



# 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.



# Investigating Materials

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



# 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 to measure in your investigation).

---

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

---



# Investigating Materials

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



# 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? Explain why, referring to thermal conductors and insulators.

---

---

What is the independent variable of your investigation?

---

What is the dependent variable?

---

What are the controlled variables?

---



# Investigating Materials

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