

STUDY GUIDE

Chapter 1

Using SI Units

Match the terms in Column II with the descriptions in Column I. Write the letter of the correct term in the blank on the left.

Column I	Column II
_____ 1. distance between two points	a. time
_____ 2. SI unit of length	b. volume
_____ 3. tool used to measure length	c. mass
_____ 4. units obtained by combining other units	d. density
_____ 5. amount of space occupied by an object	e. meter
_____ 6. unit used to express volume	f. kilogram
_____ 7. SI unit of mass	g. derived units
_____ 8. amount of matter in an object	h. Liter
_____ 9. mass per unit of volume	i. second
_____ 10. temperature scale of most laboratory thermometers	j. kelvin
_____ 11. instrument used to measure mass	k. Length
_____ 12. interval between two events	l. balance
_____ 13. SI unit of temperature	m. meter stick
_____ 14. SI unit of time	n. thermometer
_____ 15. instrument used to measure temperature	o. Celsius scale

Circle the two terms in each group that are related. Explain how the terms are related.

16. Celsius degree, mass, kelvin _____

17. balance, second, mass _____

18. kilogram, liter, cubic centimeter _____

19. time, second, distance _____

20. decimeter, kilometer, kelvin _____

REINFORCEMENT

Chapter 1

Using SI Units

1. Complete the table below by supplying the missing information.

Measurement	Base Unit	Symbol
	meter	
mass		
	second	
temperature		

In each of the following, circle the units that would most likely be used to express each kind of measurement. You may circle more than one answer for each item.

- | | |
|---|----------------------------------|
| 2. Volume of a solid: mL m ³ cm ³ L | 6. Mass: kg K cm ³ mg |
| 3. Volume of a liquid: mL mg cm ³ L | 7. Time: kg K s mm |
| 4. Density of a material: g g/cm ³ kg/m ³ L | 8. Length: K km m cm |
| 5. Temperature: °K K °C kg | |

For each pair of equations, write the letter of the equation that expresses an equal value.

- | | |
|---------------------------------------|----------------------------|
| _____ 9. a. 1 L = 1 dm ³ | b. 1 L = 1 cm ³ |
| _____ 10. a. 1 mL = 1 cm ³ | b. 1 cm ³ = 1 L |
| _____ 11. a. 0° C = -273 K | b. 0 K = -273° C |
| _____ 12. a. 1 kg = 100 g | b. 1000 g = 1 kg |
| _____ 13. a. 400 cm = 4.0 m | b. 400 cm = 0.40 m |
| _____ 14. a. 1 dm = 10m | b. 1 dm = 0.10 m |
| _____ 15. a. 100° C = 373 K | b. 373 K = 10° C |

16. Calculate the volume of the box in the diagram.

