

# TEACHER SHEET



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LEARN THROUGH PLAY



# QUARTO!

IDENTIFY, CLASSIFY, ARRANGE

## TOPIC: categorization

### • Objectives:

- learn and use an accurate vocabulary to sort and describe real items.
- compare and arrange characteristics of an item.
- learn logical reasoning, practice deduction.

### • School level: 4 - 10 years,

The main objective of this activity is to learn how to classify and arrange the pieces depending on a common denominator. The teaching sheet proposes several intermediate exercises to get pupils accustomed to the different pieces of the game and teach them to group pieces according to a common criterion.

### Objectives of the exercises:

- **Exercise 1** ⇒ Familiarise pupils with the materials.
- **Exercise 2** ⇒ Recognise and describe characteristics of an item.
- **Exercise 3** ⇒ Recognise common characteristics shared by several items
- **Exercise 4** ⇒ Recognise if an item belongs to a group or not.
- **Exercise 5** ⇒ Group items according to an imposed criterion.
- **Exercise 6** ⇒ Solve easy logical problems by using notions of group, complementary and negation.

Once these exercises are complete, pupils will be able to play a game in its simplest version and will have achieved the following:

- **Knowledge objective:** understand a rule.
- **Know-how objective :** observation and concentration; categorisation; anticipation; formulation of long and short-term strategy.
- **Behavioral objective:** respect for the opponent and the rules, communication.

The pupil sheet can be kept by pupils. It outlines the game rules and the vocabulary used in the game. The teacher sheet contains an exercise to introduce the game vocabulary.

## Intermediate exercises

### Exercise 1: observing Quarto pieces

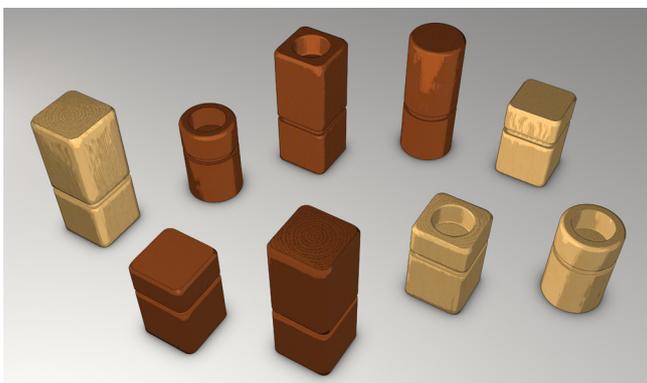
⇒ Find one or several piece(s) from imposed criterions.

• **Observe:** teacher begins by asking a pupil to identify a piece by using one or more criterion. For example: « give me the tall, light, square and hollow piece ». In this exercise, the teacher names the criterion of the pieces, in order to get the pupils accustomed to them.

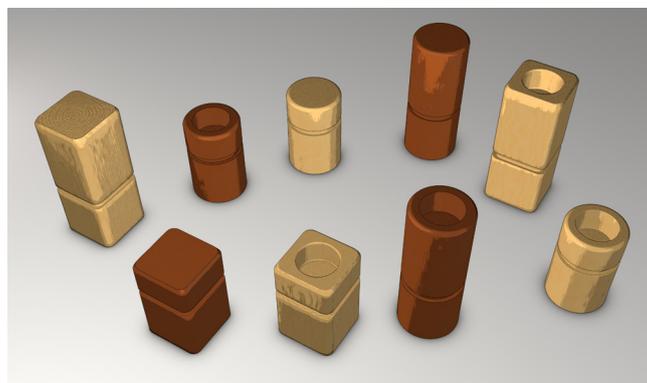
• **Portrait game:** the teacher chooses a piece without showing it to the pupils. They now have to find it by asking questions. The teacher can only answer with «yes» or «no». In this exercise the pupils will use the descriptive vocabulary previously learned.

### Exercise 2: classify and arrange Quarto pieces.

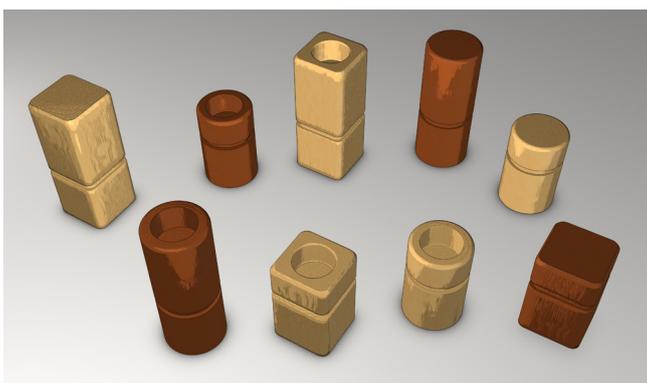
⇒ Recognise and describe characteristics of an item.



