

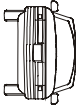





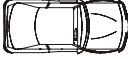



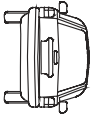
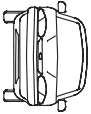


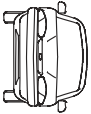




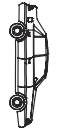



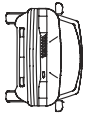
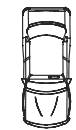
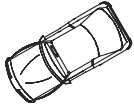

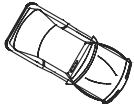
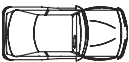


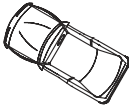
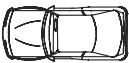

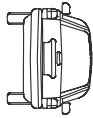



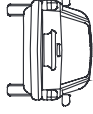


<b>WORK IT OUT</b>	<b>Categorising -series "Series of cars"</b>	<b>11-41 Niveau 4 Exercise 1</b>
<b>Aims</b>	<ul style="list-style-type: none"> <li>- Practising working with sets.</li> <li>- Practising identifying a repeating pattern in a series.</li> <li>- Practising finding a missing element in a series.</li> </ul>	
<b>Applications (examples)</b>	<p><u>In class</u>: any mental operation involving finding criteria to sort elements into series and identifying missing elements. For example, series of verbs with the same prefix (replace, rediscover, review; foretell, forecast, foresee;), thus allowing for the discovery of the meaning of the prefix. Similarly, series of words with the same root, or the same meaning, or the same grammatical function, or the same context (for example a professional one).</p> <p><u>At work</u>: any job involving sorting, tidying, arranging components, items or objects into ordered series according to given criteria (labelling, packing, stocking, stamping, separating etc.). Also quality control which often requires working with series.</p> <p><u>In everyday life and leisure</u>: any activity involving cataloguing according to criteria that are given or need to be worked out: organising a stamp or a postcard collection or other activities involving albums/storage systems and display criteria; games (card games, jigsaws); stowing objects in boxes or predetermined areas (tools, sewing implements, buttons). Knitting, unless at the most basic level, requires an ability to work with series, as does any activity involving alternation.</p>	
<b>Materials</b>	A sheet of paper with 3 different series. Each series contains drawings of a car in different positions and has 2 or 3 missing elements.	
<b>Instructions</b>	The students have to draw a car in the blank boxes, according to the other elements in the series. The teacher must mention that the series has to be read from left to right.	
<b>Comments</b>	In some of the drawings, the students might have to agree which drawing represents the front of the car and which drawing the rear, though this does not affect the answers.	
<b>Variations (examples)</b>	<ol style="list-style-type: none"> <li>1. The teacher could ask those who finish early to create, alone or in a group of two, a series of 10 elements (simple drawings, letters or numbers) to be presented to the group. The group will then discover the rationale behind the series and the missing element, if there is one.</li> <li>2. The teacher can create or get the students to create the same type of exercise with cards, dice or dominoes.</li> </ol>	
<b>Individualisation</b>	Yes.	
<b>Answers</b>	Yes.	

