

Brackett HVAC System Operation

Building Equipment-

An air handler located in the basement provides 100% fresh air to the main areas and corridors of the building. An exhaust fan is in the attic which exhausts air from the bathrooms and common spaces. There is a heat recovery coil which pre-heats the incoming outdoor air. It does so by flowing the warmer exhaust air through a coil filled with a glycol mixture in the exhaust air stream and pumping that warmed glycol to another coil in the fresh air stream, thus warming the cold outdoor air. There are two natural gas boilers which produce hot water for building heat. Only one is typically needed to heat the building unless it's 20 below zero, so the boiler not running at the time is considered a backup boiler. The hot water is circulated throughout the building using pumps through fin tube or panel heaters that are situated in every space of the building, most typically under windows.

Heating control-

Outdoor temperatures determine when a building's heating pumps turn on. When outdoor temperatures are less than 55 degrees, the heat will be enabled. If outdoor temps stay below 65 for a day or so, the heat will also be enabled until they rise above 65 degrees, at which point the heat shuts off. The heating system's water temperature is "reset" based on outdoor air temperatures. The colder it is outside, the hotter the circulating hot water will be. This is an energy savings strategy that is quite common.

Domestic hot water is made from the building boilers through a hot water tank heat exchanger.

Occupant comfort control-

Room heaters have a thermostatic control that regulates the amount of hot water flowing through each heater. These controllers sense the room temperature and allow the correct water flow to achieve the desired temperature set point which is indicated on the dial of each unit. These dials are sensitive, and their control range is between 50 and 72 degrees. A small turn of the knob can mean a big temperature change, so be cautious and make small adjustments.

The following pages explain how to use these controls and what you can do to make your space as comfortable as possible.

If you've followed the instructions in this document, and your room is still too hot or cold, please work with your RA to submit a maintenance/service request to Facilities so someone can repair. Please DO NOT open your window as a "fix" to a broken heater control.

You can also watch this 3-minute and 50-second [Student video on heating](#) where fellow students show you how to use your heater control.



