

Great  
Science  
Share  
for SCHOOLS

# Great Glass Share 5-7 years



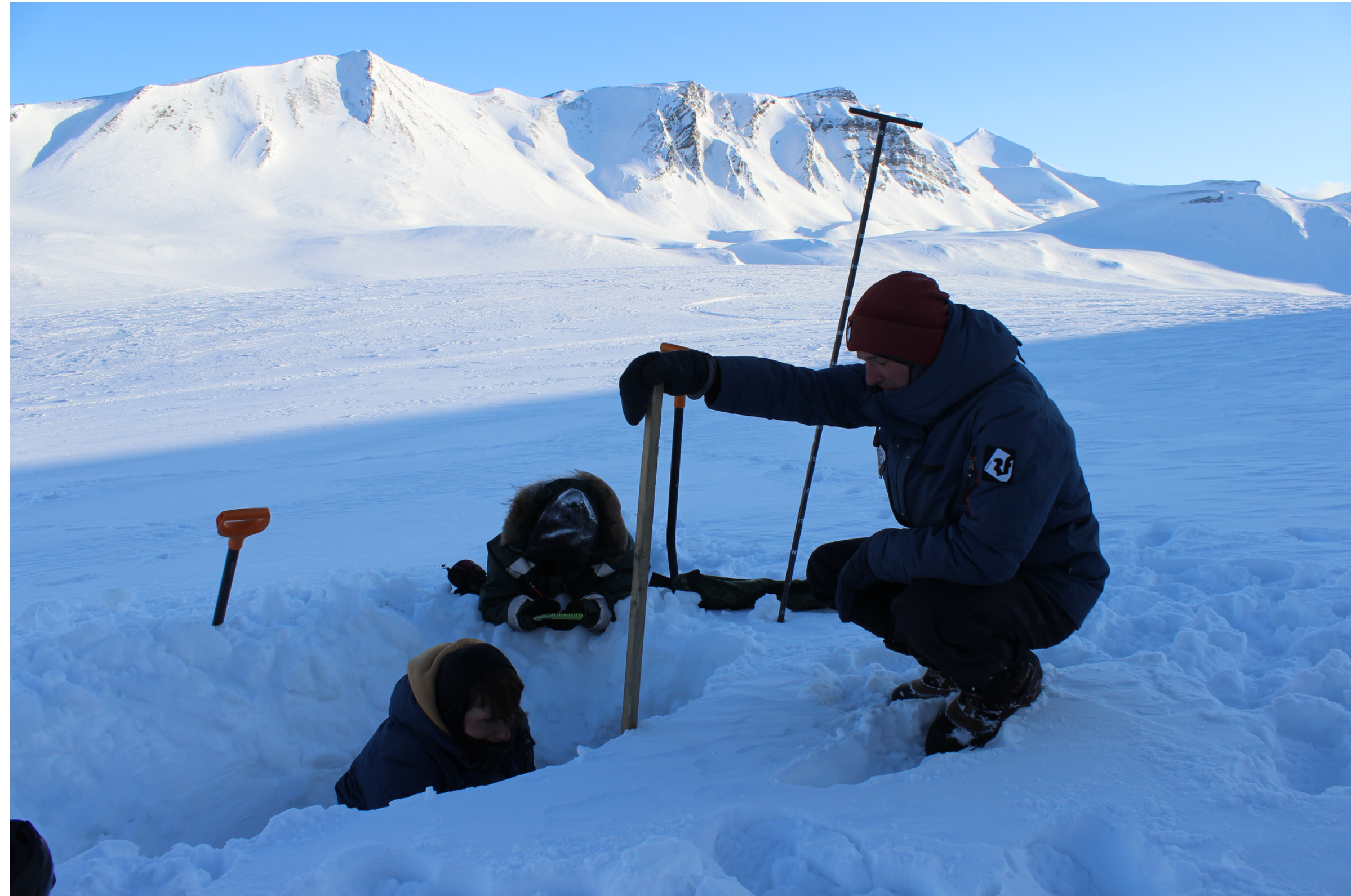


# Global warming

Scientists are trying to find ways to slow down global warming.

What is it?

Why is it a problem?





# Arctic Ice Project

Dr Leslie Field works as an engineer and inventor.