							
	<b>6</b>				<b>7</b>		
							
		<b>3</b>			<b>4</b>		<b>5</b>
							
	<b>1</b>				<b>2</b>		

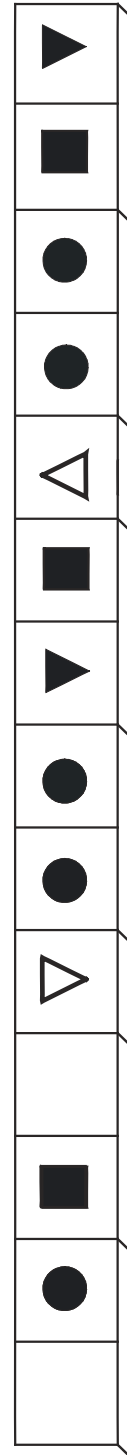
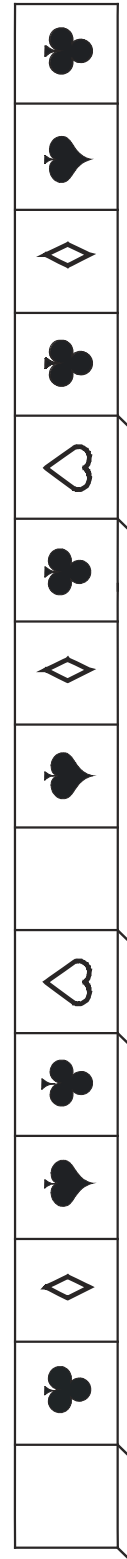
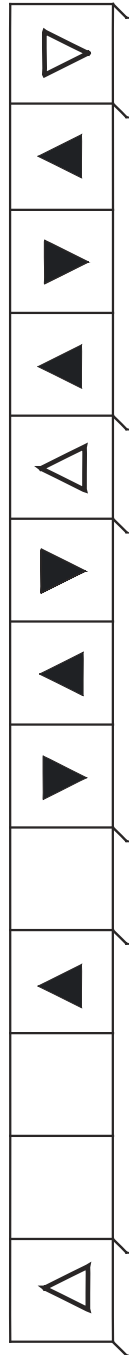
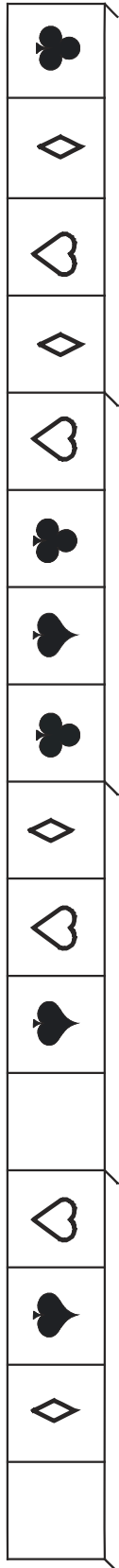
**WORK IT  
OUT**

**Categorising -series  
"Series of cars"**

**11-41  
Answers**

							
<b>6</b>							
							
<b>3</b>							
<b>4</b>							
<b>5</b>							
							
<b>1</b>							
<b>2</b>							

<b>WORK IT OUT</b>	<b>Categorising -series "Incomplete series"</b>	<b>11-42 Level 4 Exercise 2</b>
<b>Aims</b>	<ul style="list-style-type: none"> <li>- Practising working with sets.</li> <li>- Practising identifying a repeating pattern in a series.</li> <li>- Practising finding a missing element in a series,</li> </ul>	
<b>Applications (examples)</b>	<p><u>In class</u>: any mental operation involving finding criteria to sort elements into series and identifying missing elements. For example, series of verbs with the same prefix (replace, rediscover, review; foretell, forecast, foresee;), thus allowing for the discovery of the meaning of the prefix. Similarly, series of words with the same root, or the same meaning, or the same grammatical function, or the same context (for example a professional one).</p> <p><u>At work</u>: any job involving sorting, tidying, arranging components, items or objects into ordered series according to given criteria (labelling, packing, stocking, stamping, separating etc.). Also quality control which often requires working with series. .</p> <p><u>In everyday life and leisure</u>: any activity involving cataloguing according to criteria that are given or need to be worked out: organising a stamp or a postcard collection or other activities involving albums/storage systems and display criteria; games (card games, jigsaws); stowing objects in boxes or predetermined areas (tools, sewing implements, buttons). Knitting, unless at the most basic level, requires an ability to work with series, as does any activity involving alternation.</p>	
<b>Materials</b>	A sheet of paper with 4 different series of drawings. Each series has 2 or 3 missing drawings.	
<b>Instructions</b>	The students have to fill in the blank boxes, according to the other elements in the series. The teacher must mention that the series has to be read from left to right.	
<b>Comments</b>	There are some lines at the top of some boxes. They are meant to help identifying repeating patterns and can be removed to make the exercise a little bit more difficult.	
<b>Variations (examples)</b>	<ol style="list-style-type: none"> <li>1. The teacher could ask those who finish early to create, alone or in a group of two, a series of 10 elements (simple drawings, letters or numbers) to be presented to the group. The group will then discover the rationale behind the series and the missing element, if there is one.</li> <li>2. The teacher can create or get the students to create the same type of exercise with cards, dice or dominoes.</li> </ol>	
<b>Individualisation</b>	Yes.	
<b>Answers</b>	Yes.	



