Giochinsieme

The cards by Itala Riccardi Ripamonti

SHAPES AND LOGIC

**To develop logical skills:
sorting, classifying and organizing**

Erickson

Objectives

The **"Shapes and logic"** cards are designed to:

Stimulate **logical skills**, in other words perceiving similarities and differences (shape, colour, size, solid or hollow), the ability to put in order and classify, to organise knowledge (creating different strategies that reflect different ways of building reality) and understand and use accurate language.

Improve **self-regulation**. The playful modality, which exploits children's motivation, involves emotions, and this meeting of the emotional and the cognitive unleashes behaviour self-regulation, which enables objectives to be fulfilled, regardless of external stimuli. By strengthening the cognitive system we are able to work on the emotions and thus obtain greater self-regulation, in so much as the cognitive system controls the emotional aspect, even if self-regulation occurs both ways.

Develop **executive functions** (rapid task changing, inhibition, updating working memory etc.). Because the level of difficulty of the games suggested is neither too low nor too high, children are encouraged to participate.

Age and characteristics of target users

A series of «intelligent» games can be played with these cards. Some of these will be shown in the following pages, others can be created by the users.

From 4/5 years upwards, everyone can have a go and have fun, including adults. The ideal target users are **5–14 year olds**, as they — by engaging with the different activities and developing logical thinking, abstraction and language, driven by the pleasure of playing and of being competitive (under the constant supervision of the educator) — are encouraged to classify, serialise, group, sort, put in order, transform, analyse and summarise, and also to discover, invent, evaluate and compare the characteristics of the «things». In fact, the key to overcoming the challenges set against yourself or your peers, is not luck but reasoning ability.

These cards are the ideal tool for fulfilling key didactic objectives, and at the same time having fun. They are an excellent teaching aid for nursery and primary school **teachers**. They are also particularly useful in **rehabilitation**, even for secondary school pupils with difficulties. The different suggestions, in fact, prove useful for developing logical and abstraction skills in individuals with **learning and/or language and/or cognitive difficulties** and for encouraging the development of precise, accurate language.

Parents, teachers and educators can play with children and adolescents by putting themselves on their same level, thus creating ideal learning environments: a good educator never forgets that children learn by playing and play to learn!

Description of the cards

Each deck contains **54 cards**, 6 of which are «jokers». The remaining 48 depict 4 geometrical shapes (squares, triangles, rectangles and circles), and appear:

- in 3 different **colours**: blue/yellow/red
- in 2 **sizes**: big/small
- and in 2 **conditions**: solid/hollow colour.
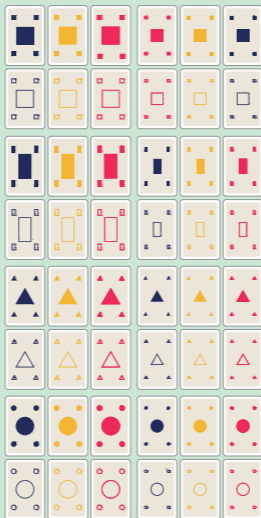
First of all, children must acquire confidence with the cards, sorting them according to the criteria of «solid» or «hollow», by colour, by shape and by size. Once this is done various kinds of **«groups»** and **«subgroups»** can be made:
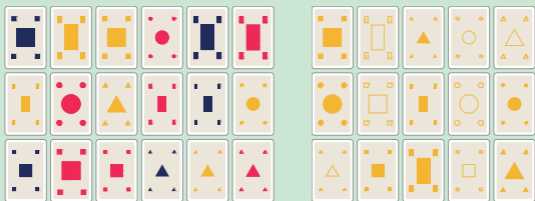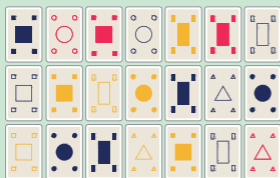

Solid groups

Color groups

It is important to help children **analyse** and **classify** the various elements by making them aware of the different characteristics that distinguish them in the group they are part of. For example, the adult shows a card depicting a «square/red/big/solid» shape, and asks: «What is it?». The child at this stage will presumably answer «a square», and here the adult will show them another«square» which is the same but «blue»; «And what's this?» «A square.» «So, it's the same as the other one, isn't it?!» «No.» «Why?» «Because this one is blue!» The same questions can be asked showing the «square/red/solid» shape, but the small one, and then the «square/big/red» shape, but the hollow one. In this way, children will learn to distinguish between the

various «characteristics», until they are able to define the first square shown as a «big/red/solid» shape, and the last one as a «small/blue/hollow» shape.
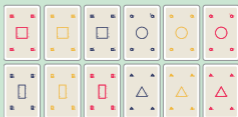

**Subgroup
of solid triangles**

Size groups

**Subgroup of small
hollow shapes**

The same process can be repeated with the other shapes (teaching their precise names should the children not know them). At this point each child will be able to play in the ways illustrated below. Obviously, older children, or particularly gifted ones will not need this kind of **preparation**: for them – and also for any adults who want to try their hand at this (and maybe find out how rusty they are …) – the explanation of the various games will suffice.

An example game:

RULE CHANGE

How to play

Deck with Joker

This game is also played in the same way as the last two. However, here it is the players who establish the characteristic the cards must have in common to be placed in a row on the table. For example: the first player puts a card down on the table and says: «Colour». This means that all the following cards must be the same colour as the first one put down, so, when a player turns over a card of a different colour, they lose their turn. The game proceeds in this way until a player finds a «joker». This enables the player to change the «rule», in other words the characteristic needed for the following cards. Let's say the player says: «Shape», from this point, the cards that can be played will be those with the same «shape» as the first card put down after the «joker». The game might proceed as follows. The first player says «Colour»: a «square/red/big/solid» shape >
a «rectangle/red/small/solid» shape >
a «triangle/red/small/solid» shape >
«joker» > ... and so says «Shape»:
a «round/yellow/big/solid» shape ...
a «round/red/small/solid» shape >
a «round/blue/big/solid» shape, etc.

Example of the "Rule change" game

"Shape and logic" games:

- What's missing?
- Steal the pack
- Happy families
- Sequences
- Sequences with 2 characteristics
- Rule change
- Functions
- Transformation/ symmetry

- Find the rule
- Find the function
- Game of «twelve»
- Solitaire 1
- Solitaire 2
- Fours 1 (or Machiavelli)
- Fours 2 (or variation on Machiavelli)