

Basic rules for left-handed children



- Left-handed children are just as normal as right-handed children.
- Left-handed children can write, draw and make things just as nicely as right-handed children.
- Left-handedness is not a bad habit, but rather an expression of the motor dominance of the right-hand brain hemisphere – hand bias is hemisphere bias.
- Left-handed children should also be encouraged in their left-handedness. There should be no attempt whatsoever to “retrain” them. Retraining handedness is a huge intrusion into the human brain.
- Parents should be consulted in the case of children who do not clearly display a preferred hand before starting school. If necessary, a paediatrician and expert in handedness should also be involved.
- Attempts to retrain left-handers who have already been ‘converted’ to use their actual dominant hand are experiments with the brain and offer both opportunities and risks for the individuals involved (Sattler, 1995).
- The child must be provided with everyday objects for left-handers from the start.
- The computer mouse should be positioned on the left from the beginning and have a long cable. A wireless mouse is recommended. Ergonomic design for the left or right hand only is not advised.
- It is particularly important that left-handed children receive assistance in learning a relaxed writing posture. This requires a good crayon and pen hold, which must be established at pre-school age.
- It is extremely important to provide assistance with learning special techniques which differ from those used by right-handed children. These include cutting, tying bows, sharpening, following craft instructions, sewing, embroidering, knitting and crocheting.
- Left-handed children should choose a seat at school, at the craft table and at the dinner table which allows them to sit either to the left of a right-hander, at the end of the table or next to another left-hander, so that the two neighbours do not block each other.
- The light at the craft table should fall from the right or the front, where possible.

Testing handedness

Reliable testing of handedness should only be carried out by a specialist, e.g. a specially trained occupational therapist, special needs teacher or school psychologist. **Handedness is not only a question of the preferred hand for certain tasks, but rather is connected to dominant areas of the brain, or to be more precise, it is caused by the motor dominance of the opposite side of the brain.** We are therefore dealing with highly complicated neurophysiological processes here, which as a result of certain disorders and negative influences can lead to confused handedness (often, in such cases, other developmental disorders can be seen in the child, affecting for example fine and gross motor skills or language, although the development of handedness, which is not always apparent outwardly, is a symptom and not the cause).

In addition to this neurophysiological confusion in the development of handedness, we are aware of two other huge influential factors:

1. Attempts by those around the left-handed child to “retrain” them to use their right hand and
2. Attempts by the left-handed child to copy or adapt themselves to a right-handed environment.

That means that left-handedness manifests itself in very different ways both in children and in adults, and can chiefly be distorted by the influence of one or more of the three causes listed. It is often not easy to come to a definitive conclusion regarding the actual innate handedness here, as it requires medical, psychological and also sociological knowledge. Furthermore, this must be accompanied by highly trained observation and knowledge of appropriate test methods for examining handedness.



Pure self-evaluation of the individual's handedness by the child itself, but also by many adults, is very dangerous, especially in the case of unclear manifestation of handedness, and should be expressly advised against.

Self-observation of handedness

Of course, in some individuals left-handedness is so clear that there can be no doubt whatsoever. These are people who often have shown a preference for performing important tasks with their left hand from the age of one or two. As long as no external influence is exerted, these children will not change the hand used, continuing to prefer the left. This often also applies to feet. However, here it is sometimes unclear which foot plays the more important role in certain movements, for example the standing leg and kicking foot when playing football.

Then there are groups of left-handers who have been “retrained” to use their right hand through gentle or, in earlier times, severe or even brutal retraining methods (such as verbal persuasion, physical blows, tying down the left hand or use of a plaster cast). This particularly involves cultural behaviour and techniques, such as eating with a knife, fork and spoon, shaking hands when meeting people, drawing, writing and cutting, peeling potatoes and crafts.