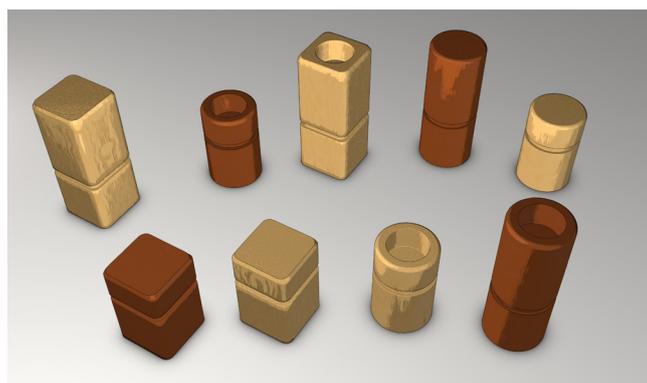
**By colour:** circle the light pieces.



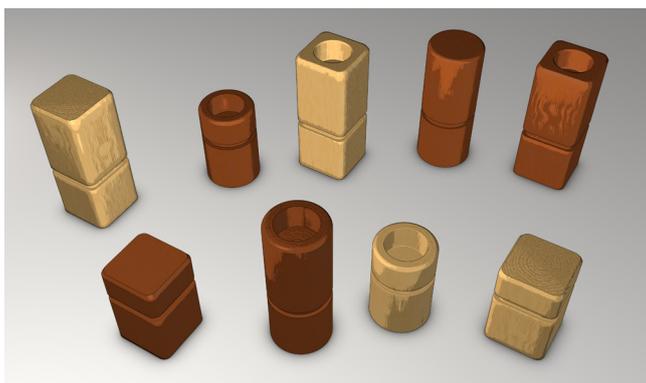
**By size:** circle the small pieces.



**By shape:** circle the round pieces.



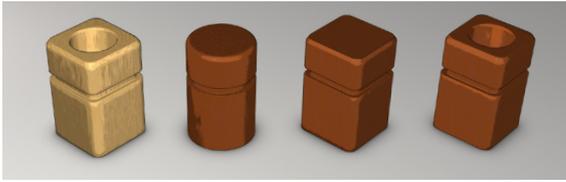
**By filling:** circle the full pieces (no hole).



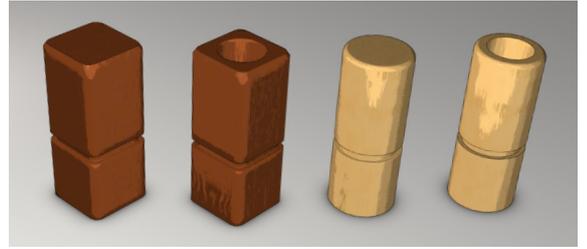
**By size and colour :**  
Circle the tall and dark pieces.

**Exercise 3: find the common denominator between these 4 Quarto pieces.**

⇒ Recognise a common characteristic between several items.



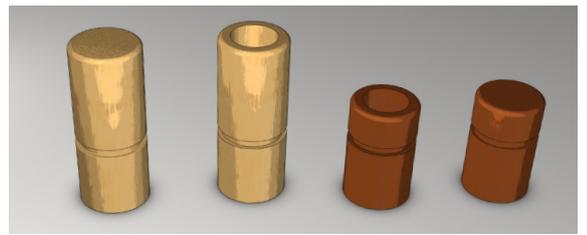
All the pieces are:



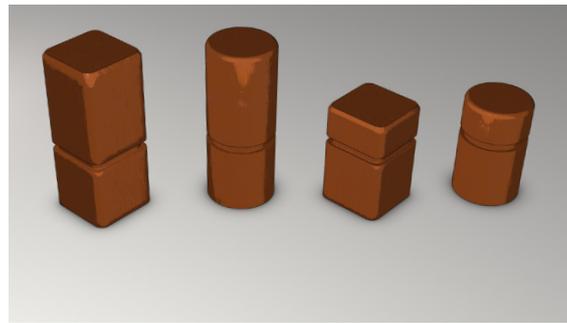
All the pieces are:



