

<b>WORK IT OUT</b>	<b>Classify by criteria</b> <b>“Signposts”</b>	<b>10-41</b> <b>Level 4</b> <b>Exercise 1</b>
<b>Aims</b>	<ul style="list-style-type: none"> <li>- Practise observing sets.</li> <li>- Practise determining criteria when observing sets.</li> <li>- Practise finding several methods of classification.</li> <li>- Practise deciphering pictograms.</li> </ul>	
<b>Applications (examples)</b>	<p><u>In class</u>: any mental operation consisting in classifying according to criteria which must be defined, for example in grammar, classify words (according to gender, their function in a sentence, their meaning, etc.). Any practical operation, like sorting or tidying (your belongings) or "getting your school bag ready" without forgetting anything, or preparing a ring binder or notebook with separations...</p> <p><u>At work</u>: any job involving filing operations requiring sorting, tidying, setting out elements or parts according to criteria that must be defined (labelling, packing, filling shelves, marking, selecting, etc.) Looking for criteria to simplify or facilitate tasks to be carried out and testing them.</p> <p><u>In everyday life and for leisure</u>: any operation requiring classification according to criteria that must be defined, for example organising a room, a kitchen, a wardrobe or chest of drawers, and more generally, any tidying in boxes or other spaces according to practical criteria.</p>	
<b>Materials</b>	A page showing signposts from the work health and safety code.	
<b>Instructions</b>	<p>The pupils must find at least two criteria for classification and group the signposts according to the criteria determined. These criteria must be worked out by each pupil during the individual work phase.</p> <p>When the results are pooled, the criteria should not be given immediately, but each pupil should give his classifications and the group can work out the criterion used for each classification.</p>	
<b>Comments</b>	<p>The teacher should first make sure that the pupils can read and understand the written signs. A brainstorming session on what the signs might mean is likely to be necessary, especially if the pupils are not familiar with the world of work.</p> <p>In this exercise, the pupils sometimes tend to determine an enormous number of categories for classification... with some categories only containing one signpost. The group could agree on a maximum number of categories, 5 or 6 perhaps, it being understood that each category should include more than one sign.</p> <p>When the results are pooled, the pupils will explain the classification code that they used (1, 2, 3, 4... or a, b, c, d... etc.).</p>	
<b>Variations (examples)</b>	<ol style="list-style-type: none"> <li>1. The teacher can ask the pupils to work in groups to look for criteria that were not suggested during the pooling of results.</li> <li>2. The pupils (working in pairs, for example) can look for other signs and make a list of them, or draw very simple pictures of them. They will first think of two or more classification criteria, but will show their list (or their drawings) without keeping to the classification. This should be worked out by the group.</li> </ol>	
<b>Individualisation</b>	Yes.	
<b>Answers</b>	No	



<b>WORK IT OUT</b>	<b>Classify by criteria “Morse code signs”</b>	<b>10-42</b> Level 4 Exercise 2
<b>Aims</b>	<ul style="list-style-type: none"> <li>- Practise observing sets.</li> <li>- Practise determining criteria when observing sets.</li> <li>- Practise finding several methods of classification.</li> </ul>	
<b>Applications (examples)</b>	<p><u>In class</u>: any mental operation consisting in classifying according to criteria which must be defined, for example in grammar, classify words (according to gender, their function in a sentence, their meaning, etc.). Any practical operation, like sorting or tidying (your belongings) or "getting your school bag ready" without forgetting anything, or preparing a ring binder or notebook with separations...</p> <p><u>At work</u>: any job involving filing operations requiring sorting, tidying, setting out elements or parts according to criteria that must be defined (labelling, packing, filling shelves, marking, selecting, etc.) Looking for criteria to simplify or facilitate tasks to be carried out and testing them.</p> <p><u>In everyday life and for leisure</u>: any operation requiring classification according to criteria that must be defined, for example organising a room, a kitchen, a wardrobe or chest of drawers, and more generally, any tidying in boxes or other spaces according to practical criteria.</p>	
<b>Materials</b>	A page showing all the signs of Morse code.	
<b>Instructions</b>	The pupils must work out a classification system for the signs in the Morse code corresponding to the letters of the alphabet. This system must include at least 5 different criteria.	
<b>Comments</b>	An extra page is available for the teacher giving some elements of the life of the inventor of the code, Samuel Morse. This page can be used to teach the pupils about this invention and its inventor.	
<b>Variations (examples)</b>	<ol style="list-style-type: none"> <li>1. The teacher can ask the pupils to work in groups to find criteria that were not suggested when pooling the results.</li> <li>2. The pupils can look for other examples of codes used in everyday life and ask each other about their characteristics.</li> </ol>	
<b>Individualisation</b>	Yes.	
<b>Answers</b>	Yes but only suggested, as there are many possible criteria for classification.	