This group of left-handed children and/or parents perform many of the actions listed with their right hand. Other actions, not affected by teaching methods continue to be performed to a large extent with the left hand. These often include brushing teeth, holding objects, watering plants, throwing dice, spinning objects. **The actions listed here are deliberately those carried out by one hand only and which are easy to observe, and which are more significant than some actions requiring two hands.** Sports played with one hand such as handball, tennis, fencing, hockey or golf, on the other hand, are largely dependent on the way the instructor demonstrated and showed to the child, and are therefore not a definite indication of handedness. It is common to see a clearly left-handed child throw a ball or play golf with their right hand.

Left-handed children, who, due to a slight cerebral disorder (which normally does not affect intelligence!), often need more time for their left-handedness to manifest and who switch hand use back and forth from time to time are particularly at risk of practising use of the wrong hand. They occasionally have slight fine motor skill disorders, leading to the dominant hand becoming tired more quickly and causing them to switch to the other hand. As a result, some left-handed children get so used to constantly switching hands that the non-dominant right hand ultimately completely takes over and automatically performs certain tasks. The reverse can also occur with right-handed children. However, nowadays the (usually more gentle) "retraining" attempts are aimed at converting young children to right-handedness, meaning that left-handed children are initially more at risk of switching hand use. **These children should be left alone, and questions of handedness should be discussed as little as possible in front of them, in order to avoid influencing them.** Otherwise there is the risk of some left-handed children consciously "retraining" themselves, as they think being right-handed would be better for them or, for example, they believe one of their parents' opinions on handedness to be more credible and therefore orientate themselves accordingly.



If a child aged around four or five has not yet clearly established a preferred handedness, expert advice and professional help should be sought, as the writing hand should be set by the time the child starts school at the latest.

Left-handed adults have often forgotten and suppressed the changing hand use and adaptation to a right-handed environment during their early childhood, to the extent that some feel a great affinity to their left hand, without actually remembering being "retrained". Childhood photos can sometimes help here, as often parents often later forget or do not pay attention to their child's initial tendency to left-handedness.

There are, however, also very alert and intelligent left-handed children, who observe their environment very well and copy it precisely. If one of these children this tends to change hand use or the people around the child make a strong case for right-hand use, they often retrain themselves to use the right hand, which then leads to the subsequent consequences of retraining.

These actions/criteria are suitable for determining handedness

Actions carried out using only one hand and which are not overly influenced by educational measures include:

- Watering plants (small watering can)
- Brushing teeth
- Spinning objects
- Throwing dice
- Emptying a container of beads and putting these back into it
- Stacking beads on a thin wire fixed vertically
- Counting matches
- Putting matches back in their box

These actions/criteria are not as suitable for determining handedness

Actions involving both hands, although different sizes and levels of difficulty handling objects influence hand use.

- Stringing beads
- Using a knife and fork
- Leafing through a book

Certain activities with a strong educational focus and which are therefore often influenced:

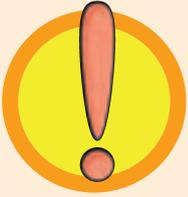
- Eating with a spoon or fork
- Drawing and writing



Hand use influenced by a lack of everyday left-handed objects, especially as the automatic established practice is often forgotten. A six-year-old left-handed child will probably not take to using left-handed scissors at first, and may have some problems using them, as they have already been using the not-so-suitable right-handed scissors in their left hand for at least three years already. The hand-to-eye coordination has firmly taken root and the child is unable to cut with the scissors which are actually far more suitable, without having to adapt and relearn.

- Cutting
- Using a potato peeler and tin opener
- Using an iron

Mirror writing, in other words turning around individual letters and entire words is typical for left-handed children. Many left-handed children try to start to read from the top right corner or leaf through a book from the back to the front. Caution is advised here, however, as right-handed children also occasionally write letters back to front initially.



Tests to establish handedness such as copying traces, drawing dots etc. should only be carried out and evaluated by specialists. Drawing extensive conclusions from the children's writing quality is also advised against, especially if children starting school are allowed to write their name once with their right hand and once with their left. This first writing is often more concentrated drawing and no significant indicator of the child's handedness.