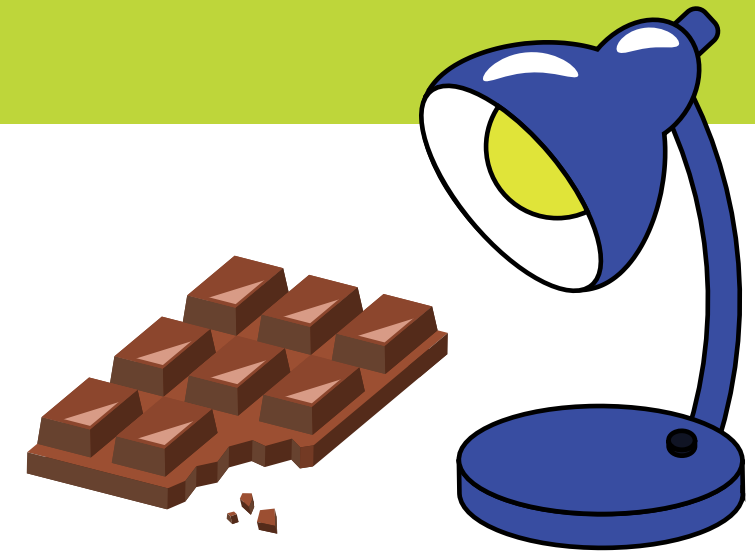
In the '*Arctic Ice Project*' scientists have been observing the effects of adding a thin layer of tiny, hollow, glass beads onto the ice to see what happens.



# How does glass change the speed chocolate melts?



This is a **comparative test**. You are changing **one** thing whilst trying to keep everything else the same.



What are we changing?

What are we keeping the same?

What are we measuring?



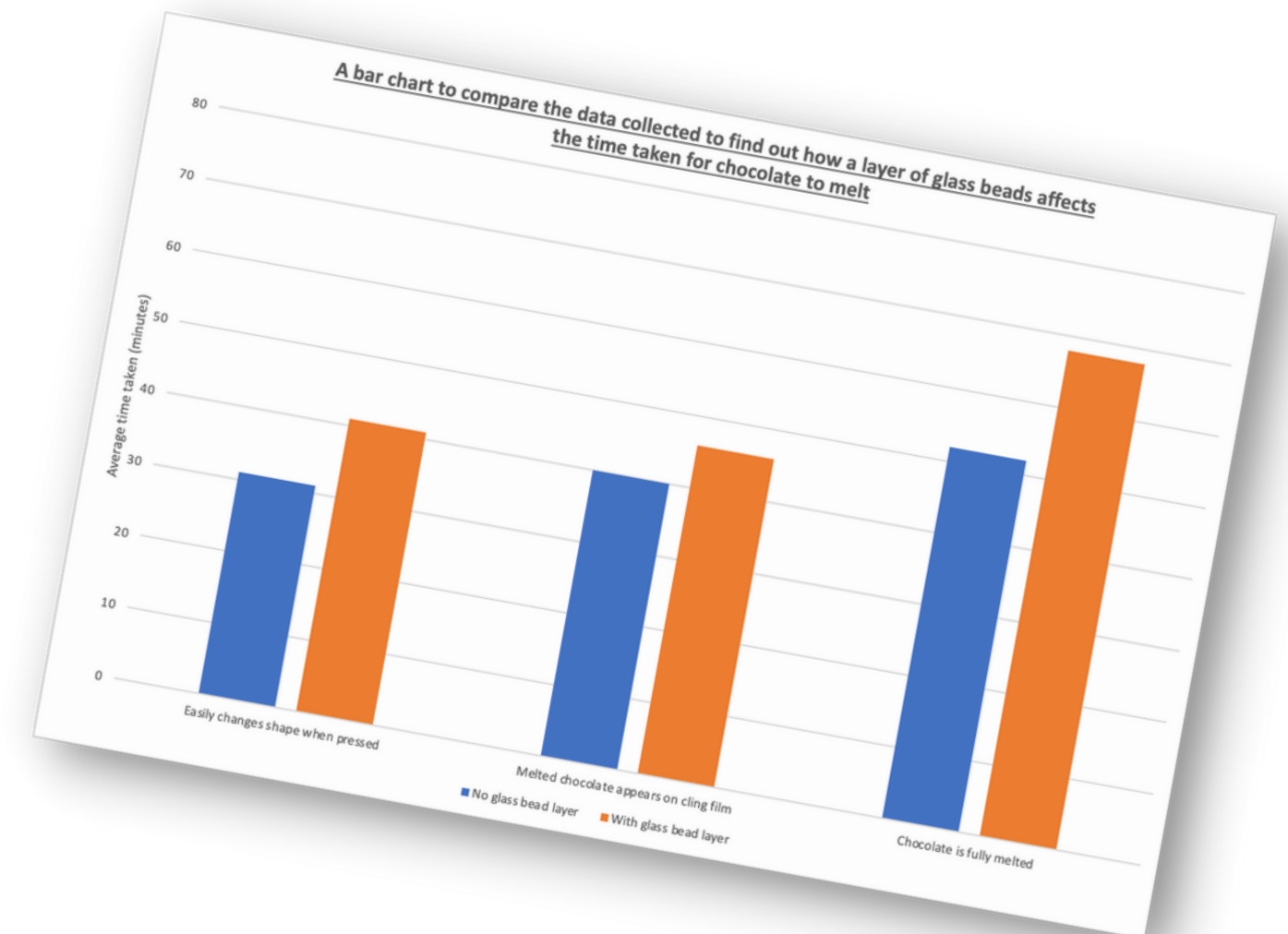
# How will we measure how long it takes for the chocolate to melt?

