

2) If the temperature heats up quickly, the material has a low heat capacity. If the temperature heats up slowly, the material has a high heat capacity.

3) NA

4) We didn't give the lamps time to heat up, which may have caused the first material we tested to be cooler than the others. The class didn't check to see that all the lamps were identical in size and wattage, so there might have been a variation in the bulbs. Each of the groups followed the same procedure, but did so individually at different times, so there might have been timing errors.

5) To improve the lab, we could take measurements at more time intervals, rather than one every five minutes, so that we would have data from the first few minutes and cooling times. Additionally, we could keep the lamp on for a longer time to simulate a full day instead of only 10 minutes.

6) To take this lab further, testing could be done to find the stability of a specific material. Testing could also be done to see how the material would react to moisture to simulate rain/ outside weather.

CLEAR Paragraph

After testing how carpet, bamboo, and hardwood respond to heat, we found that carpet gains the most heat in the least amount of time. For the experiment, each group tested to find how materials reacted to heat. We set up 125-watt heat lamps 40 cm above the counter's surface. We set one material under the lamp at a time and took the temperature before turning the lamp on. We used an infrared laser thermometer to take the temperature of the center of the surface at 5 minutes and 10 minutes. At 0 mins, the temperature of the carpet was 23 degrees (Celsius). At 5 minutes, it was 50.5 degrees and at 10 minutes it was at 53 degrees. The hardwood was initially 23 degrees Celsius, 44 degrees five minutes in, and 51.5 degrees at 10 minutes. The bamboo started at 22 degrees, 35 degrees at 5 minutes, and 40 degrees at 10 minutes. The temperature of the carpet was higher than both bamboo and hardwood after being exposed to the same amount of heat for the same amount of time. The carpet has a lower heat capacity, which means it will take in energy faster. Since its temperature was higher, we found that the carpet is best to use as a floor since it conducts heat well.