Delivery notes

Active maths: Team bar charts

15–20 minutes

Learning outcomes:

Pupils will be able to:

- collect and present data using a bar chart
- interpret data using a bar chart
- solve comparison, sum and difference problems using information presented in bar charts.

Resources required:

- For suggested skills stations: balls or bean bags, cones, stopwatch
- Time tools interactive

Downloads:

- **Team bar charts activity sheet**
- **Station cards**

Delivery notes:

This task involves teams of four pupils rotating around four skills stations and recording scores. We have made suggestions for skills stations, but you could create your own skills stations which are suited to the resources you have. They could be as basic as star jumps, which would require no equipment at all.

1. Before the activity, set up four (or more) skills stations and number them (see below).
2. Get pupils into pairs and then join up with another pair to make a team of four. Then divide teams out across the skills stations. (There may be two groups of four working at a station at any given time; in which case more equipment should be set-up.)
3. Go through how each station is to be completed.
4. Explain that on your signal, the first pair will start the 30 second challenge, whilst the other pair in their team count out the rising score aloud. When the teacher signals the end of the challenge, the final score is recorded by each team. Pupils should use the **Team bar charts activity sheet** to keep score.
5. Each pair takes it in turns to undertake the challenge and count for the other pair in their team, before you instruct all teams to rotate a station.
6. If time allows, pupils may repeat the stations to see if they can improve their score, which they should also record.

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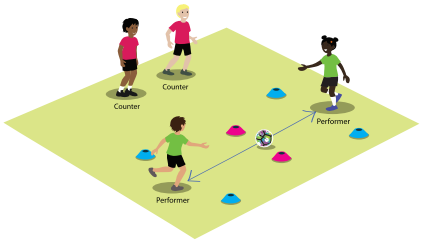
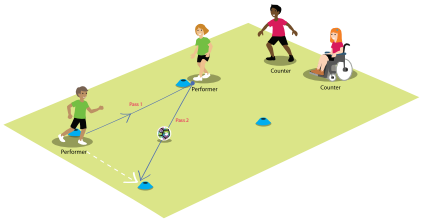
7. At the end of the session, each team should have data giving the final scores for pair one and two at each station on rotation one and two.
8. Pupils should use this data to create bar charts to compare the two pairs' performances; and use addition to work out an overall score for each pair and as a team, which could be compared against all teams in the class. Additional squared paper may be required to make multiple bar charts.

Suggested stations to pick from:



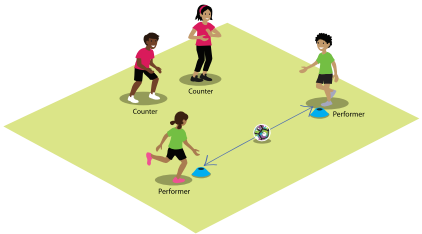
Shots

How many goals can you score in 30 seconds?



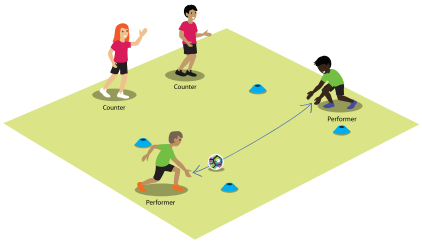
Passes

How many passes can you make in 30 seconds? Remember to pass then move, before receiving the next pass.



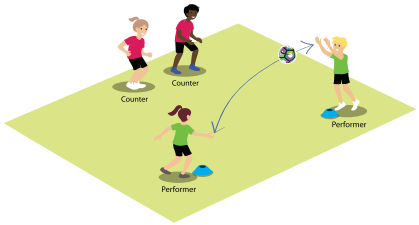
Hit woodwork

How many times can you hit the cone in 30 seconds? Remember you may also need to put your cone back in position if struck.



Throw-outs

How many times can you roll the ball out to your partner like a goalkeeper in 30 seconds?



Saves

Throwing the ball to one another underarm, how many times can you catch the ball like a goalkeeper in 30 seconds? Remember it doesn't count if you drop the ball.

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Additional challenge:

- Pupils should look at their bar chart and work out which pair had the highest score. How can they tell?
  (A taller bar indicates the higher score.)
- Pupils could survey all pairs/teams and work out a class total for each station, recording this on a bar chart with non-unitary scales.
- Pupils could add up their team's total score across all the stations. Does the team with the highest score on one station have the highest total score?
  (A team might have the highest score for one station but the lowest score altogether.)

Differentiation: STEP framework

Space

- Devise skills stations which will yield high or low scores, depending on ability (by increasing or decreasing the space between the performing pair). This will inform whether pupils will need to draw unitary or non-unitary bar charts.
- Set up more skills stations, so that more bar charts can be created.

Task

- Instead of 30-second timed stations, you could challenge teams to complete a certain number of repetitions of an activity, and record their time. They should work out that they want the quickest time, i.e. the smallest bar. Therefore, a bigger bar isn't always best!
- High ability pupils could create dual bar charts to show how each team performs at all stations (i.e. each variable is a different station, and the two bars for each variable correspond to each team).

Equipment

- Vary the size and weight of equipment for pairs or teams, to ensure they achieve a level of success.

People

- Group more pairs together so that the bar charts have more than two bars.