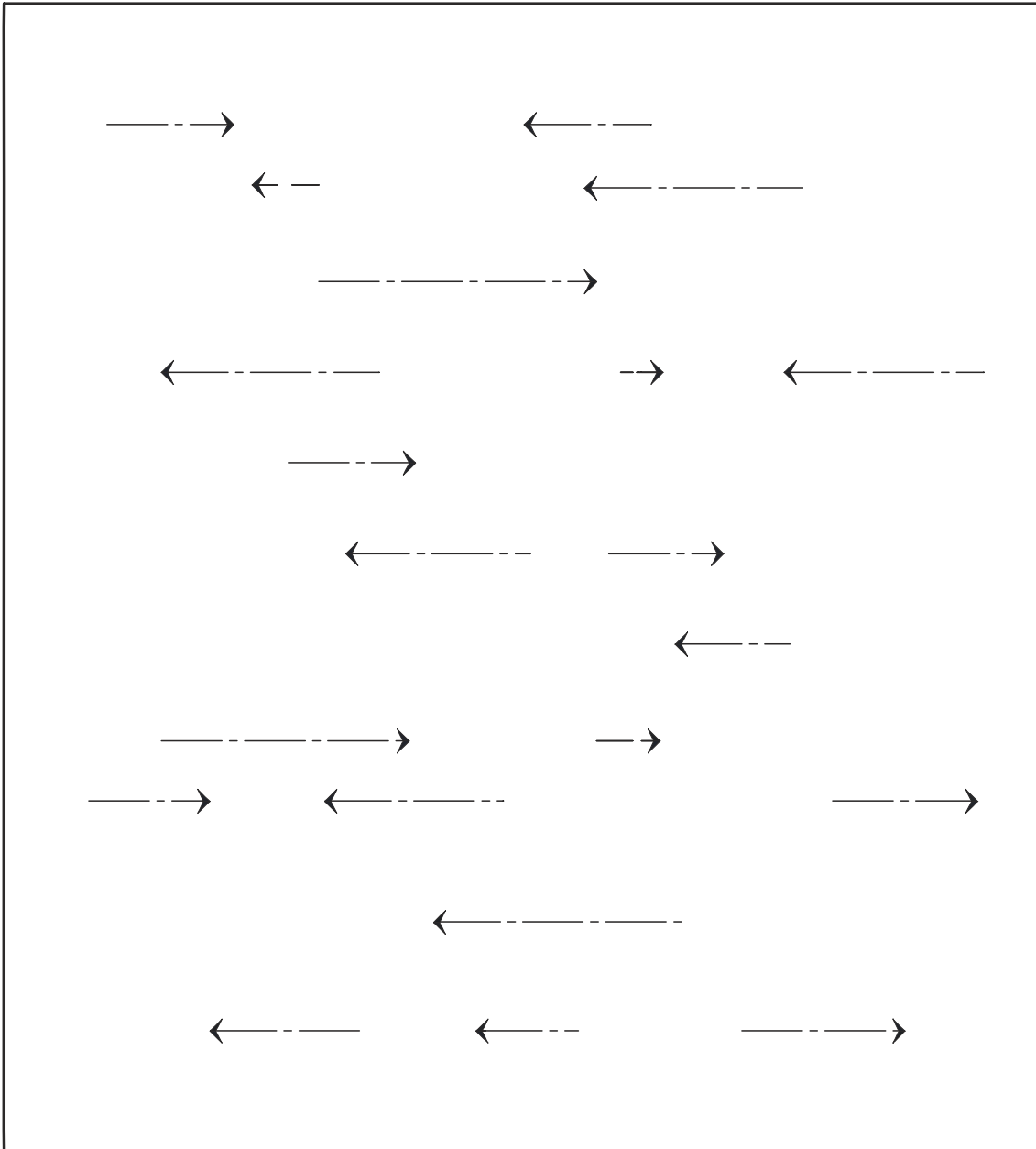
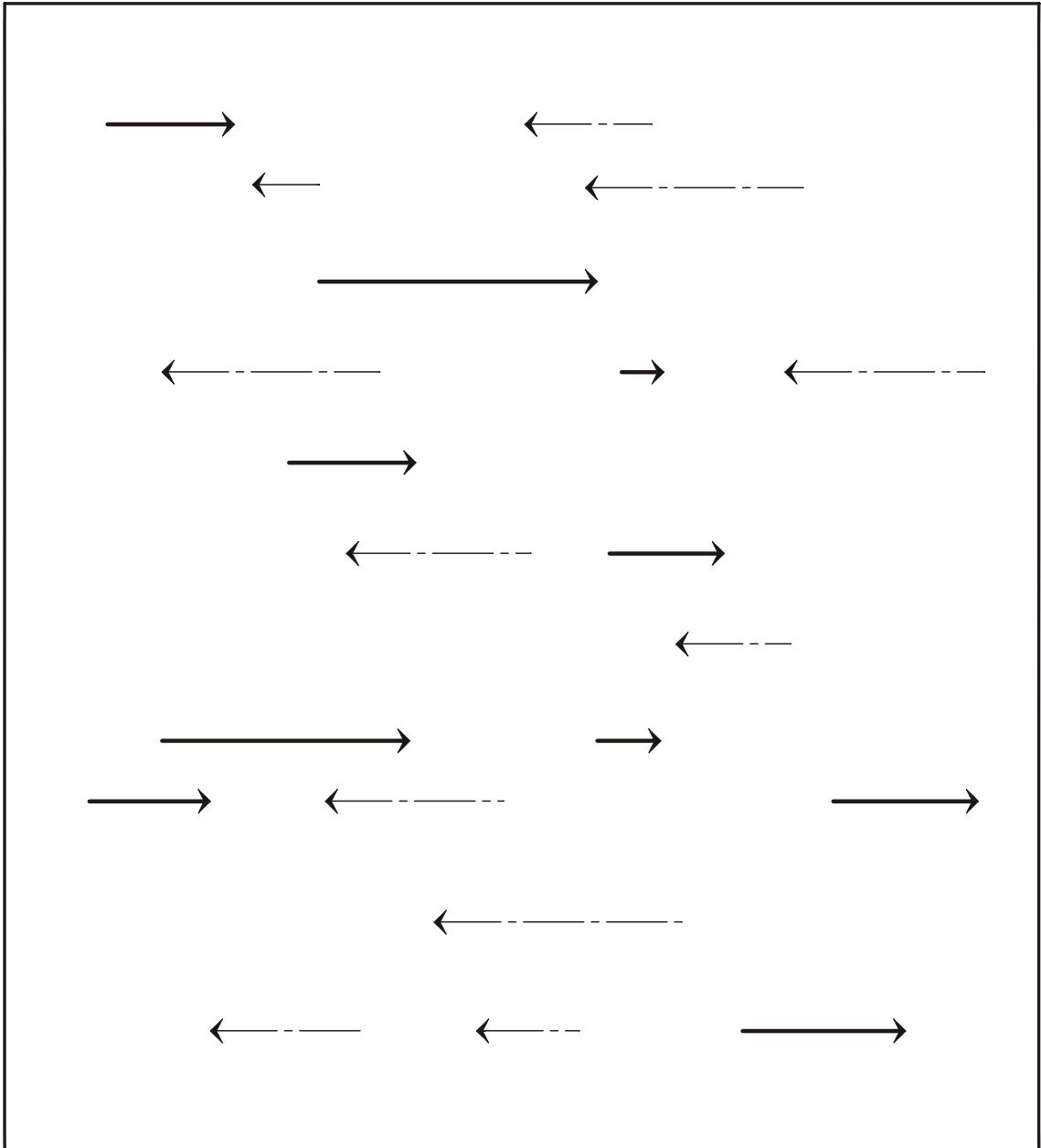