|                       | Time taken for Chocolate to change shape when pressed (min) |        |        | Time taken for Melted chocolate to appear on cling flim (min) |        |        | Time take for chocolate to complete melt (min) |        |        |
|-----------------------|---|--------|--------|---|--------|--------|--|--------|--------|
|                       | Test 1  | Test 2 | Test 3 | Test 1  | Test 2 | Test 3 | Test 1   | Test 2 | Test 3 |
| NO GLASS BEAD LAYER   | 32  | 30     | 30     | 38  | 40     | 42     | 52   | 50     | 52     |
| WITH GLASS BEAD LAYER | 40  | 42     | 40     | 44  | 46     | 48     | 66   | 68     | 70     |



A block chart to show...

**...the difference in time taken to melt between the chocolate buttons with glass on, and those without.**



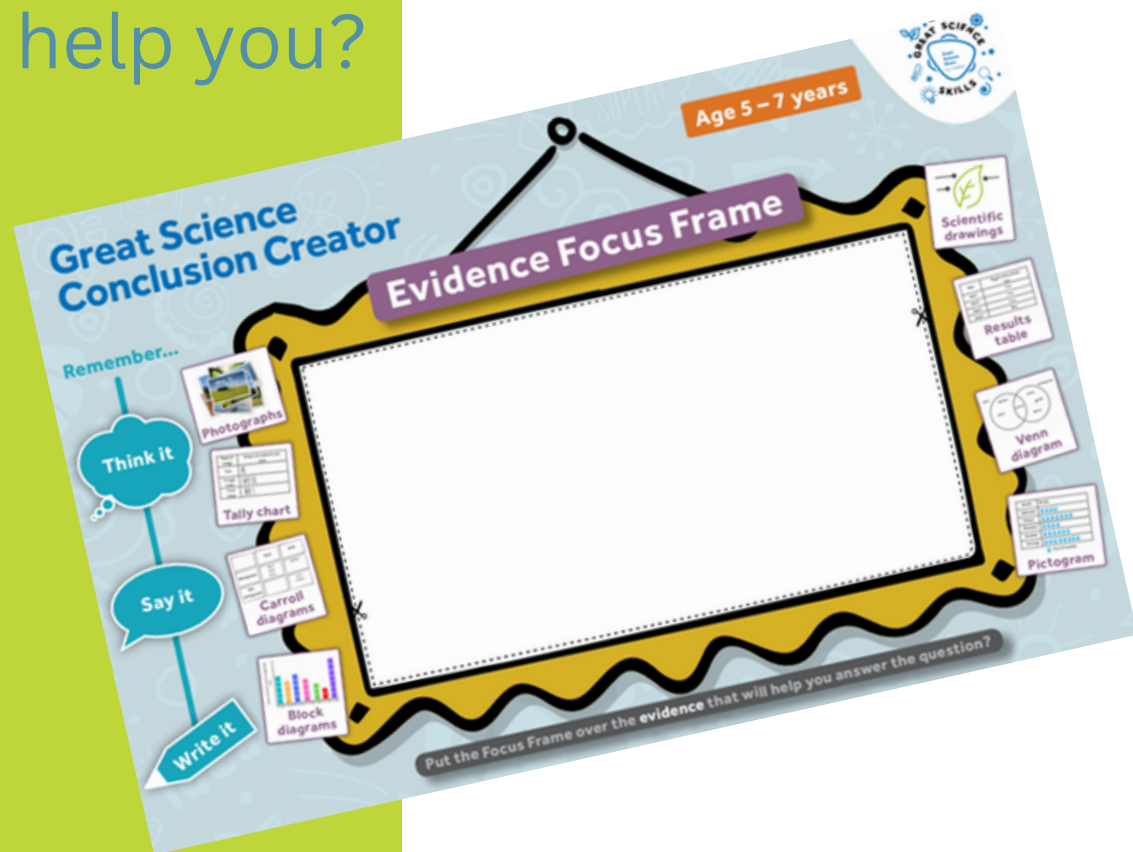
# We are ready to draw our conclusions



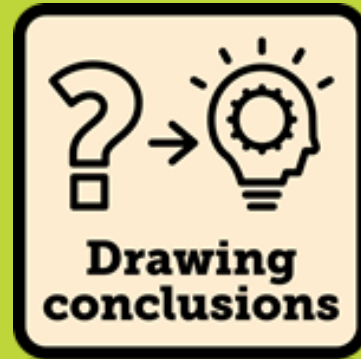
How do glass beads change the speed chocolate melts?

We have found out that...  
We think this because we observed...  
Our results show this because...

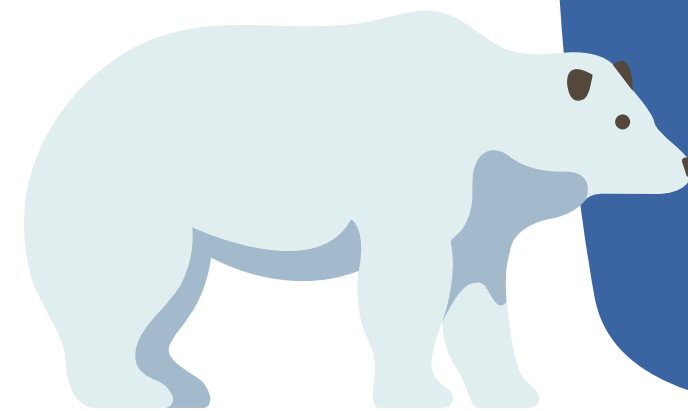
Can the Conclusion Creator help you?







# Apply your conclusions



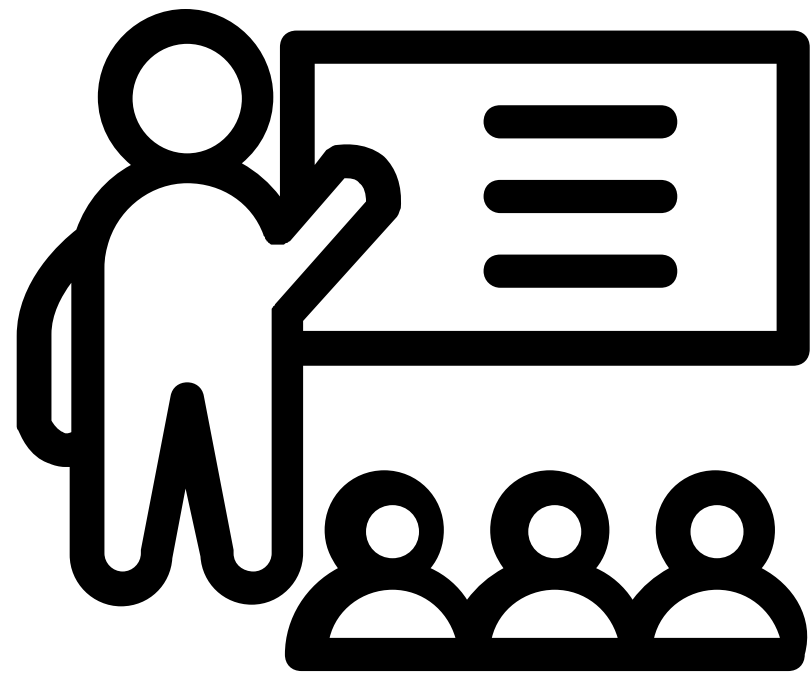
How could we prevent polar ice from melting?