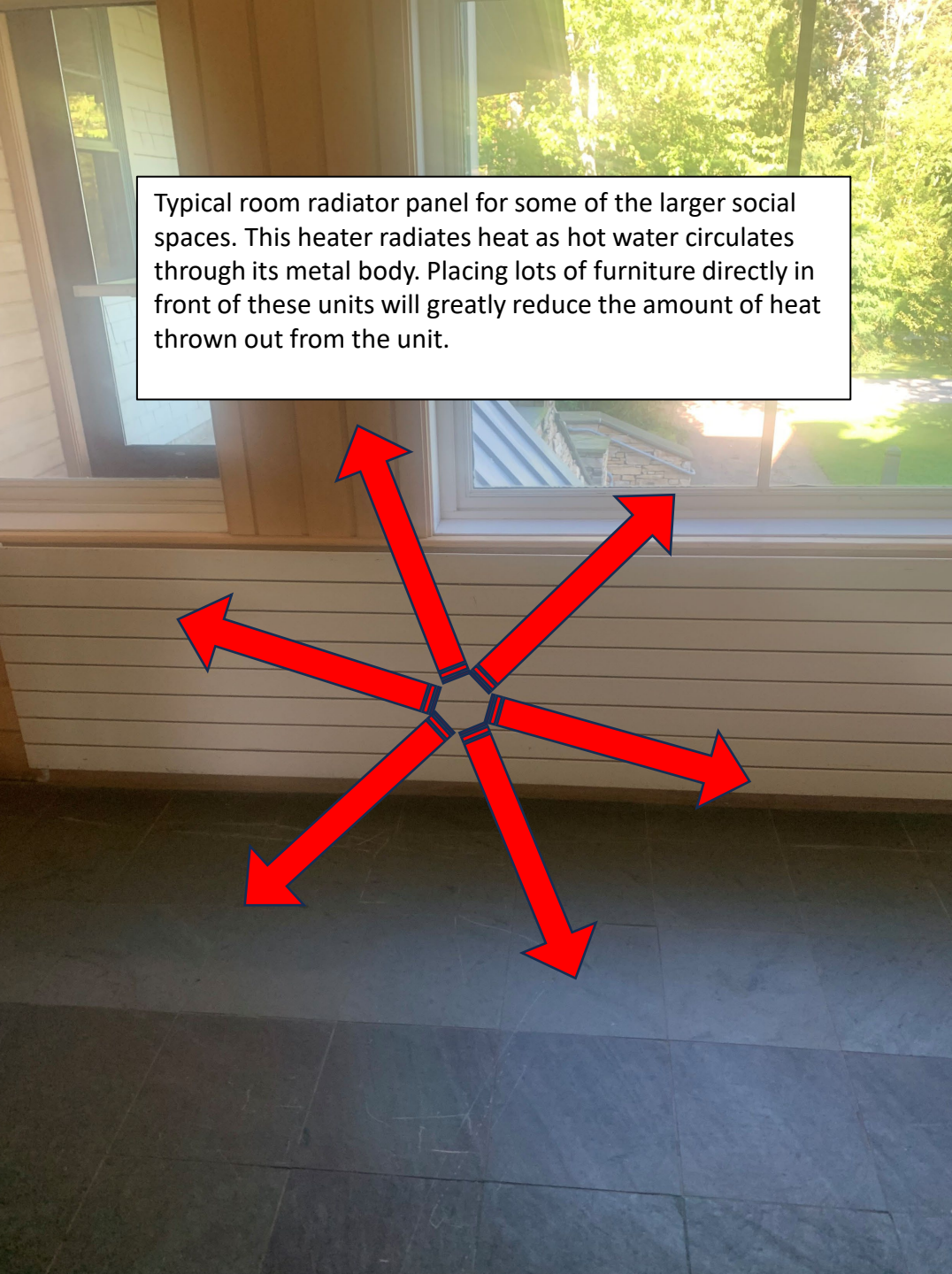
This control operates the heater in your room. The QR sticker can be used to quickly navigate to Facilities page on heating/cooling for buildings on campus.

The small triangle indicator will show you the position that the control is in. This one is set on snowflake, or 50 degrees.