<b>Aims</b>	<ul style="list-style-type: none"><li>- Training in directional representation using arrows.</li><li>- Getting used to following the direction of an arrow and interpreting its symbol.</li><li>- Practising drawing a long straight line.</li></ul>
<b>Applications (examples)</b>	<p><u>In class</u>: understanding and using arrows to indicate or point to something (on a map, a street plan or a drawing in science or in biology.).</p> <p><u>At work</u>: interpreting any indication represented by an arrow (showing directions, placing, the direction of a line or a movement).</p> <p><u>In everyday life and for leisure</u>: interpreting any indication represented by an arrow (directions for the highway code, where to put money, for example in drinks dispensers, directions to follow on a journey, following a recipe, assembling a piece of furniture following the illustrated instructions, knitting, sewing or embroidery instructions in a magazine, etc.).</p>
<b>Materials</b>	A page with continuous horizontal dots suggesting a straight line and ending in an arrow on one side, either on the left or on the right.
<b>Instructions</b>	The pupils will join, with an unbroken line, all the dots corresponding to the arrows which indicate the direction LEFT to RIGHT.
<b>Remarks</b>	<ul style="list-style-type: none"><li>- Students who wish may of course use a ruler.</li><li>- During this exercise, it can be pointed out that scanning is different depending on where people come from, and corresponds in general to the direction we read in, i.e. from left to right in countries where people read from left to right, and from right to left, for example in countries where Arabic is spoken. This scanning is part of our cultural background, so that it is also characteristic in people who do not know how to read at all. It is important for pupils to be aware of this, in particular if there are people among them whose mother tongue is written from right to left.</li><li>- It is interesting for the pupils if each one can describe the method he used to avoid forgetting any arrows pointing in the required direction.</li></ul>
<b>Variations (examples)</b>	<ol style="list-style-type: none"><li>1. The exercise can be done again looking at the page lengthways and asking the participants, for example, to highlight the arrows pointing downwards.</li><li>2. To ease the transfer to everyday or working life, the teacher can ask the group to list all the arrow signs that they usually see around them, and to give their uses.</li></ol>
<b>Individualisation</b>	Yes.
<b>Answers</b>	Yes.















