

## Position-in-Space and Printing

For most of their day, our children operate in 3-dimensional space. Within that 3-dimensional space, many of their activities take place on the vertical plane rather than the horizontal. Even though they may stand on a horizontal plane, their body is usually in a vertical position and they relate things to that vertical plane. When we take children to the horizontal plane for paper and pencil tasks (this can include printing, artwork, or math activities) many of the position-in-space words we use could be confusing for children who relate those words to the vertical plane. For our English Language Learners it can be even more confusing as they are trying to learn the vertical plane meaning as well. Lets look at some examples.

**up – down** Children look at up and down in the vertical plane. When printing, we often want children to form letters from the top down, but if they aren't sure of 'down' on the horizontal plane, they will be confused. Try this: have 2 students stand side-by-side and point up – their arms will most likely go above their head and point toward the ceiling. If you have them point down, they will point to the floor. With their arms still at their sides, have one student lie down on a piece of chart paper and show the children where that child points when his arm is 'down'. It is a completely different position in space on the horizontal plane. When wanting children to make a line 'down' the page, I give them the clue "bring your pencil down to your tummy". This gives them a physical place to move their hand to.

**top – bottom** Again, like up and down, children view top and bottom in the vertical plane – top of their head, top of the hill, top shelf, etc. To demonstrate this, put a piece of chart paper on the wall and have them point to the top of the page. If you are into sounds, mark it with a 't' (lower case) or use clouds. Have them point to the bottom and mark it with a 'b' or draw some grass. Take that piece of chart paper and lay it on a desk or table. Show the children where top and bottom are when the paper is on the horizontal plane. By the way, some children may think 'bottom' is a body part. And, if we look at our 'bottom', it's in the middle of our body!

**over – under** (above – below) If we hold a piece of paper horizontally and ask a child to put one hand over the paper and the other hand under, the hand/paper/hand will be lined up vertically. Yet, if we take that same piece of horizontal paper and ask the child to draw a line under the word on the paper, 'under' moves to a completely different place in relation to the paper. The 'under'line is 'on' the paper, as would be a line drawn 'over' the word. Again, work with a picture on a piece of chart paper on the vertical plane first. Have children identify where over/under the picture would be then place the paper on the horizontal plane to show the connection.

**first – then (next)** Children often think of 'first' in terms of a time concept – "first we'll have snack, then play time". When they are 'first' in line, it is a position-in-space, but in a very 3-dimensional way in that the line can be formed in any place/direction. Once we take 'first' to the horizontal plane (eg. first the bat, then the ball) children have to understand left-right directionality. If we want children to print first the bat, then the ball (b) they have to know that there is a specific place for the ball, to the right of the bat. This concept is very important with the b-d reversal issue. Itchy's Alphabet Reversal Packages include a 'first – then' card for practising this skill.

**forward – backward** Forward and backward are very 3-dimensional positions. Children can walk forward and backward in any direction. However, when we want them to move forward on a piece of paper, it is generally from the left side to the right. I talk to the children about how we move forward across the page when we read and we also have to go forward when we are forming 2-part letters (ball/stick combination). I tie this in with 'first – then' so that children make the first part of the letter and learn that they have to go forward to make the 2<sup>nd</sup> part – they can't go backwards! This applies to our 'down, back up and around' letters – when we come back up, we always have to go forward for the around part.