

Doing Maths on the Move



Product Code

PE00942

Contents

- 10 Number Bean Bags
- 12 Weighted Bean Bags
- 30 Shaped Bean Bags
- 1 Fun Gripper Die (27cm)
- 36 Team Selector Bands
- 1 Open Reel Tape 50m
- 10 Plaited Skipping Ropes
- 3 Action Talk Balls
- 1 Frog Hopscotch set
- 1 Target Mat 87cm diameter
- 1 Outdoor 1 Minute Timer
- 6 Swingz4
- Teacher's notes
- Large storage bag to keep it all in.

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Introduction

Get children to estimate length in units using skipping ropes and then in standard units using the length of one rope (or part of rope) and the tape.

Aims & Objectives

Students will be able to:

- Estimate distances - estimate answers by approximating and checking that their results are reasonable
- Understand the importance of estimation to check your working / not just to accept a figure as correct but to be able to check. Investigate the relationship between length, width and perimeter
- Develop a simple check mechanism – is this longer than, shorter than.....?

Links in the curriculum

Appropriate for KS2.

Activities

- Split into teams (you have 10 ropes, so this could be groups of 2, 3 or 4 depending on class size. One rope per team. To get them warmed up – each to do 10 skips with the rope – who finished first? – How many skips has the group done? The whole class done? (some mental arithmetic there for starters).
- How many skipping rope lengths is the hall? Ask them to discuss amongst themselves – get them to write down their answer. Who said more than 5? Who said less than 10? Etc. Use the concept of more than and less than to get them thinking. Record all the answers. Let's see who is nearest? Ask how they could do this? Let them do it. Get them to check their estimation. Look for interesting ways of doing this and discuss which one is probably the most accurate.
- Do the same for the width of the hall? Send a group(s) out into the playground to do the same?
- Do the same for perimeter of the hall? Or the playground- look for the relationship between length, width and perimeter – *doing it* should embed the relationship.
- Reference movement - there are lots of opportunities here for races, developing techniques which will involve thinking about the process and developing the best way of doing something.
- Link the length of the rope – 240cm (maybe call it 2.5m) to the length of the hall
- Lay all the ropes end on end along the length (let's say its 9 ropes long) introduce fractions - get everyone to stand at the 2/9 point, 7/9 point etc. give quick instructions and get them moving.



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- Lay the ropes down to make a 5 x 5 quadrant and get children to run from the origin to a nominated point – along and up! This will help them read and plot coordinates in the first quadrant, then in all four quadrants (you will need more ropes for this).

Resource/Materials Needed

Set of 10, 2.4m (240cm or 8ft) skipping ropes
Pen and paper or whiteboard and water based pen
Set of 50 cones
Tape measure – 10m
Black insulation tape to mark length skipping rope (say 2m)

Extensions/Ideas

Use the length of the ropes but in feet – some simple conversion. Discussion on what is easier and why, how did imperial measurements come about (links to History), why the UK converted in 1969. Where we still use Imperial units (height measurement, shopping for fruit and vegetables, measuring speed etc.) and why?

What we could use as our own unit of measure – height of one child in the class – how many 'Johns' to the length of the sports hall? Why would this be no use next year? Perhaps arrange in teams and measure using whole teams. Make into a race – a rolling tape measure!

Make a circle 10 ropes in circumference, get the children to stand in a circle 3 ropes in circumference, 5 ropes etc. Use the vocabulary that they will need or already using (Circle, circumference, diameter, radius, centre)

Play games of swapping from opposite sides of the circle, running around the circumference, jumping over the centre).

Speed – maybe introduce the concept of speed whilst working on distance and length – use Speed Trackers (code PE00991 - not provided)

<http://www.tts-group.co.uk/shops/tts/Products/PD3030188/Rechargeable-Speed-Trackers/>



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General Notes

Note – use the **Team Selector Bands** (provided in the kit) to select teams, if you don't want the class to select their own partners – this can be easier for the teacher, as it will mix the group randomly, sometimes stop arguments, prevent some children from feeling excluded, get children working with others that they wouldn't normally work with, mix the sexes etc. You will find that the class will soon accept this process (and even devise strategies to ensure they work with their friends on some occasions).

Please note: These lesson plans/ ideas are supposed to be starting points for the teacher and operate as an 'ideas bank' from which they can draw, use, modify and develop and make appropriate for their age and ability group. Around the general activity, there are a multitude of opportunities to get the children moving and you will no doubt find that as you take the session for the second and third times that it will improve and new ideas will present themselves.

Risk assessment: The sessions will also lend themselves to using other equipment that you have in the school already. For example, metre rulers could be used in the lesson above – please ensure that a sensible risk assessment is carried out before the use of any other equipment is incorporated into an 'active' session.