Foot use is a very dangerous test criterion. On the one hand it is difficult to establish which foot is more important, and on the other hand confusing effects of other entirely different origins can be relevant in foot use.

Often **eye use** is also checked, for example by looking through a cardboard tube, a kaleidoscope or the keyhole. Similar to ear use, confusion often arises here due to completely different influences which can be traced back to functional disorders in the respective organ (eye or ear), or even in the brain. Moreover, scientists increasingly doubt that hand use, hearing and sight are comparable, congruent brain functions.

Closing remarks

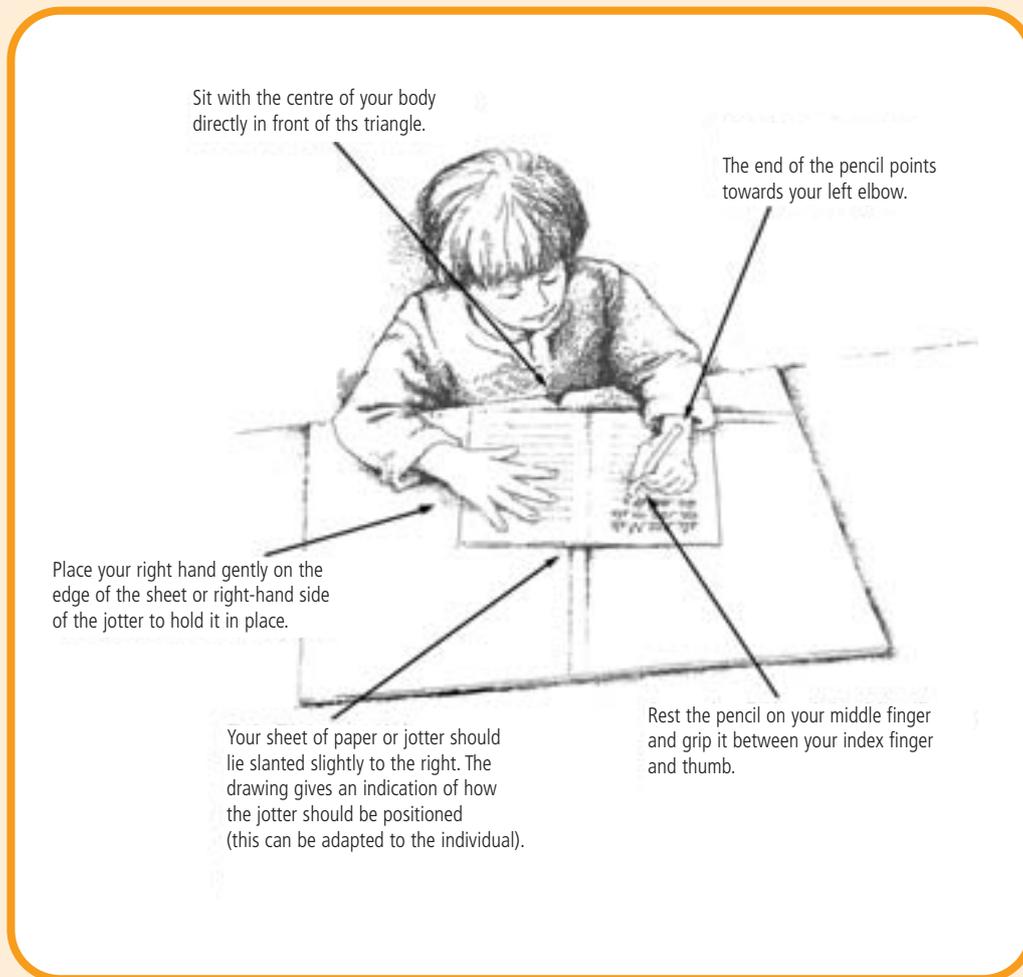
Investigating handedness has been and unfortunately occasionally still is approached in a very superficial and thoughtless manner, mostly to the detriment of left-handers. **On the other hand, a more relaxed attitude to left-handedness is required – it isn't a disease.**

One fact must never be forgotten in this context: we have two hands, which we use, and in most cases one dominant hand is established clearly. Sometimes, however, we also use the other non-dominant hand for supposed or actual key tasks, without causing any immediate confusion.

