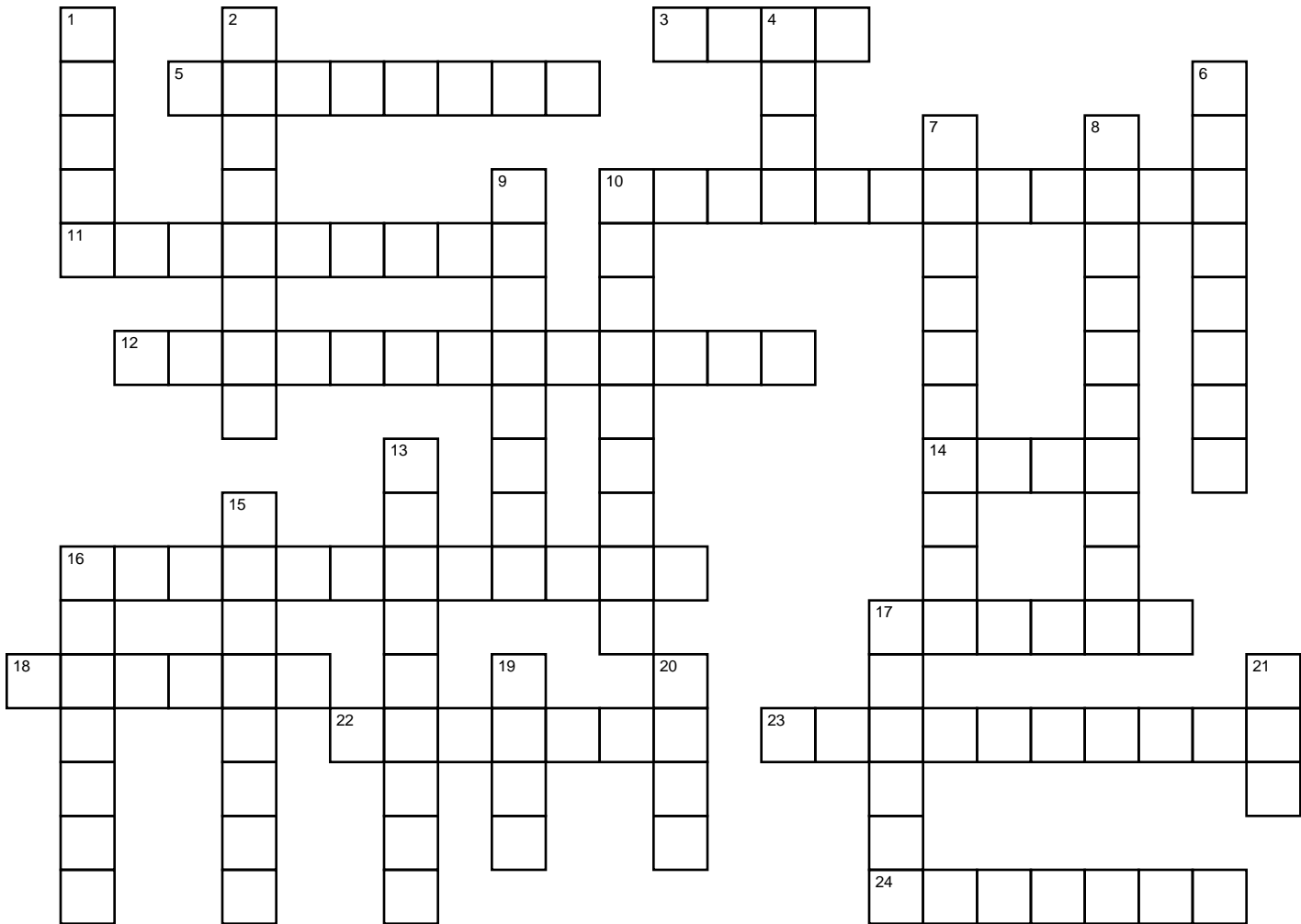


# Chapter 4: Motion

## Integrated Science: Physics & Engineering Design

Name \_\_\_\_\_ Period \_\_\_\_\_



### Across

3. a \_\_\_ is NOT a projectile because it is affected by forces generated by its own power
5. the speed and direction of an object, this is a vector quantity
10. negative acceleration is also called
11. in a graph, the \_\_\_ variable is usually plotted on the y-axis
12. actual speed of an object at any moment
14. speed = distance/ \_\_\_
16. \_\_\_ is the rate at which speed changes
17. an acceleration of 10 km/h/s means that the velocity is changing by 10 km/h every \_\_\_
18. variable that gives direction information as part of the value
22. a \_\_\_ line on a position vs. time graph means a faster speed
23. on a speed vs. time graph, constant speed is shown by a straight \_\_\_ line
24. 9.8 m/s/s is the acceleration due to \_\_\_ on Earth

### Down

1. the rate of motion of an object, how quickly something moves
2. acceleration might be a \_\_\_ in velocity
4. the slope of a line on a graph is the ratio of the \_\_\_ over the run.
6. if the speed stays the same it is a \_\_\_ speed
7. an object moving through space and affected only by gravity
8. the Earth is rushing through space at a speed of \_\_\_ thousand miles per hour
9. an object moving at a constant speed always creates a \_\_\_ line on a position vs. time graph
10. like velocity, acceleration is a vector quantity because it has \_\_\_
13. acceleration might be only a change in \_\_\_
15. acceleration is the rate of change in \_\_\_
16. total distance/total time = \_\_\_ speed
17. in a \_\_\_ relationship between variable, large changes in one variable cause similarly large changes in the other variable

## Down

19. in a \_\_\_ relationship between variables, large changes in one variable cause only small changes in the other variable
20. \_\_\_ fall is acceleration due to the force of gravity alone - no other forces are acting on the object
21. the ideas in chapter 4 apply to \_\_\_ motion