**Can you predict what adding a layer of glass beads to the polar ice caps would do?**

Would it lead to them melting as quickly, quicker or slower?





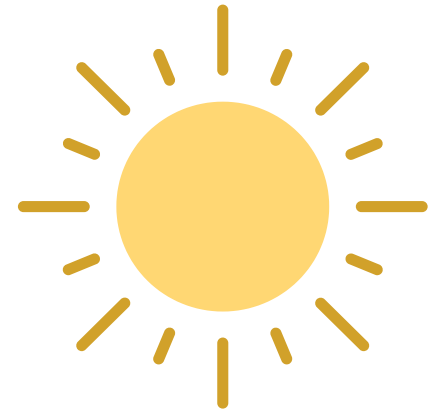


**Questioning**





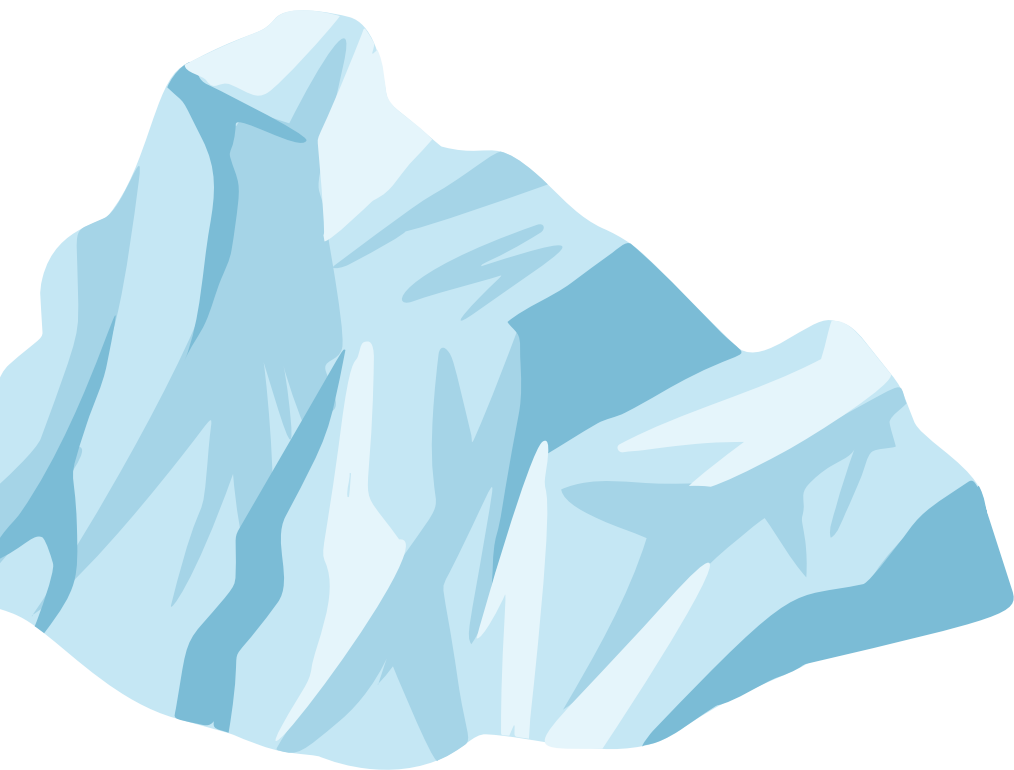
# Glossary



**Arctic ice**  
the cover of sea ice in  
the Arctic region of  
the Earth

**Melting**  
when a solid turns  
into a liquid

**Reliable**  
able to be trusted



**Global warming**  
the long-term  
heating of the Earth's  
climate system

**Comparative test**  
You are changing one  
thing whilst trying to  
keep everything else  
the same

**Variable**  
what can be  
controlled or  
changed

# With special thanks to PSTT and the Worshipful Worshipful Society of Glass Sellers.



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