

>> Chemistry Diane Jewell: What is the specific heat of a substance if 2.33 calories are needed to raise the temperature of 7.20 grams by 3.00 degrees C? Okay. Let's take a look at what we have, here. First thing, they're asking about specific heat. So, that's going to be what we are going to solve for. They said the substance needs 2.33 calories to raise the temperature of 7.20 grams by 3 degrees C. So, these are all pieces of information that we can use. So, we can go ahead and organize those over here. Our calories, our grams. And raising the temperature is the same as delta T. It's the change in temperature. And the change in temperature is 3.00 degrees. Okay. So, since they're asking about specific heat, we want to look at the specific heat equation. Specific heat equals calories divided by grams times delta T. And that's exactly what we have, over here. So, we can go ahead and plug those numbers in; 2.33 divided by 7.20 times the 3 degrees, here. And we end up with a specific heat of .108. Now, look at the units on this. This is calories per gram degrees C. Calories per gram degree C. Okay. That's what specific heat, always will have units of calories per gram degrees C. And then, once we get the specific heat, we can go back to our table and look on the table and identify what substance is this that has a specific heat of .108.