

Directed Reading A

Section: What Is a Force?

1. In science, a push or a pull is a(n) _____
2. Any change in motion is caused by a(n) _____
3. Force is expressed by a unit called the _____

FORCES ACTING ON OBJECTS

4. Force always acts on a(n) _____.
5. Give two examples of objects on which you exert forces when you are doing your schoolwork.

6. Give one example of a force that does not cause an object to move.

7. What is one example of an unseen source exerting a force?

8. What is one example of an unseen receiver of a force?

DETERMINING NET FORCE

9. The combination of all forces acting on an object is

10. How is net force determined if two students moving a piano exert force in the same direction?

Directed Reading A *continued*

11. Two dogs are pulling on a rope in opposite directions. The dog on the left pulls with a force of 10 N, while the dog on the right pulls with a force of 12 N. Which dog will win the tug-of-war? What is the net force?

BALANCED AND UNBALANCED FORCES

12. What will knowing the net force on an object tell you about the forces on the object?

13. When are the forces on an object *balanced*?

14. Forces are unbalanced when the net force is not equal to a certain number of newtons. What is that number?

15. What do you need to cause an object to start moving?

16. Give an example of an object that continues to move when an unbalanced force is removed.