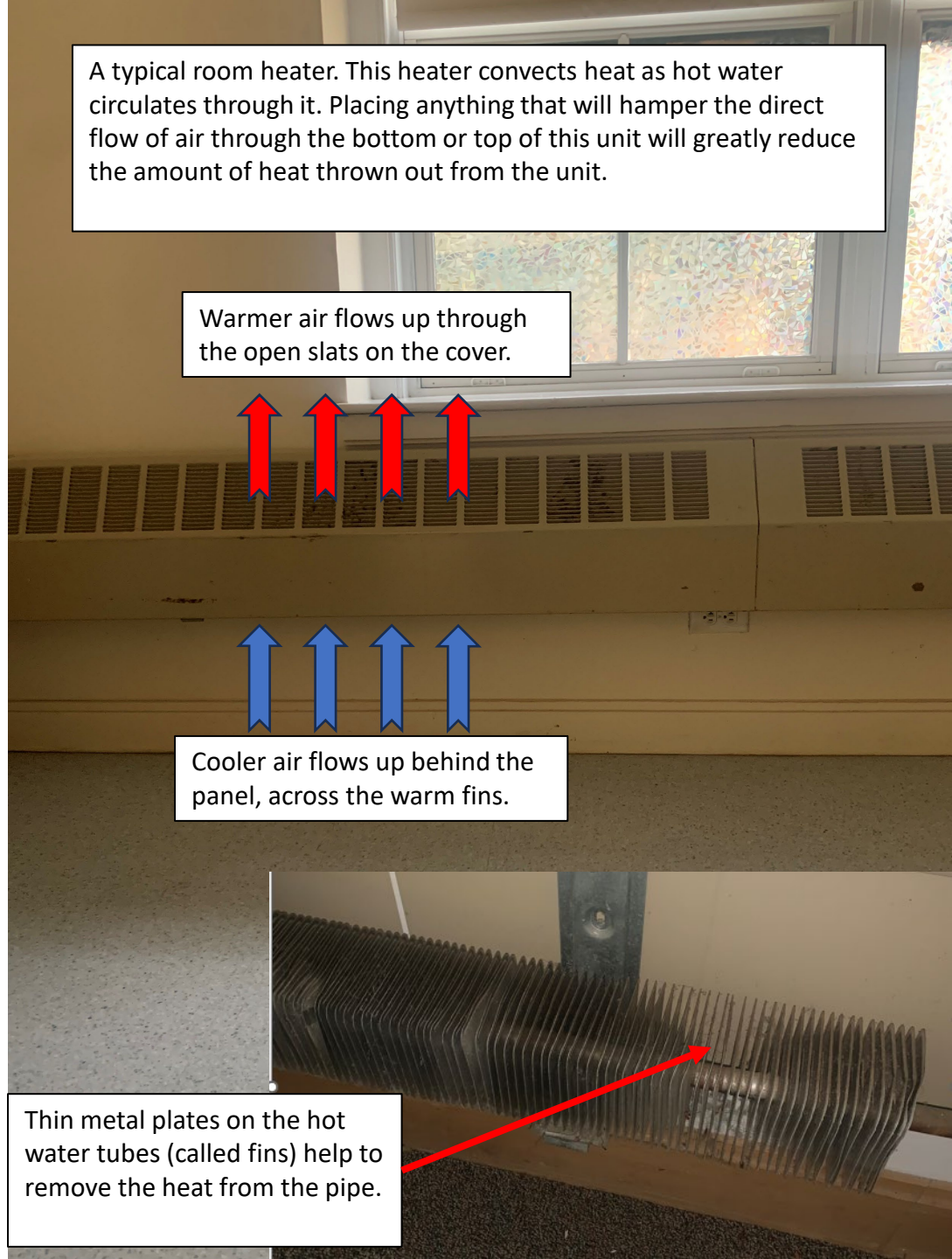
This control is set for the maximum room temperature setting of 72 degrees.

This room is set for a room temperature of 68 degrees.

DIAL SETTINGS				
*	1	3	5	6
50	54	61	68	72
Frost Protection				



Typical room radiator panel for some of the larger social spaces. This heater radiates heat as hot water circulates through its metal body. Placing lots of furniture directly in front of these units will greatly reduce the amount of heat thrown out from the unit.



A typical room heater. This heater convects heat as hot water circulates through it. Placing anything that will hamper the direct flow of air through the bottom or top of this unit will greatly reduce the amount of heat thrown out from the unit.

Warmer air flows up through the open slats on the cover.

Cooler air flows up behind the panel, across the warm fins.

Thin metal plates on the hot water tubes (called fins) help to remove the heat from the pipe.



This desk is hampering a small amount of the airflow because it is tight to the heater. If this is the only blockage for this room, most likely not an issue.



The area below this bed is clear and allows the proper flow of air through the heater. The bed appears to be touching the heater, and a bedspread can be covering up the open slats on the heater face. Pulling the bed away from the heater a few inches to keep the slats free for air movement is advised. Also, do not clutter the area below the bed with boxes or storage bins.

