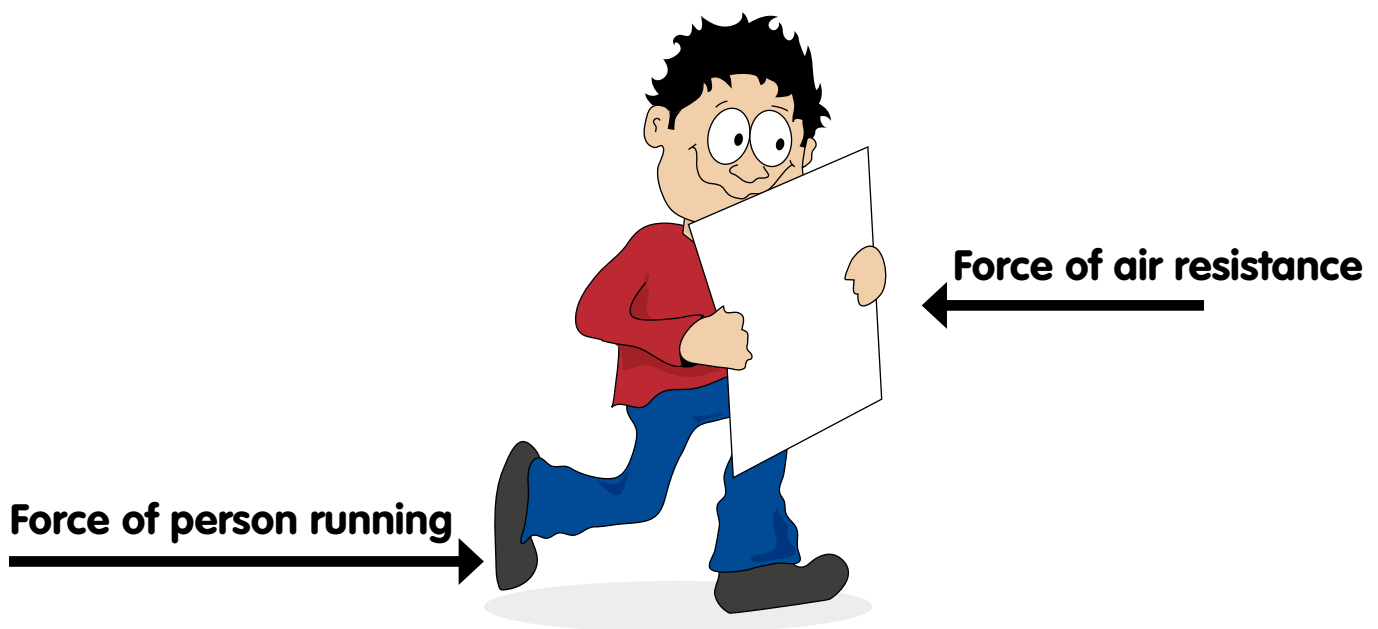


Air Resistance Investigation

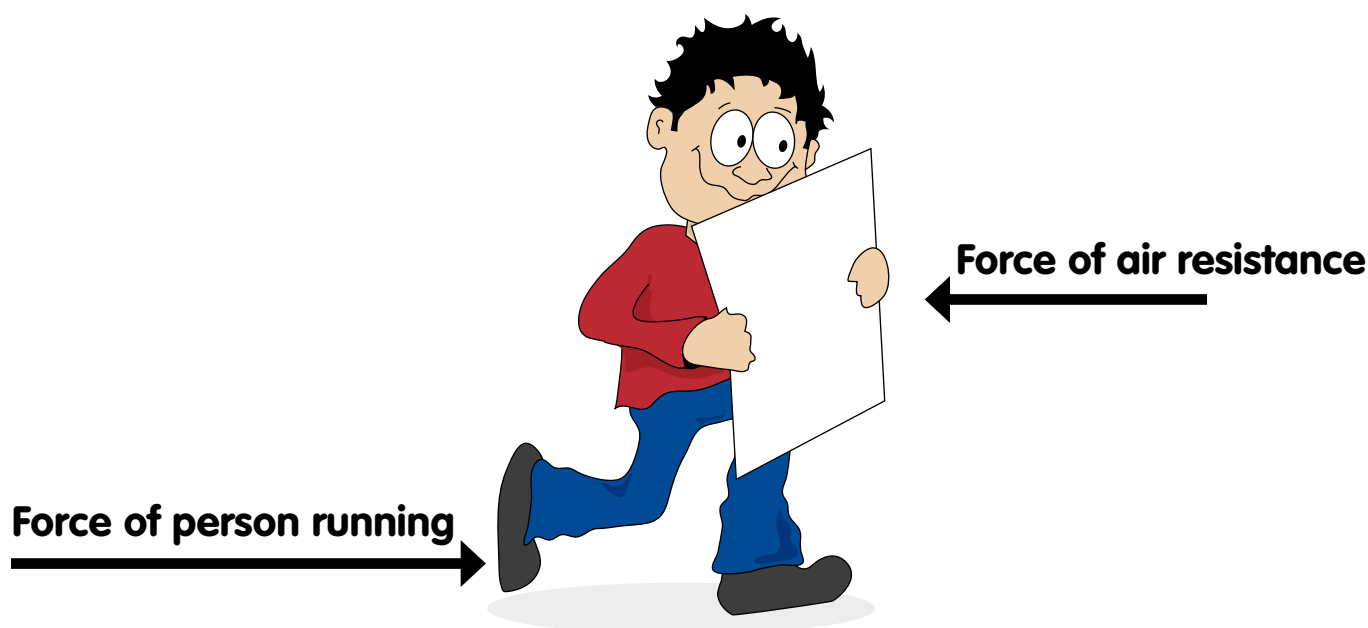
For pupils aged 7-11

Activity sheet



Air Resistance Investigation

When something moves through the air the air pushes back on the object with a force which is called air resistance. You can feel air resistance when you run. Try running across the play ground or school field and then run again but with a sheet of card or wood held in front of you like in the diagram below.



Do you feel a larger force of air resistance with or without the card? What could you change to alter how much air resistance you feel? In your group make a list of as many as you can. Two ideas are given below to start you off:

- How fast you run
- If the card is bent or flat.

When you have written down as many as you can decide on one idea from the list to investigate.

Write your idea down as a question, for example:

What will happen to the amount of air resistance we feel when we run faster?

Try to make a prediction and if you can give a reason for it, for example:

The faster we run the more air resistance we will feel. We think this will happen because as we run faster we are trying to push more air out of the way and it will push back more.

Air Resistance Investigation

Write your own question and prediction in the spaces below.

Question

Prediction

Now try some runs to test your prediction. Remember to:

- Work as a team
- Make sure you do a fair test
- Decide the order of how much air resistance you could feel and write your results down in the table below.

	Description of air resistance



Use this column to record the thing you changed to alter the air resistance.



In this column describe the air resistance you felt. You could list each one from most air resistance to least air resistance.

Air Resistance Investigation

Now think about what your results tell you:

- What did you find out?
- Was your prediction correct?
- Is there a pattern in the results?
- Could you improve your investigation?

Use the space below to write a conclusion to your investigation that answers these questions.

Conclusion

Further investigations on air resistance

If you have time you could write another question which investigates a change you make to how much air resistance you feel when you run.

Or you could:

- Make parachutes and use them to investigate air resistance, measuring how long they take to fall
- Use card to alter the shape of a model car and investigate air resistance by timing how long it takes to run down a slope.