

# Directed Reading A

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## 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.

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

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

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

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### DETERMINING NET FORCE

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

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

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**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?

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**BALANCED AND UNBALANCED FORCES**

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

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

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

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

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

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