Grade: 6–8

Learning Outcome

DLM Essential Element	Grade-Level Standard
<p>SCI.EE.MS.PS3-3 Test and refine a device (e.g., foam cup, insulated box, or thermos) to either minimize or maximize thermal energy transfer (e.g., keeping liquids hot or cold, preventing liquids from freezing, keeping hands warm in cold temperatures).</p>	<p>MS-PS3-3 Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.</p>

Linkage Level Descriptions

Initial	Precursor	Target
<p>Identify objects/materials used to minimize or maximize thermal energy transfer (e.g., gloves, vacuum flask, insulated hot pad holder, or foam cup).</p>	<p>Investigate objects/materials and predict their ability to maximize or minimize thermal energy transfer.</p>	<p>Test and refine a device (e.g., foam cup, insulated box, or thermos) to either minimize or maximize thermal energy transfer (e.g., keeping liquids hot or cold, preventing liquids from freezing, keeping hands warm in cold temperatures).</p>

Instructional Resources

Linkage Level	Instructional Activities
Initial/Precursor/Target	N/A
Connections	
Science and Engineering Practices	Constructing Explanations and Designing Solutions
Crosscutting Concepts	Energy and Matter
Released Testlets	
See the Guide to Practice Activities and Released Testlets .	

[Link to Text-Only Map](#)

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Map Key	
I	Initial
P	Precursor
T	Target

