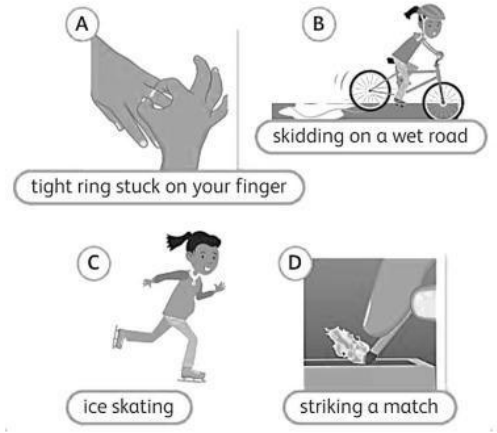
Stop objects moving

Friction is a force that slows down movement when two surfaces are in contact. We use friction to change the way things move. For example:

• When things slide easily, the surfaces are smooth, or there is a small mass … there is low friction. When things do not slide so easily, the surfaces are rough, or there is a large mass … there is high friction.

• High and low friction are in everyday life. Depending on the situation, it can be an advantage or a disadvantage.

1. Write the letter of each picture in the correct part of the Carroll diagram.



	High friction	Low friction
Useful		
Not useful		

2. Amy and his class had fun rubbing their hands. They investigated how to change the friction between both hands using oil.

a. How could they reduce the friction between both hands?

_____

b. Does the oil make easier or heavier the movement of their hands?

_____

c. Why is it a disadvantage to walk on a floor with oil on it?

_____

3. Write true or false for each sentence.

a. Friction slows down movement. _____

b. A smooth surface has low friction. _____

c. The rougher the surface, the more difficult to move. _____

d. An object with a large mass has high friction. _____

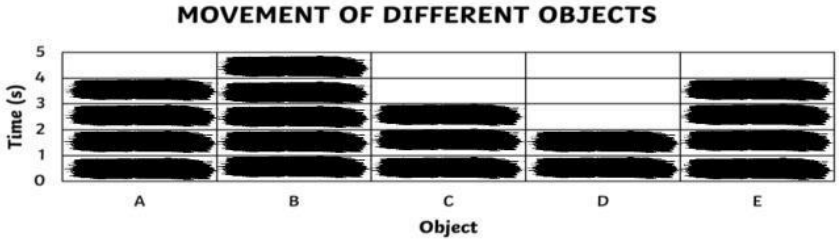
e. Friction is always a disadvantage. _____

f. Running on a wet floor is a disadvantage. _____

g. The lower the friction, the more time to move. _____

4. Look at the picture.

Some Class 2 learners measured how long it takes for some objects to slide across the board.



Use the graph above to complete the table of results.

a. Tick the letter of the object with the correct description.

	A	B	C	D	E
Smoothest surface [1]					
Roughest surface [1]					
Highest friction [1]					
Lowest friction [1]					
Highest mass [1]					
Lowest mass [1]					

b. Suggest a name for the objects that take more and less time to move.

More time (Object __): _____ [1]

Less rime (Object __): _____ [1]

CONCLUSION

The time an object takes to move depends on its friction. And the friction depends on two variables: _____ and _____. The **smoother** / **rougher** the surface, the **more** / **less** friction. The **more** / **less** mass, the **more** / **less** friction.