ANSWER KEY: TIME / TEMPERATURE GRAPH OF 2 SUBSTANCES

A – F: SEE GRAPH KEY
G: SHOWN ON GRAPH KEY

QUESTIONS:

1. No, the graphs represent different substances; since each of the 2 lines has different melting/freezing and vaporization/condensation points, the substances must be different.

2. -10^0C 3. 20^0C 4. 60^0C 5. 100^0C

6. if had more of each substance (greater volume)plateaus would be longer (more time to melt more ice, for example). THE TEMPERATURE OF THE PLATEAUS WOULD NOT CHANGE!
(a lot of ice still melts at 0^0C)

7. The freezing point would be lower – see graph key (think – road salt melts ice, even though the air temperature may be below freezing – therefore, the melting point of "salty ice" is lower)

8. The boiling point would be higher – see graph key (salt crystals help to "get in the way" and prevent water molecules from breaking free from each other; therefore, the boiling point of "salty water" is higher)