Four vertical sequences of shapes are shown, each consisting of 15 boxes. The shapes in each sequence are as follows:

- Sequence 1:** Club, Diamond, Heart, Diamond, Heart, Club, Spade, Club, Diamond, Heart, Spade, Heart, Heart, Spade, Diamond.
- Sequence 2:** Inverted Triangle, Triangle, Inverted Triangle, Triangle, Triangle, Inverted Triangle, Triangle, Inverted Triangle, Triangle, Inverted Triangle, Triangle, Inverted Triangle, Triangle, Inverted Triangle, Triangle.
- Sequence 3:** Club, Spade, Diamond, Club, Heart, Club, Diamond, Spade, Club, Heart, Spade, Diamond, Club, Spade, Heart.
- Sequence 4:** Triangle, Square, Circle, Circle, Triangle, Square, Inverted Triangle, Circle, Circle, Inverted Triangle, Square, Circle, Circle, Inverted Triangle, Triangle.

<b>WORK IT OUT</b>	<b>Categorising "Animals"</b>	<b>11-43</b> <b>Level 4</b> <b>Exercise 3</b>
<b>Aims</b>	Practising sorting in sets and series.	
<b>Applications (examples)</b>	<p><u>In class</u>: any mental operation involving cataloguing according to criteria that can be given or need to be worked out. For example, in a grammatical context, sorting words according to their meaning, their function in the sentence, their roots etc. Also practical tasks like tidying a classroom, packing a school bag without forgetting anything, separating files in a ring binder etc. Similarly, any mental operation involving identifying the place of one element in a series, the next logical step in a sentence, a debate, a statement.</p> <p><u>At work</u>: any job involving cataloguing, sorting, tidying, arranging components, items or objects according to given criteria (labelling, packing, stocking, stamping, separating etc.) Jobs requiring this mental ability are numerous in manufacturing, retailing and office work, as well as in other sectors like market-gardening, catering, ICT. Similarly, any mental operation involving identifying and sorting the different stages of a process, from start to finish, for example on a production line.</p> <p><u>In everyday life and leisure</u>: any activity involving cataloguing according to criteria that are given or need to be worked out: organising a stamp or a postcard collection or other activities involving albums/storage systems and display criteria; games (card games, jigsaws); stowing objects in boxes or predetermined areas (tools, sewing implements, buttons).</p>	
<b>Materials</b>	A sheet of paper with names of animals in different fonts and typefaces.	
<b>Instructions</b>	The students have to separate the names of animals on the page into 4 sets. They then have to sort the animals in each set according to a criterion which they decide themselves, from the least... to the most...	
<b>Comments</b>	The typographical differences are not necessarily relevant, though they can form the criterion for sets (italics, upper case etc..). The different fonts and typefaces might, however, be discussed and lead to ideas for sorting criteria.	
<b>Variations (examples)</b>	<ol style="list-style-type: none"> <li>1. The teacher could ask the students about the relationship between the size of the animals and the size of the letters of its name.</li> <li>2. The same type of material can be used to work on sets and sub-sets (see especially exercise 12-31).</li> </ol>	
<b>Individualisation</b>	Yes.	
<b>Answers</b>	Yes, but only as an example.	

flea

mouse

Iguana

elephant

fly

**Crocodile**

goat

*ostrich*

*pigeon*

**wasp**

*duck*

donkey

*adder*

*sparrow*

mosquito

Lizard

Here is one possible solution, but there are more...

<b>Insects, by size</b>	<b>Birds, by size</b>	<b>Reptiles, by size</b>	<b>Mammals, by size</b>
flea mosquito fly wasp	sparrow pigeon duck ostrich	lizard adder iguana crocodile	mouse goat donkey elephant