

1

Put three in order

Set out three strips of card with the longest one in the middle and the shortest pushed furthest to the right, so that the arrangement on the table gives the wrong answer. Students order them from shortest to longest.

"Put these in order from shortest to longest. Tell me how you know."

"Why is where they are sitting not the answer?"

What matters is that all three are lined up from a common end and ordered by their far ends rather than by where they happened to be lying.

2

The tower on a book

Build one tower on top of a book and a taller looking tower on the floor, leave the book in place, and ask which tower is taller. Say nothing about the book.

"Which tower is taller? Fix anything that is not fair first."

"Why did the book have to go?"

3

Someone else's comparison

Set out two straws that were compared without their ends starting together, with the claim already made that the red one is longer. Students decide whether to agree.

"They say the red straw is longer. Do you agree, and how do you know?"

"Show me what you would do before you answer."

The comparison is not fair because the ends did not start together. A student at this level says so, redoes it, and then gives the answer with a reason.

4

Find me two the same

Send pairs into the room to find two objects they believe are the same length, bring them back and prove it to the group. Objects that cannot be brought back, such as a door and a window, can be carried as a length of string instead.

"Find two things you think are the same length, then prove it to us."

"If you cannot carry it, how could you bring its length back with you?"

What to put out

Three strips in the wrong order

Three strips of card of different lengths, with the longest in the middle and the shortest furthest to the right.

Settle it by lining all three up from one common end.

The tower on a book

Blocks for two towers and one thick book, with one tower built on the book.

Settle it by taking the book away, or by matching the bases.

The straws that did not start together

Two straws close in length, laid out with their ends not matched, and the claim that the red one is longer.

Settle it by starting both ends on the same line and comparing again.

Two the same

String and scissors, for lengths that cannot be carried back.

Settle it by laying both objects, or both strings, against each other.