All the pieces are:



All the pieces are:

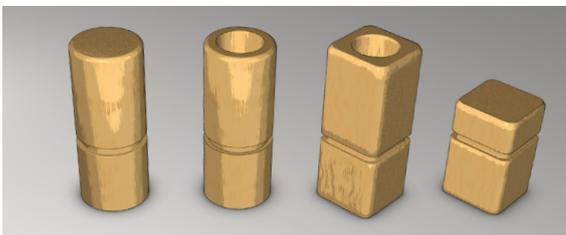


All the pieces are: \_\_\_\_\_ and \_\_\_\_\_

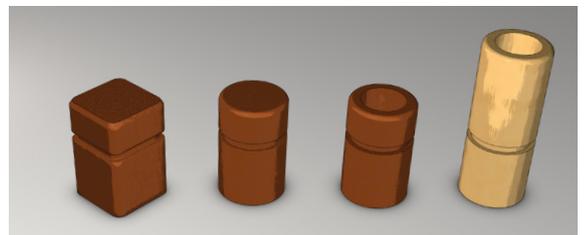
**Exercise 4: Do these groups make a Quarto? Circle the right answer.**

A Quarto is a group of 4 pieces sharing at least one common characteristic : the colour (light or dark), the shape (square or round), the size (small or tall), or the filling (full or hollow).

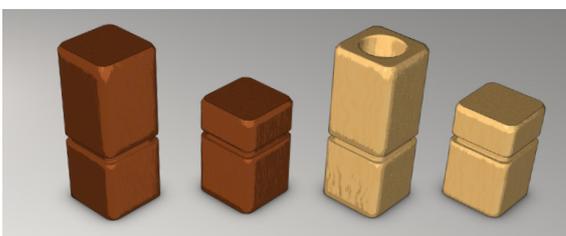
⇒ Recognise if an item belongs to a group or not.



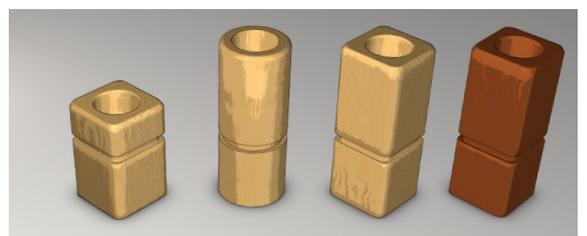
YES / NO



YES / NO



YES / NO

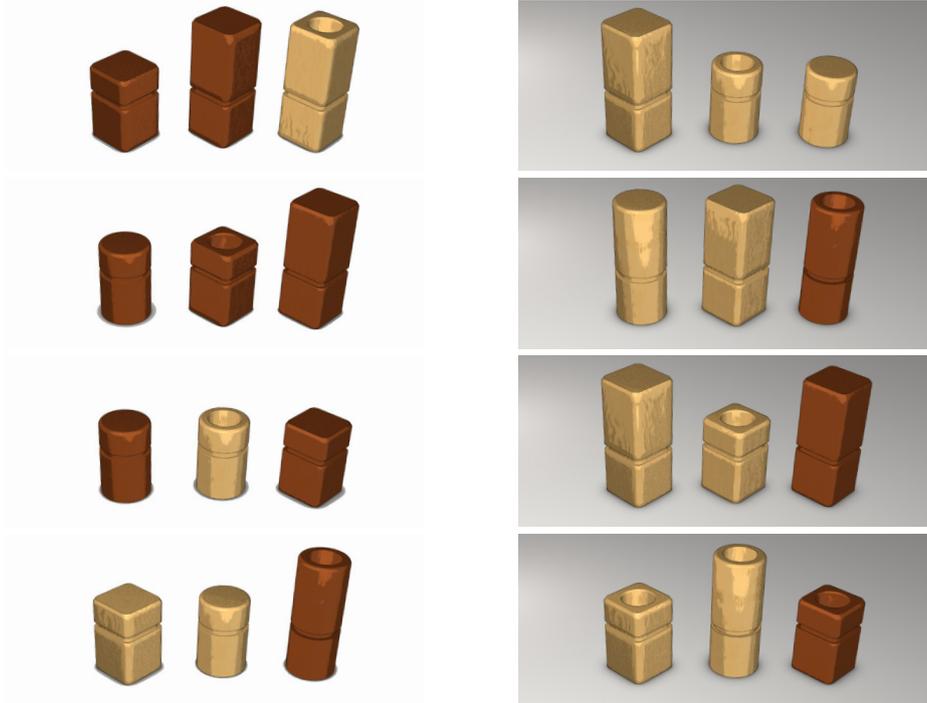


YES / NO

**Exercise 5: choose a piece to create a Quarto !**

⇒ Gather together items according to an imposed criterion.