**MORSE CODE**

A	•—	T	—
B	—•••	U	••—
C	—•—•	V	•••—
D	—••	W	•—
E	•	X	—••—
F	••—•	Y	—•—
G	—•—•	Z	—•••
H	••••		
I	••		
J	•—	1	•—
K	—•—	2	••—
L	•—••	3	•••—
M	—	4	••••—
N	—•	5	•••••
O	—	6	—••••
P	•—••	7	—••••
Q	—••—	8	—••••
R	•—•	9	—•••••
S	•••	0	—••••—

**Signal to begin a message**

—•—•—

**Signal of end of transmission**

•—•—•

**Awaiting answer signal**

•—•••

**Question mark**

••—•••

**Full stop**

•—•—•—

**Word separation**

/

## **Who was the inventor of Morse code**

**Samuel Morse was born in 1791 in the United States and died at the age of 81.**

**He studied painting in London.**

**Back in New York, he founded a fine arts society.**

**In 1829, he goes back to visit Europe and, on the ship on the way back, a conversation about the recent discovery of electricity gave him the idea for his electric telegraph. He actually worked out the main ideas before the end of the crossing.**

**With very little material means and no help, Samuel Morse spent several years perfecting his invention.**

**In 1837, he gave the first demonstrations of his machine.**

**But the American government showed little interest.**

**Morse took it to Europe, but had no success there either.**

**It was not until 1840 that he obtained his patent, and three years later the financial help needed to create a line between two towns in the United States.**

**In Europe, Samuel Morse’s telegraph was first set up in Austria, Germany and Switzerland. In the 1850s Morse’s electric telegraph system was adopted in Europe, with the exception of the United Kingdom where another system was in use.**

**\* \* \***

**Suggested answers**

**Here is a classification with 5 criteria:**

- All the signs containing only **dots**:

E H I S

- All the signs containing only **dashes**:

M O T

- All the signs containing as many **dots** as **dashes**:

A C N P X Z

- All the signs containing more **dots** than **dashes**:

B D F L R U V

- All the signs containing more **dashes** than **dots**:

G J K Q W Y

<b>WORK IT OUT</b>	<b>Classify: by criteria</b> <b>“From one word to the next”</b>	<b>10-43</b> <b>Level 4</b> <b>Exercise 3</b>
<b>Aims</b>	<ul style="list-style-type: none"> <li>- Practise finding several criteria for grouping.</li> <li>- Practise associating.</li> <li>- Combining sets so that all the elements are used.</li> </ul>	
<b>Applications (examples)</b>	<p><u>In class</u>: any mental operation consisting in making associations according to criteria that must be defined, for example in written English, word collocations, use associations to memorise ...</p> <p><u>At work</u>: any job involving filing operations requiring sorting, tidying, setting out elements or parts according to criteria of association to be defined (labelling, packing, filling shelves, marking, selecting, etc.) Looking for criteria to simplify or facilitate tasks to be carried out or memorised, and testing them.</p> <p><u>In everyday life and for leisure</u>: any operation requiring associating elements in order to classify them or group them together, or determining classification criteria, for example for tidying utensils in a kitchen, or a bathroom, arranging things in a wardrobe or chest of drawers, and more generally, any tidying in boxes or other spaces according to practical criteria.</p>	
<b>Materials</b>	Une feuille où figure une liste 7 mots séparés par des lignes en pointillés sur lesquelles les élèves pourront écrire un autre mot.	
<b>Instructions</b>	Between each of the words proposed, the pupils must write (on the dotted lines) a word that enables them to go from one word to the next according to a linking criterion that they must be able to explain when the results are pooled.	
<b>Comments</b>	This aid cannot be used in the case of a group of pupils who have little or no literacy skill. The teacher should therefore choose one of the other two exercises in level 4 in the tool “Work it out”.	
<b>Variations (examples)</b>	<ol style="list-style-type: none"> <li>1. Lors de la mise en commun, après que plusieurs élèves ont donné leur solution, d'autres peuvent montrer les associations qu'ils ont faites et demander au groupe d'en découvrir la logique.</li> <li>2. The pupils (working in pairs, for example) can look for other words that they can make into a list and that require finding an intermediate word to express the association. Ils penseront au préalable à des critères d'association que devront découvrir les autres élèves.</li> </ol>	
<b>Individualisation</b>	Yes.	
<b>Answers</b>	Yes, but there are many possible solutions.	

TROUSERS

.....

CURTAIN

.....

GLASS

.....

BULB

.....

PLANT

.....

INDUSTRY

.....

COAL