Problems arise when the dominant hand is used for writing or other oft-repeated hand-intensive actions. These include for example playing the drums and guitar, or fencing, tennis and movements such as those featured in ballet. Here it is absolutely essential to find out which the actual dominant hand is and to use it for these very tasks.



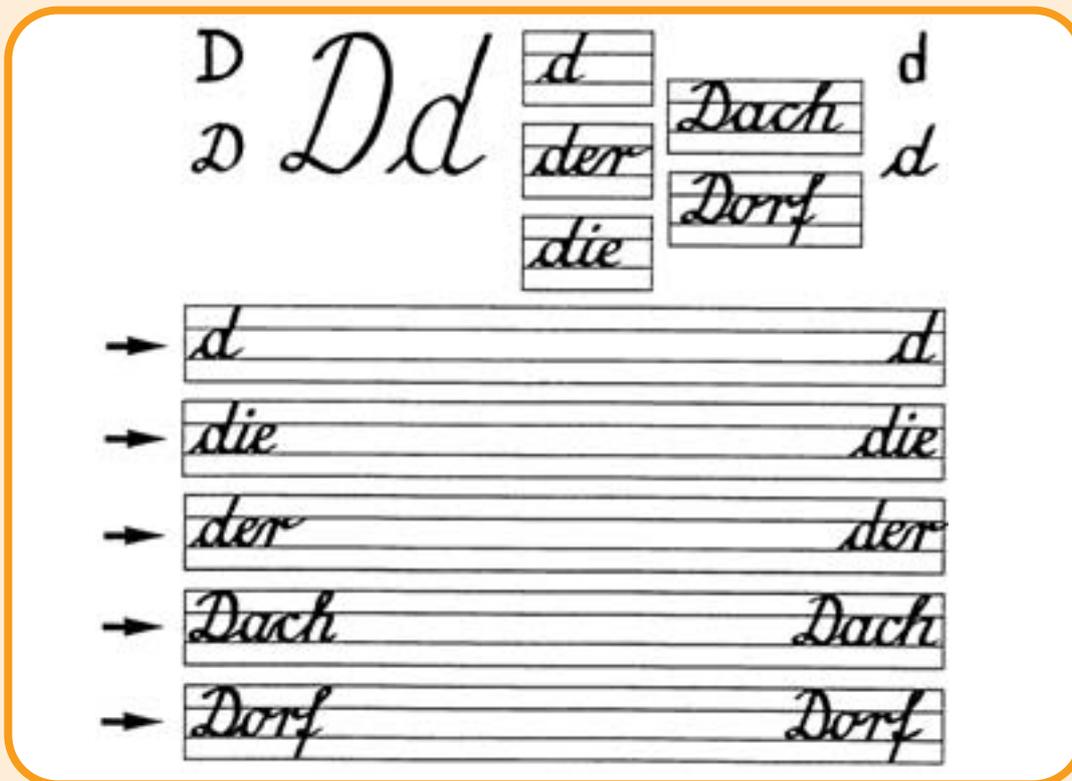
Dealing with left-handed children at school



The optimal left-handed writing posture

Left-handed writing posture

It is particularly important that left-handed children receive special assistance in learning a relaxed writing posture. In our left-to-right script, the hand of a right-hander moves away from what is written. There is therefore no risk of smudging or covering up what has just been written. The left-hander, however, smudges the writing easily or covers it with their hand. To avoid this, a writing posture should be practised from the start which positions the left hand under the line. The back end of the pen points roughly towards the left elbow and the paper should be angled slightly to the right. The right hand holds the sheet at its right edge. It should definitely not lie on the middle of the paper, otherwise the child must write "around the hand" and ends up in the so-called "hook" hold from above. Many left-handers therefore angle their paper to the left, to avoid bending the wrist and counteracting cramp in the hand, arm and up to the shoulder area.



