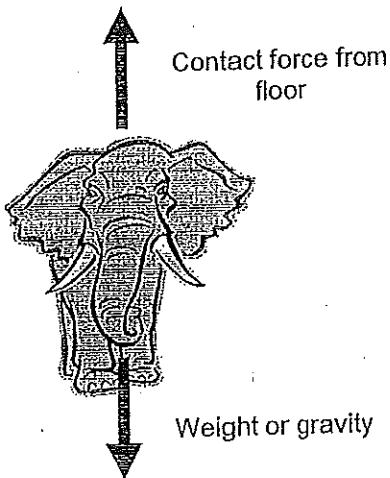
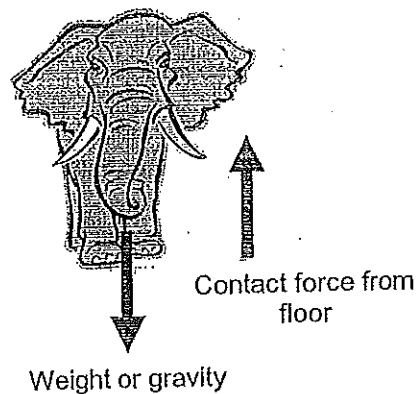


Audit feedback: forces

1. Primary children need to know that a force is a push or a pull
2. Newtons
3. Look in the Science Resource pack: Forces part 1 for the answer to this. N.B. Primary children do not need to know the word, 'vector', but they do need to know that the direction in which a force acts is important.
4. A line with an arrow at the end is used to represent a force: the longer the line, the larger the force; the direction of the arrow shows the direction of the force.
5. Gravity pulls the elephant down but the floor pushes back up on him. He is effectively squashing the floor and the springiness of the atoms pushes back up & so there is a force upwards too.
6. Both the diagrams below are correct:



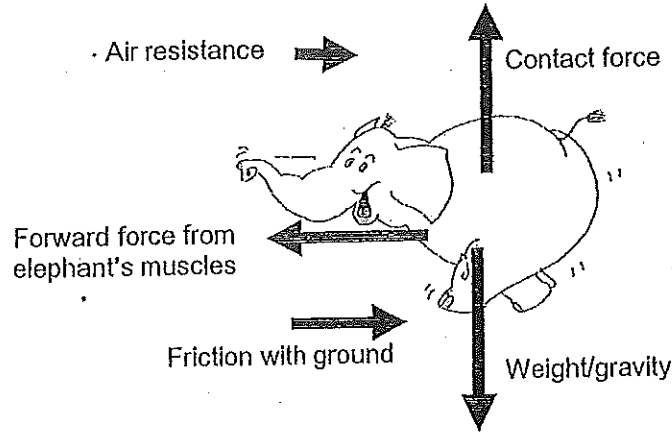
The force downwards is the pull due to gravity, which called the weight



The arrows must point in the right direction but it does not matter exactly where they are drawn

7. The force downwards is equal and opposite to the force upwards – they balance. Forces can effectively cancel each other out.

8. The elephant is moving at a steady speed so all the forces on him balance: there is no overall force! This may seem rather strange - see the Science Resource Pack again & we will think about this carefully in the PG sessions too.



- The contact force is equal & opposite to the elephant's weight.
 - The forces of friction & air resistance together are equal & opposite to the forward force from the elephant's muscles.
9. The car will keep speeding up as long as the force from the engine of the car below is greater than air resistance & friction together. Another way of describing this is to say that it is accelerating. This is a situation where there is an unbalanced force. An unbalanced force makes something speed up, slow down or change direction – see SRP.