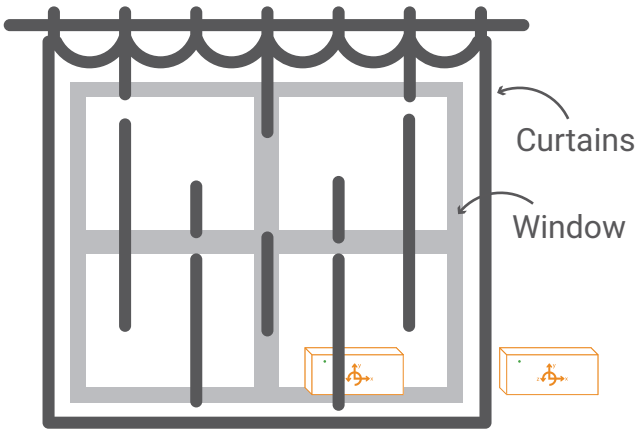
Saving Energy with Curtains

Exploration

Does closing blinds or curtains save energy? Often the blinds or curtains in a room are left open when it is cold outside, even when no one is using the room. Would closing them save energy?

Materials

- Room that has blinds or curtains
- 2 PocketLabs (experiment can also be done with 1 PocketLab)



Objective

In this experiment, students will:

1. Determine how to use curtains to save energy when it is cold outside.

Method

1. Place first PocketLab on the window still with tape. Place the other PocketLab near the window inside the room. Have the blinds/curtains in the entire room closed.
2. Collect a series of temperature readings over the course of 15 minutes from both PocketLabs.
3. Open the blinds or curtains and wait 5 minutes. Repeat steps 1 and 2 with the blinds open.

Predictions

- When the blinds are closed, how do you think the temperature in the room will be affected? Will it increase, decrease, or not make a significant difference? Explain your prediction.
- How will the temperature of the glass be affected when the blinds are closed? Will it increase, decrease, or not make a significant difference? Explain your prediction.

Data Analysis and Observations/Conclusions

- Analyze the graphs.
- When the blinds are closed, how is the temperature of the room affected? How would this affect the energy required to keep a room heated during the winter?
- What happens to the temperature of the glass when the blinds are closed? Why did it increase, decrease or stay the same?