

### 3.14 Forces

Name:.....

1. Using the words in the list, complete the sentence.

*Newtons*      *push*      *direction*      *pull*      *speed*

A force is a \_\_\_\_\_ or a \_\_\_\_\_ that changes the shape, \_\_\_\_\_ or \_\_\_\_\_ of an object. It is measured in \_\_\_\_\_.

2. Draw a diagram of a spring balance.

Describe how it is used: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. What is friction? \_\_\_\_\_  
\_\_\_\_\_

4. (i) Give one everyday example of where friction is useful. \_\_\_\_\_  
\_\_\_\_\_

(ii) Why is friction useful in your example? \_\_\_\_\_  
\_\_\_\_\_

5. Rearrange the following letters to discover what we can use to reduce friction.

B U R N I T A L C      Answer: \_\_\_\_\_

6. Using the list below, circle the surfaces with high friction.

*bus tyres*      *sandpaper*      *ice*      *football boots*      *wet soap*

7. Describe two advantages and two disadvantages of living in a world without gravity.

Advantages:

(1) \_\_\_\_\_

\_\_\_\_\_

(2) \_\_\_\_\_

\_\_\_\_\_

Disadvantages:

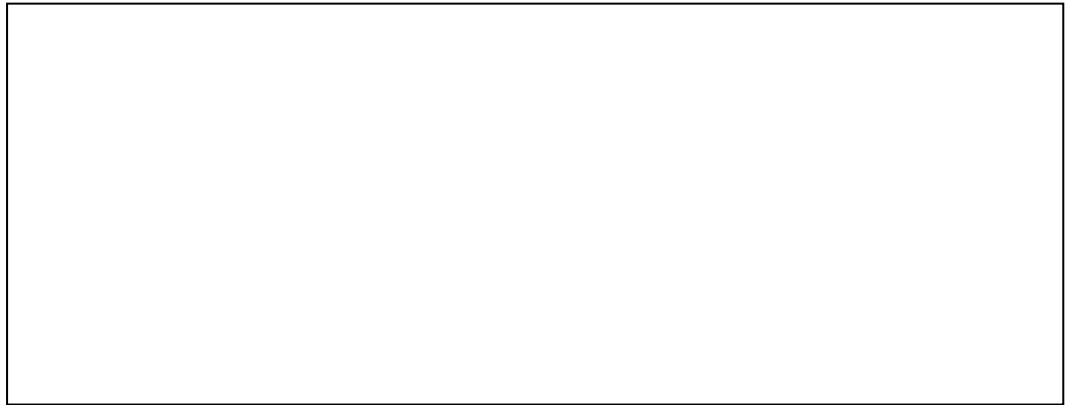
(1) \_\_\_\_\_

\_\_\_\_\_

(2) \_\_\_\_\_

\_\_\_\_\_

8. Using a diagram to show your idea, design an experiment to show that forces often act in pairs.



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_