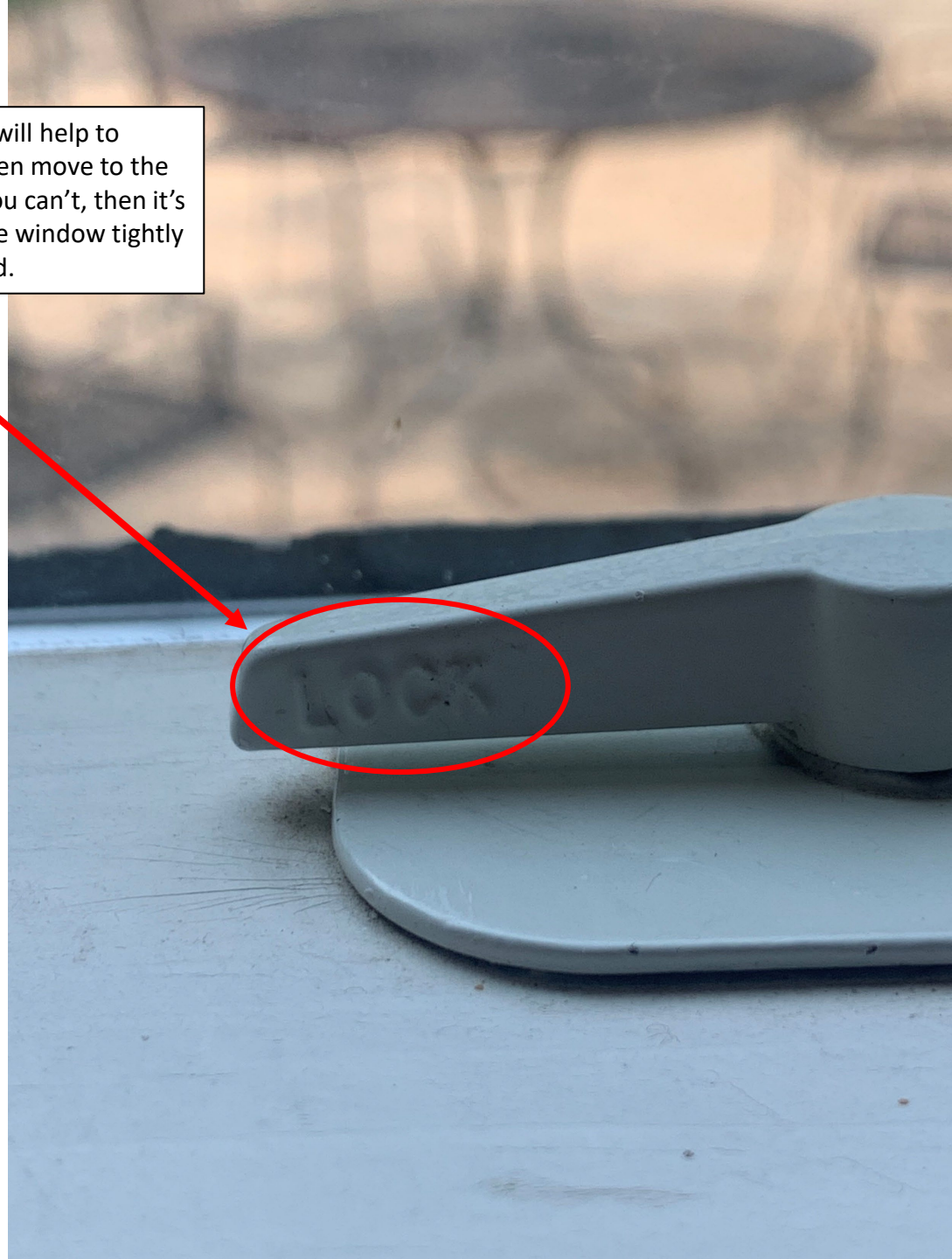


Do not place mini-fridges directly below one of these controls. The heat given off from the fridge will not allow the control to work properly.

Windows left unlocked will not seal properly and will allow a draft to enter. Even windows that appear closed, if not locked, will have a noticeable draft during periods of cold weather.



