

P4 Explaining motion

A Forces and interactions

1 Interaction pairs of forces

Forces happen because of an *interaction* between two objects. They happen in *pairs*.

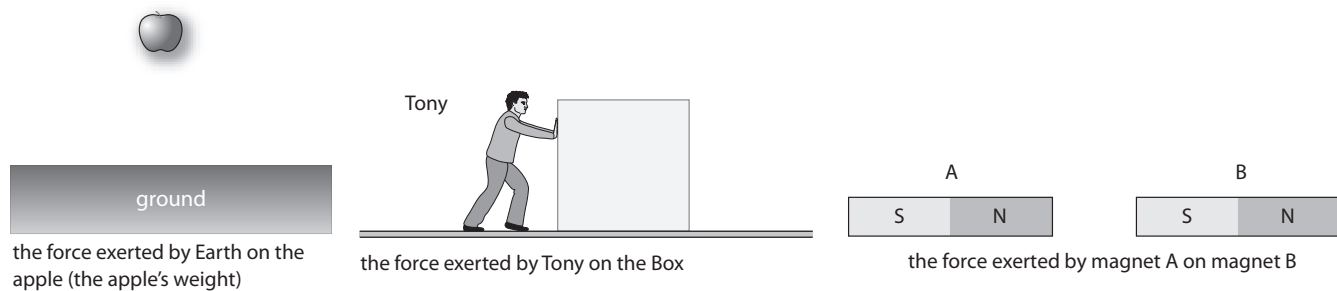
In each of the bullet points below, draw a **ring** around the correct **bold** word.

The two forces in an interaction pair:

- are **always** / **sometimes** / **never** the same size
- act in **the same** / **random** / **opposite** directions
- act on **the same** / **a different** object

2 Forces

a In each of these drawings, add an arrow in red to show the named force.



b Complete these sentences by filling in the missing words. Each sentence will help you with the next one.

i Magnet A pulls magnet B to the left; magnet B pulls magnet A to the with the same size force.

ii Tony pushes the box to the right; the box exerts a force on Tony. It pushes him to the with the size force.

iii The Earth exerts a downwards force on an apple; the apple exerts an force on the It pulls back with the

c Now add a second arrow to each of the pictures above. This should show the second force in the interaction pair. Use a different colour and label the force like this:

'force exerted by on