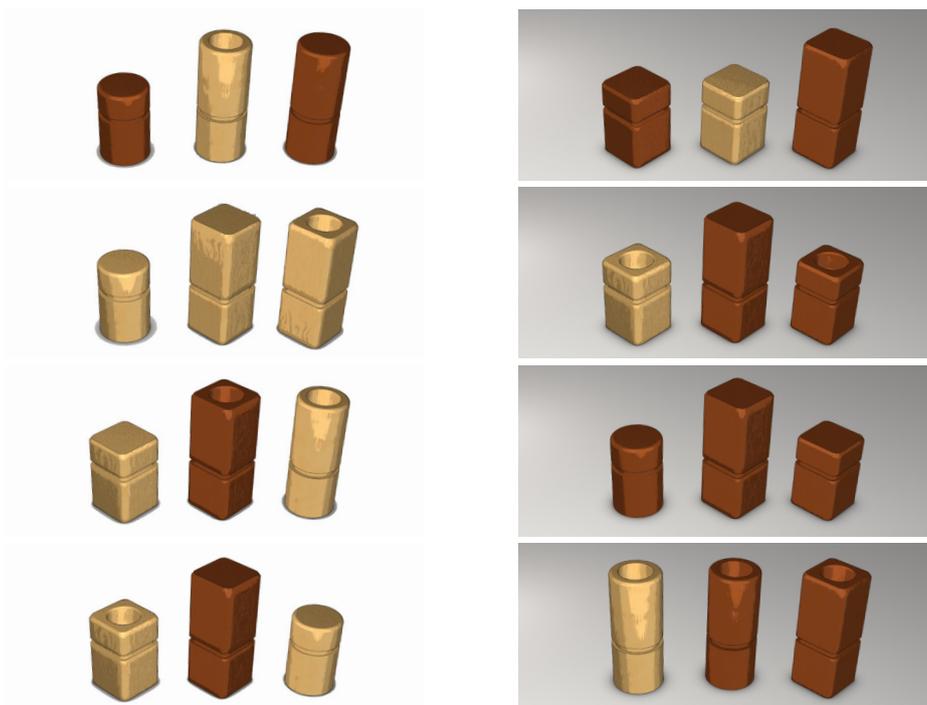
👉 Circle a piece in the left group to complete the right group and thus create a line of 4 pieces sharing one common criterion.



**Exercise 6: choose a piece to block the progression of the opponent.**

⇒ Solve easy logical issues by using notions of group, complementary and negation.

👉 Choose and circle a piece from the left group in order that the right group does NOT form a Quarto.



# Let's play Quarto

👉 **Play a complete game** ⌚ 15min.

## ⇒ Aim of the game

Be the first to establish a line of four pieces, with at least one common characteristic (fig. 2) on the board.

