Newton’s Laws of Motion Mr. Stewart

Physical Science November, 2012

1. Who was Sir Isaac Newton?
2. How many laws of motion did Newton propose?
3. What is the first law of motion called?
4. What does Newton’s first law of motion say?
5. What is motion?
6. What is a force?
7. What is inertia?
8. What is required to change the motion of an object?
9. What is the difference between a balanced and an unbalanced force?
10. What unbalanced forces act on a golf ball?
11. Why would a golf ball stay on a tee forever?
12. What kind of unbalanced force would cause a soccer ball to move? What would have to happen in a tug of war for both teams not to move?
13. What makes a long line of box cars motionless?
14. Why don’t you feel a bug being smashed on your windshield?
15. Why don’t objects keep moving forever?
16. What affects the motion of objects on Earth?
17. Why would an object in motion in outer space stay in motion forever?
18. Why does an object in motion on Earth slow down and eventually stop?
19. What are four types of friction?
20. What causes a book sliding on a table to come to a stop?
21. What would happen to the sliding book if there was no friction?
22. If your car hit a brick wall, why would you keep flying forward?
23. What does Newton’s 2nd law of motion say?
24. What is a newton (N)?
25. Force = mass X \_\_\_\_\_\_\_\_.
26. What is acceleration?
27. Make a ball twice as big, but keep its acceleration constant. What happens to the force on the ball?
28. What happens to the force on an object if its mass is doubled and the acceleration of the object is doubled?
29. Where does the force on an object come from?
30. Different masses accelerate to Earth at the same rate, but with different \_\_\_\_\_\_.
31. Name four types of forces.
32. What does Newton’s 3rd law of motion say?
33. What happens when object A interacts with object B.
34. What are the two forces that interact called?
35. What is an example of a balanced force?
36. What causes you to move away from the wall if you are standing on a skateboard and push against the wall?
37. What causes a fish to be able to swim through water?
38. What pushes on a bird’s wings as it flies through the air?
39. What makes it possible for a bird to fly?
40. Describe an action/reaction pair between a baseball and a baseball bat.
41. How does a car move forward?
42. What causes a rocket to be propelled upward?
43. What is a definition of velocity?