



Investigating Materials



You have been asked to help choose the best material for the inner lining of a lunch box to make sure that the Brilliant Bag Company's new lunch box keeps children's lunches cool and fresh until lunch time.

What materials will you test?

What material do you predict will be the best choice for your lunch box? Why?

What is the independent variable of your investigation? (Tip: This is the thing you will change in the investigation).

What is the dependent variable? (Tip: This is the thing that you observe or measure in your investigation).

What are the controlled variables? (Tip: These are the things that you keep the same in the investigation).

Variables

Type and size of box;
type of thermometer;
size and quality of ice cubes;
temperature of room;
length of time;
size of materials;
type of material.



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Carry out your investigation and record your results in the table below.

Material	Starting state / temperature of contents	Temperature/state of contents after 5 minutes	Temperature/state of contents after 10 minutes	Temperature/state of contents after 15 minutes	Temperature/state of contents after 20 minutes



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What materials will you test?

What material do you predict will be the best choice for your lunch box? Explain why, referring to thermal conductors and insulators.

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What is the dependent variable?

What are the controlled variables?



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