

Name:
Date:

Period:

Review for Unit 4 Test: Force and Motion; Simple Machines

Force and Motion

1. Describe an unbalanced force (p.118).
2. Draw an example:
3. Describe a balanced force.
4. Draw an example:
5. What is net force?
6. What is inertia (p. 120)?
7. Give an example of inertia in the real world.
8. State Newton's First Law.
9. What is Newton's First Law known as?
10. What increases inertia as it increases (p. 121)?
11. What is friction (p.128)?
12. What would happen if machines didn't have friction (p. 129)?
13. What is gravity (p. 130)?
14. 2 people are pushing on a box. Person 1 is pushing the box to the right at a force of 10N. Person 2 is pushing the box to the left with a force of 10N.
 - a. Will the box move?
 - b. What is the net force acting on the box?
 - c. Please explain your answer.

15. 2 teams of 7th Graders are playing a game of tug-of-war. Team 1 (4 kids) pulls with a force of 20N to the left. Team 2 (5 kids) pulls with a force of 15N to the right.
- Which team will win tug-of-war?
 - Explain why this team won.
 - What is the net force of the tug-a-war game?

Simple Machines

16. What is a machine (p.160)?
17. What are the 3 ways that machines make work easier (p. 161)?
18. As related to a machine, what is input and output force?
19. Draw a tree map that classifies the six types of simple machines. Describe each machine's function and give an example of each (p. 168).
20. What is a fulcrum (p. 171)?
21. How does the fulcrum's position affect a first class lever (p. 172)?
22. Describe how a catapult works.