#Jenny

Finally I get this ebook, thanks for all these I can get now!

#Rio

Cool! I'am really happy

#Markus Jensen

I did not think that this would work, my best friend showed me this website, and it does! I get my most wanted eBook

#Hun Tsu

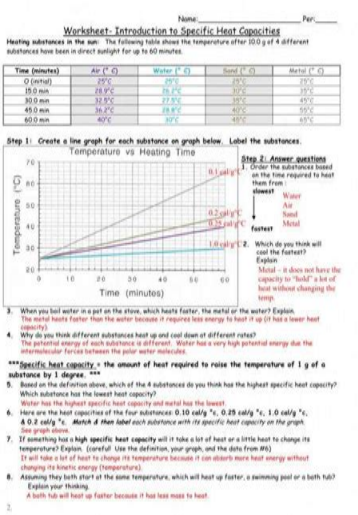
wtf this great ebook for free?!

#Che Salsa

My friends are so mad that they do not know how I have all the high quality ebook which they do not!

#Diego Butler

so many fake sites. this is the first one which worked! Many thanks



Name:_____ Per:____

Worksheet- Introduction to Specific Heat Capacities

Heating substances in the sun: The following table shows the temperature after 10.0 g of 4 different substances have been in direct sunlight for up to 60 minutes.

Time (minutes)	Air (° C)	Water (° C)	Sand (° C)	Metal (° C)
0 (initial)	25°C	25°C	25°C	25°C
15.0 min	28.9°C	26.1°C	30°C	35°C
30.0 min	32.5°C	27.5°C	35°C	45°C
45.0 min	36.2°C	28.8°C	40°C	55°C
60.0 min	40°C	30°C	45°C	65°C

Step 1: Create a line graph for each substance on graph below. Label the substances.

Temperature vs Heating Time

Temperature (°C)

Time (minutes)

Step 2: Answer questions

1. Order the substances based on the time required to heat them from slowest to fastest: Water, Air, Sand, Metal

2. Which do you think will cool the fastest? Explain. Metal - it does not have the capacity to "hold" a lot of heat without changing the temp.

3. When you boil water in a pot on the stove, which heats faster, the metal or the water? Explain. The metal heats faster than the water because it requires less energy to heat it up (it has a lower heat capacity).

4. Why do you think different substances heat up and cool down at different rates? The potential energy of each substance is different. Water has a very high potential energy due the intermolecular forces between the polar water molecules.

***Specific heat capacity = the amount of heat required to raise the temperature of 1 g of a substance by 1 degree. ***

5. Based on the definition above, which of the 4 substances do you think has the highest specific heat capacity? Which substance has the lowest heat capacity? Water has the highest specific heat capacity and metal has the lowest.

6. Here are the heat capacities of the four substances: 0.10 cal/g °c, 0.25 cal/g °c, 1.0 cal/g °c, & 0.2 cal/g °c. Match & then label each substance with its specific heat capacity on the graph. See graph above.

7. If something has a high specific heat capacity will it take a lot of heat or a little heat to change its temperature? Explain. (careful! Use the definition, your graph, and the data from #6) It will take a lot of heat to change its temperature because it can absorb more heat energy without changing its kinetic energy (temperature).

8. Assuming they both start at the same temperature, which will heat up faster, a swimming pool or a bath tub? Explain your thinking. A bath tub will heat up faster because it has less mass to heat.

Download PDF version of :

Worksheet Introduction To Specific Heat Capacities Answers