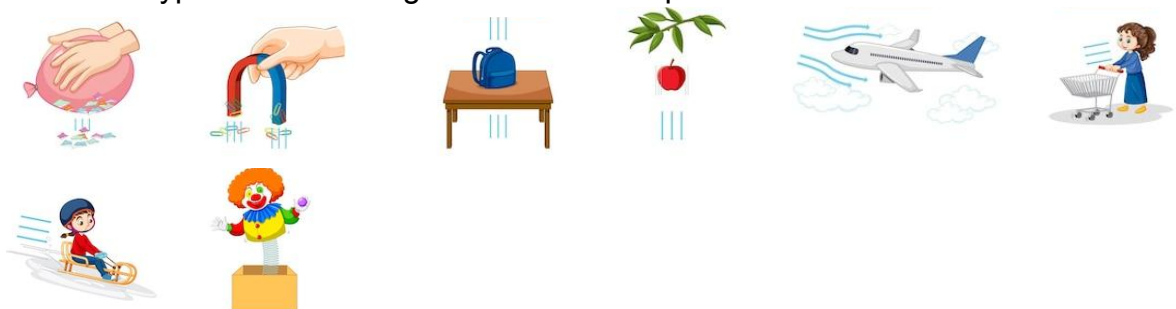


chapter 4 : Forces and Motion

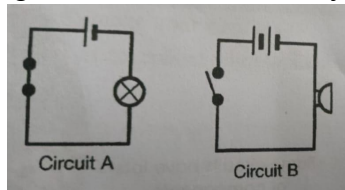
1. How do you measure the mass and weight?
2. What is the difference between mass and weight?
3. Why does a boat float on the water?
4. What force is acting on the book?
5. What force is acting on your arm?
6. When you first hold up the book is one force bigger than the other? Write why or why not?
7. When you stand still, why don't you sink into the ground? Draw a force diagram to explain your answer.
8. What are balanced and unbalanced forces?
9. When you open a door, what force do you exert on it?
10. How can you increase the amount of work done when you lift a book? Explain your answer?
11. How do forces act to break a glass when it falls on the ground?
12. How do forces act to make a rubber ball bounce when you drop it?
13. What is friction?
14. What are some real life examples of friction?
15. How do we use friction to clean our clothes?
16. How can we reduce friction?
17. How does air resistance affect the motion of objects?
18. What is the difference between air resistance and friction?
19. Name two forces that acted on your parachute.
20. Name the type of force acting in each of these pictures.



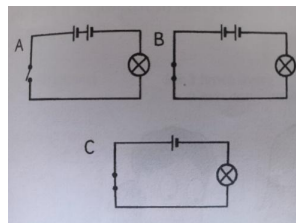
Chapter 5 : Electrical conductors and insulators.

1. What are conductors and insulators?
2. Which materials conduct electricity?
3. Which types of materials are best conductors?
4. Gold is a very good conductor of electricity. Why is not gold wire used in circuits?

5. Explain the reason for each the following:
 - a. Racing cars have smooth tyres.
 - b. The tyres of trucks have lots of grooves.
 - c. Racing cars are low, flat cars.
6. What is the difference between a cell and a battery?
7. Did all the metals conduct electricity?
8. What is the difference between pure water and distilled water?
9. What is a series circuit?
10. Draw a circuit diagram to show a circuit with a 3 v battery, a closed switch and two bulbs.
11. Draw a circuit diagram including these components to make the circuit:
4.5 v battery connecting wire switch two bulbs
12. Look at circuit diagrams A and B. Identify the circuit that shows:



- i) Which circuit shows a battery, a buzzer and a switch?
 - ii) Which circuit shows a cell, a bulb and a switch?
 - iii) Which circuit has the biggest energy source?
 - iv) Which circuit shows the switch open?
13. In which of the circuits A, B and C will the bulb not light up? Explain your answer.



14. Identify two dangers in the use of mains electricity in the picture.