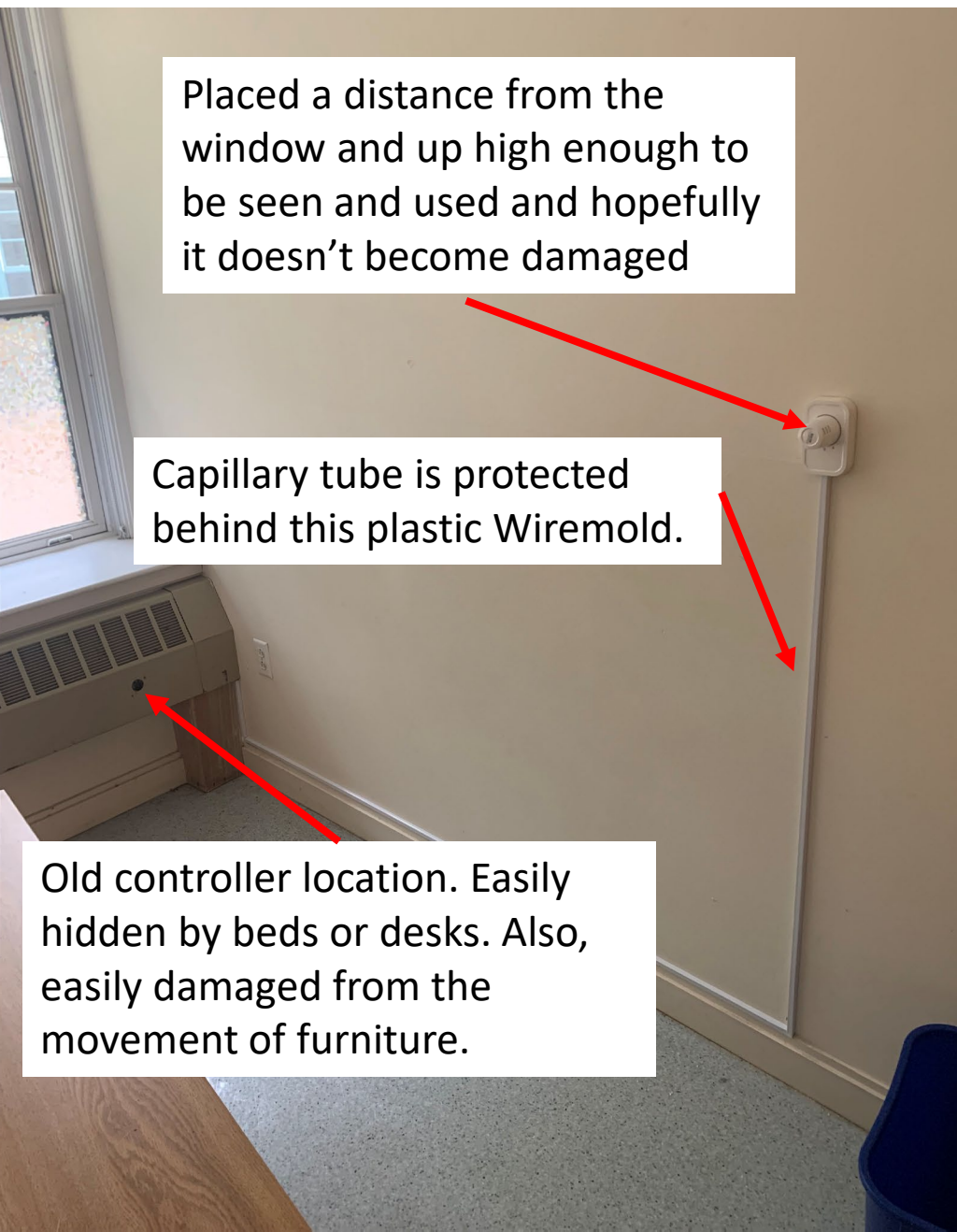
Having a window that is shut AND locked, will help to reduce drafts. Close the window tightly, then move to the lock position. Try to open the window, if you can't, then it's locked. If you are having trouble closing the window tightly enough to lock it, ask for help from a friend.



While they look different, these controllers have the same settings and work the same as the room heater control. You will see these in bathrooms.



