

# Fizzy's Stupendous Steppers

## Objectives

To develop an understanding of how to carry out a scientific investigation.  
To begin to develop accurate prediction skills.

## Big Question

Which kind of step is fastest?

## Resources

Pupil Sheet 2a

From the box:

Fizzy puppet

Timers

From [www.getinthezone.org.uk](http://www.getinthezone.org.uk):

The Stupendous Steppers PowerPoint - Lesson 1

## Classroom equipment

Trundle wheels

## Optional

Clipboards

## Preparation

Find an outside space that is 100 metres long. If you don't have a straight 'track' that is long enough, use combinations of distances, e.g. to the fence and back four times.

During 'In the Zone', children should be wearing trainers/plimsolls.

Assign children to teams as appropriate.

Additional adults could help children complete the tables.

## Lesson 1 Step on it!

### What's it all about?

Show PP slide 1 to explain the focus of today's lesson: 'Today we will compare different types of step.'

### Warm-up

Play 'Bolt and Breathe' for 1 minute: Children jog on the spot. If you shout 'Bolt!' they have to speed up, if you shout 'Breathe!', they slow down.

### Get in the Zone

- 1) If the children haven't met Fizzy and her dog Dizzy before, introduce them. Use the pictures on PP slide 2, or the Fizzy puppet in the box.
- 2) Fizzy wants to learn how to run faster than Dizzy. She has heard of a very fast runner called Usain Bolt. What does the class know about him? Use the facts on PP slides 3 and 4 if needed.
- 3) Look at PP slide 5. Ask the children why they think it is that Usain runs so fast.
- 4) Take the children outside; walk 100m together. Emphasise that Usain Bolt ran it in nine and a half (9.58) seconds!
- 5) At the end of the lesson, the children will see how far they can run in nine and a half seconds. First, however, they will investigate different types of step, to see which is the fastest.

### In the Zone!

- 1) In groups of 3 or 4, ask the children to come up with a step that they think could be fast (e.g. skip, run, gallop, hop etc) and to give it a name.
- 2) Now ask for a volunteer from each group to demonstrate their step. Using Pupil Sheet 2a, ask the class to make a note of each step and predict which will be the fastest. Discuss why.
- 3) Ask the volunteers to cover a distance (e.g. 10 or 20 metres) using their step. Time each one. Were the class's predictions correct? Why do they think some steps were faster than others (was one more springy, did one use bigger strides etc)? Support: Try to suggest a variety of steps, so that not all children choose a conventional 'sprint' (e.g. giant strides, side-stepping, etc.). Extension: Ask the children whether the test was fair. How could they make it fairer (e.g. use the same person to try each kind of step, or repeat the test a number of times, etc.)?

### Plenary

- 1) Ask children to use the class's winning step to run for nine and a half seconds (you will need to round this to 10, as the timers are accurate to the nearest second). How far do they go compared to Usain Bolt's 100m?
- 2) The children present their findings to Fizzy.

## Lesson 2 Quality time

### What's it all about?

Show PP slide 1 to explain the focus of today's lesson: 'Today we will learn that our bodies get better at doing things with practice.'

### Warm-up

Play 'Do as I say, not as I do': Explain that you will tell the children what to do, but sometimes you will do the wrong thing. They have to do what you say, not what you do (e.g. 'I say thumbs up,' but show thumbs down; 'I say stroke your palm,' but stroke your head).

## Objectives

To develop an understanding of how to improve reaction times.  
To begin to understand how to collect data and draw scientific conclusions.

## The Big Question

Can I improve my reaction time if I practise?

**Get in the Zone**

- 1) Fizzy says that she's found out something new about runners: they need to have fast reaction times. Explain that your reaction time is how fast you act when something happens, e.g. when a whistle is blown at the start of a race. The faster you react, the faster you will start the race.
- 2) Fizzy wants to know if she can improve her reaction time. Show PP slide 3 to demonstrate how to use the reaction tester.

**In the Zone!**

- 1) Ask the children to work in pairs, taking it in turns to drop the reaction tester, five times each. They record their results in the table from Pupil Sheet 2b. What do they notice?
- 2) Ask the children to think of other questions to investigate, e.g. Are you better with your right hand or your left hand? Are you better with your eyes closed (Partner says 'Now!')? How could they test these questions?  
Support: Some children may need help to fill in the table.  
Extension: Ask some children to try the activity with a 30 cm ruler (0 cm beside the thumb), and to record the position of the thumb on the ruler in centimetres.

**Plenary**

- 1) Ask what happened the more they did the experiment. Discuss what they found out (the more you practise, the better you get).
- 2) Ask them to explain to Fizzy the other questions that they investigated. What did they discover?

**Lesson 3 Stepping Out****What's it all about?**

Show PP slide 1 to explain the focus of today's lesson: 'Today we will find out how active we are, by counting our steps'.

**Warm-up**

Play 'The great number warm-up': Call out an action that children have to do with a number of body parts, but without naming the part, e.g.: 'Wave with 5 of these. Stand up on 2 of these. Shrug with 2 of these. Clap with 2 of these,' etc.

**Get in the Zone**

- 1) Fizzy tells the class that in order to be fit enough to do their activity well, all sports people need to be active. She says that Usain Bolt trains 10 times a week, both to practice the movements he needs for running, and to keep his body fit.
- 2) Fizzy thinks that all the children could get better at their favourite sports by becoming more active, but first they need to find out how active they are already.

**In the Zone!**

- 1) Use PP slide 2 to show the children how to use the pedometer.
- 2) Ask the children to estimate the number of steps they might take in (for example) one playtime, one lunch break and one PE lesson. Make a note of their estimates in a place that the children can see and refer back to.
- 3) Clip the pedometers to volunteers during these different sessions.
- 4) Make a note of the actual results. Compare and discuss the differences between the estimates and the results, and between the results of the different sessions – what were the children doing differently (sitting, running, etc)?  
Extension: Ask the class to estimate the number of steps they think they take in one whole day. Three volunteers wear the pedometers from the start of one school day to the start of the next (they can take them off to sleep). Compare the results with the estimates (over time, every child could have a go).

**Plenary**

- 1) Fizzy asks the children whether they took a smaller or greater number of steps than they had estimated. Do they think they are active?
- 2) Ask each child to come up with two ways to become more active and to complete the 'promise' on their Home Cards.
- 3) Gather the children together for a Stupendous Steppers presentation and give each child a badge from the Reward Card on Pupil Sheet 2c.

**Resources**

Pupil Sheet 2b

From the box:

Fizzy puppet

From [www.getinthezone.org.uk](http://www.getinthezone.org.uk):

The Stupendous Steppers PowerPoint - Lesson 2

Super Speedy Interactive Game

**Preparation**

Photocopy Pupil Sheet 2b and stick onto card, then cut out the reaction testers and slip a paper clip on the bottom of each one (to act as a weight). You will need one reaction tester for every two children, and one copy of the table for each child.

**Objectives**

To develop an understanding of how to make and test estimates.

To learn how to compare their results against their estimates and against other results.

**The Big Question**

How active am I?

**Resources**

Pupil Sheet 2c - Home Card

Pupil Sheet 2c - Reward Card

From the box:

Fizzy puppet

Pedometers

From [www.getinthezone.org.uk](http://www.getinthezone.org.uk):

The Stupendous Steppers PowerPoint - Lesson 3

**Preparation**

Note that this activity will take place over at least 24 hours.

Photocopy and cut out one Home Card and one badge for each child.