Reading: What temperatures cause scald burn injuries?

Directions: Use the text and chart below. Determine if any of this information can help us define the criteria for the temperature range of our homemade heaters. Underline important text and draw arrows to parts of the chart to show the information you think will help us define our temperature range criteria.

General Background Information on Scald Burns

Scald burns are burns caused by something wet. Scald burns can happen to anyone, but young children, older adults, and people with disabilities are the most likely to suffer scald burns. Most scald burn injuries happen in the home, when people prepare or serve hot food or beverages. They can also happen when a person is exposed to hot tap water in bathtubs or showers.

The temperature to which skin is exposed and how long it is exposed determines how bad a scald injury is. To help avoid these injuries, most home water heaters have a maximum water temperature of 48°C (120°F). The skin of adults can be exposed to this temperature for an average of five minutes before a serious burn happens.

If a hot liquid has a temperature of 60°C (140°F), it takes only five seconds or less for a serious burn to occur. Coffee, tea, hot chocolate, and other hot beverages are usually served at 71-82°C (160-180°F). Spilling one of these on human skin almost instantly causes burns that need surgery.

Time and Temperature Relationship to Severe Burns[4]

Water temperature		*Time for a third degree burn to occur*
155° F	68° C	1 second
148° F	64° C	2 seconds
140° F	6 0° C	5 seconds
133° F	56° C	15 seconds
127° F	52° C	1 minute
124° F	51° C	3 minutes
120° F	48°C	5 minutes
100° F	37° C	safe temperature for bathing

Source: American Burn Association at http://ameriburn.org/wp-content/uploads/2017/04/scaldinjuryeducatorsguide.pdf