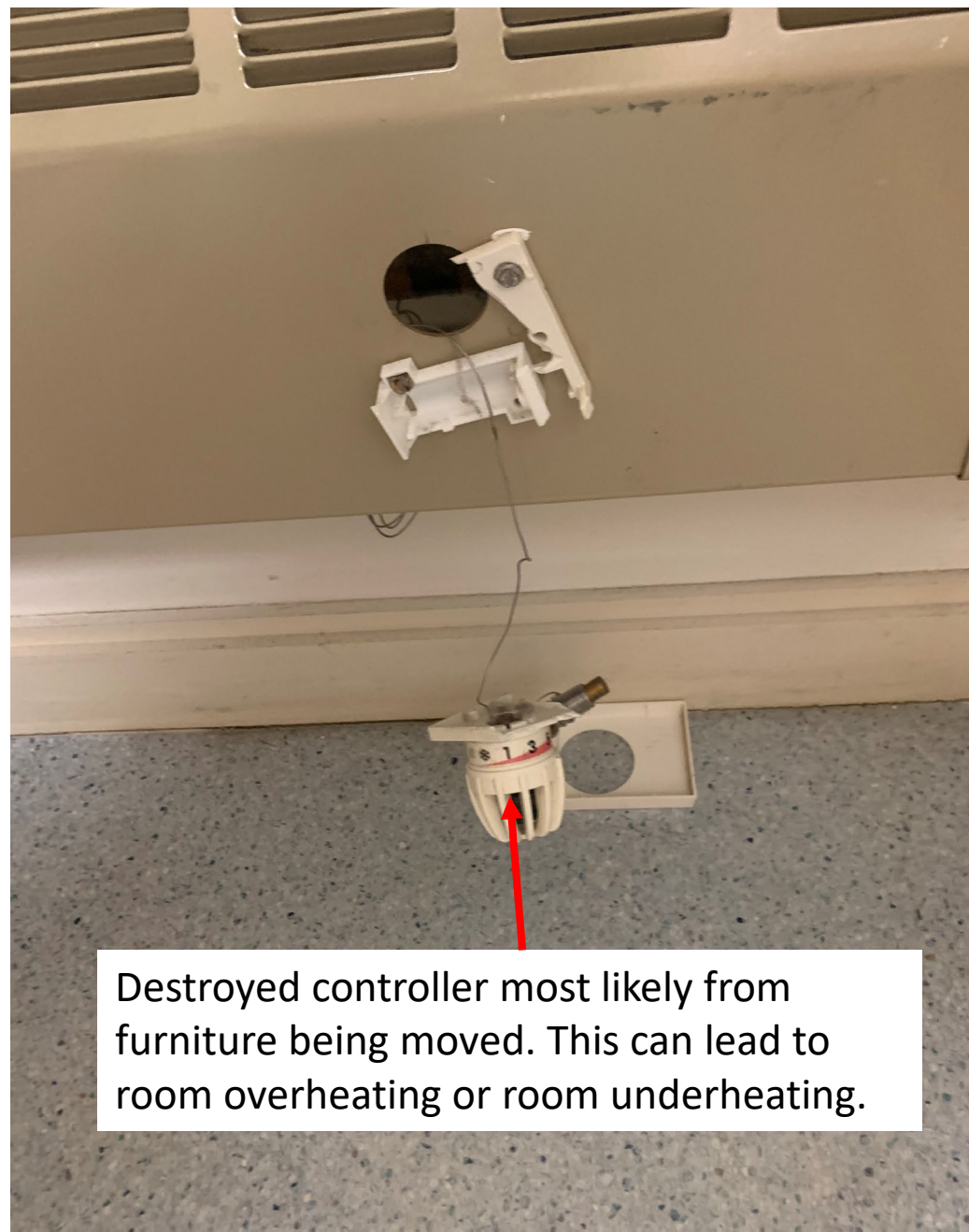
Along with trying to save energy by giving users more convenient access to adjust their temperature control, moving these controllers can help with damage that can create heating issues for those rooms.



Placed a distance from the window and up high enough to be seen and used and hopefully it doesn't become damaged

Capillary tube is protected behind this plastic Wiremold.

Old controller location. Easily hidden by beds or desks. Also, easily damaged from the movement of furniture.



Destroyed controller most likely from furniture being moved. This can lead to room overheating or room underheating.