Letters and words also on right side of lines and beginning of line indicated with arrow or dot



Letters and first words should not only be written on the left side of exercise sheets at the beginning of the line, but also on the right at the end of the line. This is the only way that a left-handed child can see what is to be done. However, it is very important to mark the beginning of the line on the left with a colored dot or an arrow, otherwise the child may make the mistake of starting on the right-hand side.

A special writing mat has been developed to help left-handed children practise a relaxed writing posture and to do this automatically. A sample pattern showing paper position, centre of body and position of the right hand is printed on paper or non-slip plastic (paper and sturdy non-slip plastic desk mats available in different colors). It is important that this posture is practised at home as well as at school. This can also be done using masking tape markings on the desk, for example, or with the aforementioned mats. Thanks to their size the colored desk mats are also suitable for school desk from year 1 onwards and help children to find the correct position quickly and securely.

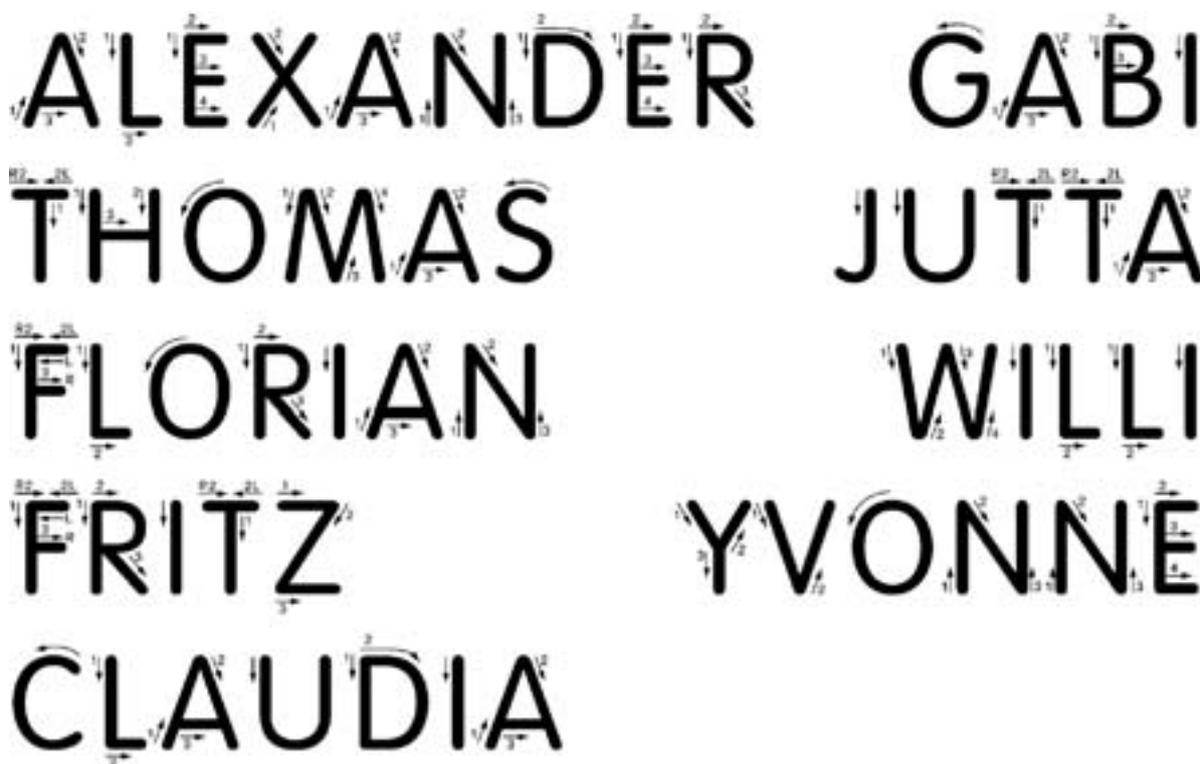
Once the fine motor skills in the fingers are extensively developed, it is advisable to start with tracing and looping exercises as early as pre-school age. **Precision does not matter here, but rather a relaxed posture.** Five minutes a day in the recommended posture with caring support from an adult have more of an effect than a hard training programme and prevent the child from getting into the habit of the typical, often very cramped hand and body posture which left-handers sometimes slip into when writing with fountain pens later.