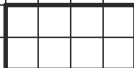
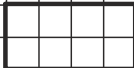


<b><i>Aims</i></b>	<ul style="list-style-type: none"><li>- Training in directional representation with arrow signs.</li><li>- Practise determining the direction of an arrow and interpreting its symbol.</li><li>- Practise drawing a long straight line.</li></ul>
<b><i>Applications (examples)</i></b>	<p><u>In class</u>: understanding and using arrow systems to indicate, point to (on a map, a street map, on a drawing in science or biology, etc.).</p> <p><u>At work</u>: know how to interpret any indication represented by arrows (indications of direction, placing, the direction of movement, etc.)</p> <p><u>In everyday life and for leisure</u>: know how to interpret any indication marked with arrows (directions for the highway code, where to put money, for example in drinks dispensers, directions to follow on a journey, following a recipe, assembling a piece of furniture following the illustrated instructions, knitting, sewing or embroidery instructions in a magazine, etc.).</p>
<b><i>Materials</i></b>	A page with continuous horizontal dots suggesting a straight line, and ending in an arrow on one side, either right or left.
<b><i>Instructions</i></b>	The pupils will use an unbroken line to join all the dots corresponding to the arrows which indicate the direction LEFT to RIGHT.
<b><i>Remarks</i></b>	<ul style="list-style-type: none"><li>- Of course, those pupils who wish may use a ruler.</li><li>- During this exercise, it can be pointed out that scanning is different depending on where people come from, and corresponds in general to the direction we read in, i.e. from left to right in countries where people read from left to right, and from right to left, for example in countries where Arabic is spoken. This scanning is part of our cultural background, so that it is also characteristic in people who do not know how to read at all. It is important for pupils to be aware of this, in particular if there are people among them whose mother tongue is written from right to left.</li><li>- It is interesting for the pupils if each one can describe the method he used to avoid forgetting any arrows pointing in the required direction.</li></ul>
<b><i>Variations (examples)</i></b>	<ol style="list-style-type: none"><li>1. The exercise can be done again looking at the page lengthways and asking the participants, for example, to highlight the arrows pointing downwards.</li><li>2. To ease the transfer to everyday or working life, the teacher can ask the group to list all the arrow signs that they usually see around them, and to give their uses.</li></ol>
<b><i>Individualisation</i></b>	Yes.
<b><i>Answers</i></b>	Yes.