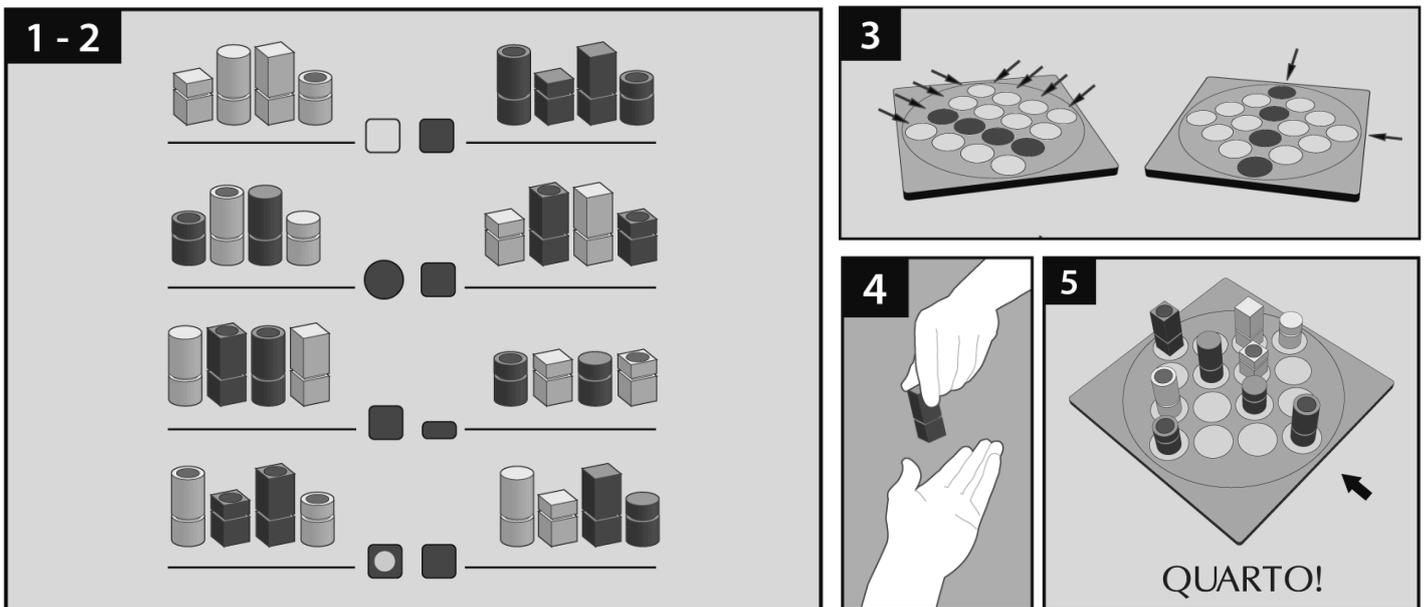
## ⇒ Simplified rules:

- at the beginning the board is empty. The pieces belongs to nobody.
- Players take it in turns to select a piece and place it on any empty square of the board.
- The winner is the first one who creates a Quarto. It can be done horizontally, vertically or diagonally.

## ⇒ Didactics variations:

**Simplification:** play with only one criterion (easiest is the color, less easy is the filling)

**Complication:** Once the pupils are used to the game the players take it in turns to choose the piece that their opponent has to place on the board.



Any comments or suggestions concerning this sheet?

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# PUPIL SHEET



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LEARN THROUGH PLAY

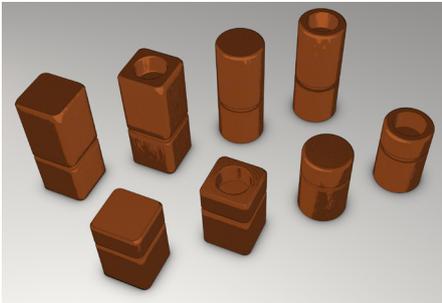


# QUARTTO!

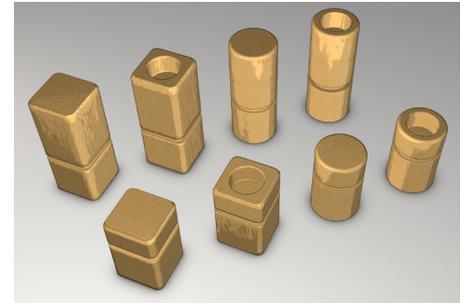
IDENTIFY, CLASSIFY, ARRANGE

## Pieces of the game

*Dark pieces*



*Light pieces*



## Aim of the game

Be the first to establish a line of four pieces on the board, sharing at least one common characteristic: the colour (all dark or all light), the size (all tall or all small), the shape (all round or all square), the filling (all full or all hollow). The alignment can be horizontal, vertical or diagonal.

*Example of a Quarto :  
All the pieces are dark*



## How to play ?

- At the beginning, the board is empty. The pieces belongs to nobody.
  - On turn take a piece and place it on any empty square anywhere on the board. Then it's your opponent's turn, and so on...
  - The winner is the first one who creates a Quarto. It can be done horizontally, vertically or diagonally.
- If there are no pieces left and nobody creates a Quarto, you can play again.

## Words to keep in mind :

- Round, square, small, tall, hollow, full, light, dark.
- Size, shape, colour, filling.
- Difference, common criterion, group, characteristic.
- Horizontal, vertical, diagonal.