

SOME FORCEFUL LESSONS

Forces and energy—they're all around you! They keep your feet from slipping out from underneath you. They keep the moon from flying off into space. They make your favorite sports activities possible. They keep the drink in your glass from floating up into your face. They provide the thrills you get at an amusement park or on a water slide. Make the correct choices about the kinds of forces or energy in these examples. Circle each right answer.

1. What keeps your feet from sliding out from underneath you with every step you take?

(friction, gravity, work)



2. Why do your hands get warm when you rub them together?

(potential energy, centripetal force, friction)



3. What kind of energy does the chain have that's pulling the car up to point A?

(potential, kinetic)

4. What kind of energy does the car itself have at point A?

(potential, kinetic)

5. At point B, why do the riders pop up out of their seats?

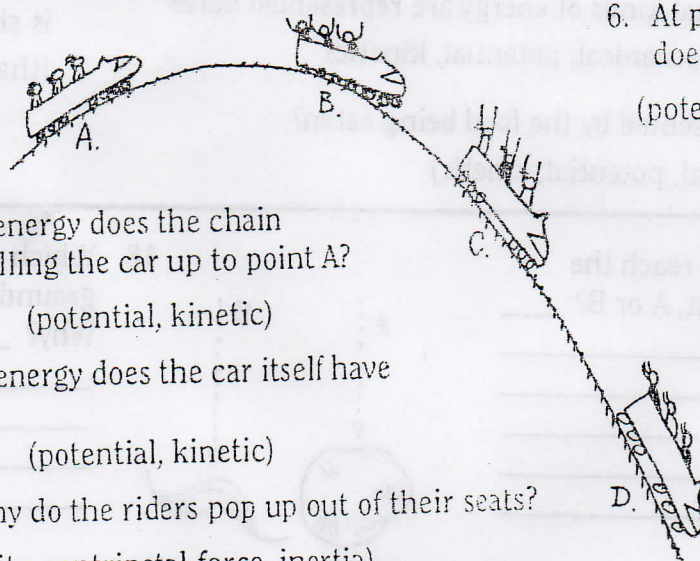
(gravity, centripetal force, inertia)

6. At point C, what kind of energy does the car have?

(potential, mechanical, kinetic)

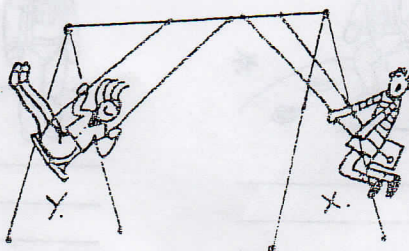
7. At point D, what force is pulling the car down hill?

(friction, gravity, centripetal)



8. What kind of energy is shown in X, when the boy is pushing by bending back his legs?

(kinetic, potential)



9. What kind of energy is shown in Y, when the girl's legs are extended?

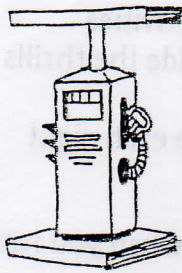
(potential, kinetic)

Use with page 33.

Name _____

SOME FORCEFUL LESSONS, CONTINUED

Use with page 32.



10. What kind of energy is represented by the gasoline pump?
(potential, kinetic)



11. What kind of energy is shown in P?
(mechanical, potential, kinetic)



12. What kind of energy is shown in Q?
(mechanical, potential, kinetic)



13. What type of energy is shown here?
(potential, kinetic)



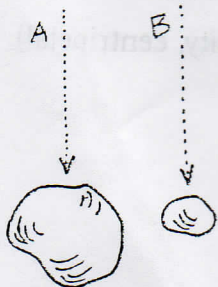
14. What kind of energy is represented by the food being eaten?
(mechanical, potential, kinetic)



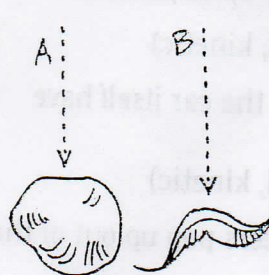
15. What kinds of energy are represented here?
(mechanical, potential, kinetic)



16. What type of energy is shown here?
(thermal, mechanical)

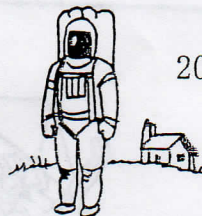
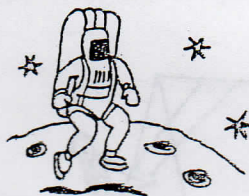


17. Which will reach the ground first, A or B? ____
Why? _____



18. Which will reach the ground first, A or B? ____
Why? _____

19. Where will this astronaut weigh the most?
(moon, Earth)
Why? _____



20. How much difference is there between the astronaut's mass on Earth and on the moon?

Name _____