**“Lines or dots”**

The grid is divided into two equal halves by a vertical line. On the left half, there are eight rows of geometric shapes:

- Row 1: A horizontal line consisting of three dots.
- Row 2: A vertical line consisting of two dots.
- Row 3: A plus sign (+).
- Row 4: A square with four dots at its corners.
- Row 5: An 'X' shape formed by two intersecting diagonal lines.
- Row 6: A square.
- Row 7: A rectangle.
- Row 8: A rectangle.

**WORK IT  
OUT****Reproduce - Represent****3-13****“A strange staircase”****Level 1  
Exercise 3**

<b>Aims</b>	<ul style="list-style-type: none"><li>- Practise "matching" an existing drawing and continuing it with your own.</li><li>- Observe the characteristics of a simple drawing with a repetitive pattern.</li><li>- Practice in continuing a drawing already begun keeping exactly the same characteristics.</li><li>- Beginning seriation.</li><li>- Using squared paper for precision drawing.</li></ul>
<b>Applications (examples)</b>	<p><u>In class</u>: any exercise consisting in reproducing a line identically and continuing it (in geometry, drawing, etc.) and highlighting the importance of giving precise instructions. In learning to read and write, copying letters, words and sentences.</p> <p><u>At work</u>: any task requiring anticipation in a rhythm, or recurring sequences, for example, in making motifs on material, leather, craftwork objects, etc.</p> <p><u>In everyday life and for leisure</u>: finding your place and anticipating the reproduction of sequences that recur in a regular pattern, in sewing, for example, embroidery, tapestry work, interior decorating, etc. Becoming aware that the oral expression in formulating instructions can lead to (mis-)interpretation if it is left unclear, with often serious consequences.</p>
<b>Materials</b>	A sheet of squared paper with the beginning of a broken line drawn on it, resembling a sort of staircase with steps that seem irregular at first sight, but which obey a repeated pattern.
<b>Instructions</b>	Les pupils continue the existing drawing in keeping with its characteristics.
<b>Remarks</b>	The instructions are intentionally vague on the number of lines required. It is indeed not specified whether the drawing has to be continued upwards or downwards or both, nor whether the line should continue right to the edge of the squares. Each person will explain, during the pooling phase, how he/she interpreted the instructions, unless questions are asked before or during the exercise.
<b>Variations (examples)</b>	<ol style="list-style-type: none"><li>1. During the pooling of the techniques used to continue the drawing, very different ways of proceeding will be found, often expressed in images to describe a certain rhythm, for example, to define the lines, you will hear "formulas" such as "small - small - big; small - small - big" or "long - short - short". Some will talk of mountains: "one small one – two big ones next to it", others will draw a diagonal going along the line and use this new mark as a basis for the rest. The wealth of techniques used can easily be exploited by the teacher; the exercise is particularly suitable. The variation will then consist in discovering ways to create sequences requested other than those which are given.</li><li>2. Using the page on which the work was done, it is possible to choose one of the techniques shown during the pooling of results to trace the same broken line, but starting from the top right-hand corner of the squares to go down to the opposite corner, crossing the first line. The pupils can then compare amongst themselves the exact place of their last line.</li><li>3. For this exercise the group could look for a way to formulate the instructions so as to explain the work explicitly, leaving no room for interpretation.</li></ol>
<b>Individualisation</b>	Yes.
<b>Answers</b>	Yes, suggested.

**“A strange staircase”**