Left-handed children should use particularly soft pencils and colored pencils, so that they do not have to hold the pencil too steeply. Later, a left-handed fountain pen or rollerball is advisable, e.g. the STABILO 's move easy. Children often follow other children's tastes. That is why a pen should be chosen which both pleases the child and is recommended by the school. Some rollerballs feature fast-drying ink. These can help a great deal in cases of awkward yet already automatic writing posture, as they do not smudge so much.

Without help and support for the child, an unfavourable writing posture often develops over the first year at school, to the extent that there is little chance of changing and correcting this posture at a later stage. It may then be necessary to seek an individual solution for the child and improve the established habits.

Left-handed letter formation

Letters should be written in a specific, prescribed style. The aim of this is that children discover a comfortable way to move in order to develop flowing writing with few backwards movements. Left-handers tend to start letters from the back, so to speak, forcing them to break up their writing more frequently than necessary and change the direction of the pen. That is why it is advisable to stick to these prescribed movements when learning letters. However, in the cases of children who have already developed other ways of writing letters, which they use automatically, this often cannot be changed.



Letter formation with pen direction arrows. Two options for pen direction are suggested for the letters T and F, as there is no compelling reason to follow the same pen direction here as is prescribed to right-handers



An optimal movement is advisable for writing numbers, too. This particularly applies to those children who tend to reverse letters and numbers. If a child has become used to drawing a diagonal stroke from bottom left to top right (or vice versa), they will discover this movement in the shapes of many numbers and this helps them to create a memory aid.

Sensible everyday objects for left-handed children

At school:

- Scissors for left-handers
- Sharpener for left-handers (also available with container), e.g. from STABILO
- Desk mat for left-handers for developing a relaxed writing position
- Possibly a ruler for left-handers, where the numbers run from the other side. However, with children who tend to confuse letters and numbers, this should possibly be avoided so as not to cause confusion
- Notepad for left-handers with spiral binding on the right side and holes on the left (for older schoolchildren); spiral binding at the top is another good idea
- Chair with writing table on left side (for older schoolchildren)

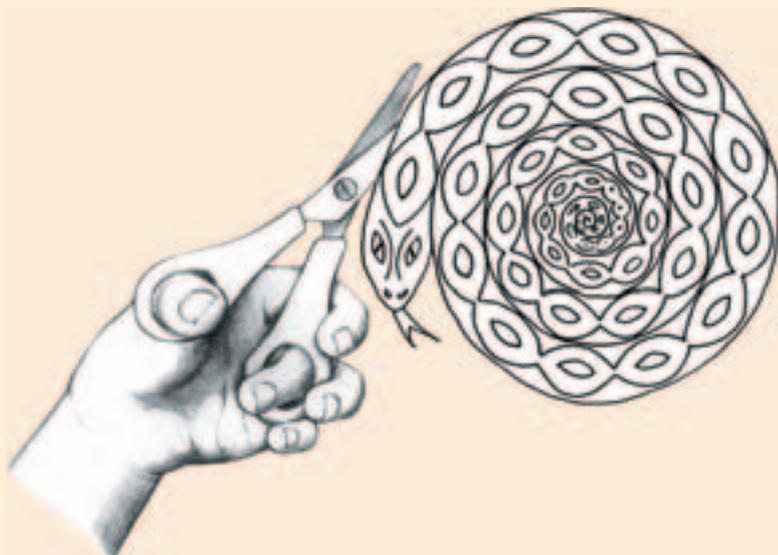


At home:

- Potato or vegetable peeler for left-handers
- Pocket knife for left-handers
- Tin opener for left-handers
- Bread knife for left-handers (for older children)

Left-handed cutting

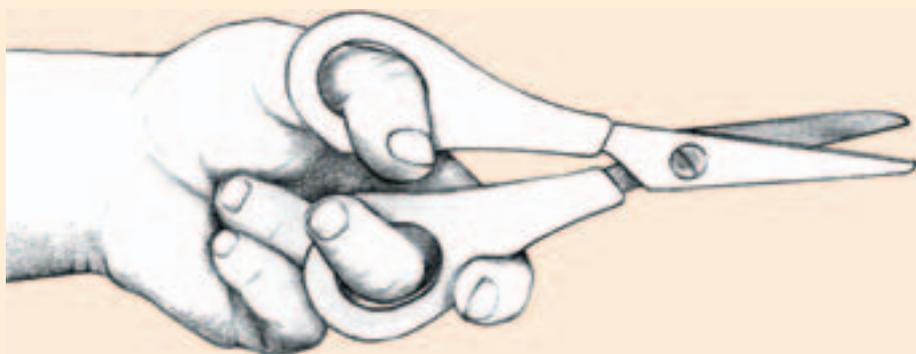
Left-handed children begin cutting from the left side, right-handed children from the right. When cutting out spirals in particular, it is important to ensure that left-handed children get mirror-image copies.



Left-handed scissors differ from right-handed scissors in the arrangement of the blades: when cutting with left-handed scissors, the top blade is on the left at the outside, and on right-handed scissors the top blade is on the right at the outside.

Spiral snake for left-handers

When using appropriate scissors, the top blade does not hide the cutting line, leaving it conveniently visible in the middle. The scissors need not be held across the body on the opposite side, the head need not be tilted severely to the left. When using left-handed scissors with the left hand, the paper cut away falls away to the left on the outside, allowing the other part to be held and followed comfortably by the right hand.



Child's hand with left-handed scissors



If appropriate scissors are not used, the blades may be forced slightly apart, causing the paper to be more squashed than cut.

Exercise sheet – left-handers



Picture puzzle: In Sarah and James' room



1. Find five mistakes for left-handed children in the picture.
2. What hand does James use?
3. Find another mistake in the desk set-up that affects both left- and right-handed children.

Picture puzzle solution: In Sarah and James' room



- First mistake:** The light at the desk is falling from the wrong side, the lamp should be positioned at the other side, as otherwise Sarah's writing/drawing hand casts a shadow on what has been written.

Second and third mistake: As Sarah's paper is positioned straight (second mistake) and the end of the pen is not pointing back towards her elbow (third mistake), as a left-hander she is smudging what she has written. She is also hiding it. These are two main reasons why left-handed children often opt very quickly at school for the very cramped 'hook' hold from above, especially due to the effects of fountain pen use.

Fourth mistake: The set of drawers are on her right side, meaning that she cannot reach them conveniently with her left hand.

Fifth mistake: While playing with the digger, James has to almost twist his left arm in order to reach the crank handle. The handle is only suitable for right-handed children; a left-handed child must either use their weaker right hand or operate the handle from the front, blocking the digger's scoop and the hanging load.
- Sarah and James are both left-handed.**
- Mistake affecting left- and right-handed children:** Sarah has positioned her paper too far to the right across the centre of her body, which is uncomfortable when drawing and writing, and the left hand does not have enough room to move freely.