GAME

Matching polymer



Polymers are all around us. Find the polymer the two cards have in common and say its name!

To discover more games about polymer science, visit polymat.eu/play

POLYMAT PLAY 1

PRESENTATION · 1/16

Bottle
PET: light, clear polyester.

Bag
Polyethylene, the world's most-made plastic.

POLYMAT PLAY 2

PRESENTATION · 2/16

Tyre
Vulcanised rubber, toughened with carbon black.

Rubber duck
Soft PVC (vinyl): it floats and never breaks.

POLYMAT PLAY 3

PRESENTATION · 3/16

Toothbrush
Nylon bristles, polypropylene handle.

Glasses
Polycarbonate lenses, acetate frame.

POLYMAT PLAY 4

PRESENTATION · 4/16

Sports shirt
Polyester: a quick-drying fibre.

Trainer
EVA foam and polyurethane in the sole.

POLYMAT PLAY 5

PRESENTATION · 5/16

Ball
Polyurethane skin over a butyl bladder.

Balloon
Latex: natural rubber from the Hevea tree.

POLYMAT PLAY 6

PRESENTATION · 6/16

Dummy
Silicone: a silicon–oxygen polymer.

Building brick
ABS: stiff and glossy, it clicks without breaking.

POLYMAT PLAY 7

PRESENTATION · 7/16

Sponge
Polyurethane foam full of bubbles.

Pipe
Rigid PVC: it never rusts.

POLYMAT PLAY 8

PRESENTATION · 8/16

Plug
PVC or polyethylene insulation over the copper.

Paint roller
Acrylic paint: polymer dispersed in water.

POLYMAT PLAY 9

PRESENTATION · 9/16



Glue
Polymers that harden as they dry (PVA, epoxy).



Sticky tape
Polypropylene film with acrylic adhesive.

POLYMAT PLAY 10

PRESENTATION · 10/16



3D printer
PLA: polyester made from corn starch.



Card
Layered PVC with the chip embedded.

POLYMAT PLAY 11

PRESENTATION · 11/16



Phone
Polycarbonate body, flexible screen.



Lunch box
Polypropylene: it survives the microwave.

POLYMAT PLAY 12

PRESENTATION · 12/16



Umbrella
Nylon or polyester canopy, glass-fibre ribs.



Rope
Nylon: it stretches and absorbs the fall.

POLYMAT PLAY 13

PRESENTATION · 13/16



Raincoat
Polyurethane or PVC: waterproof.



Chair
Polypropylene moulded in a single piece.

POLYMAT PLAY 14

PRESENTATION · 14/16



Helmet
Polystyrene foam that absorbs the blow.



Syringe
Polypropylene: sterile and single-use.

POLYMAT PLAY 15

PRESENTATION · 15/16



DNA
A natural polymer: the molecule of life.



Paper
Cellulose: the polymer of plants.

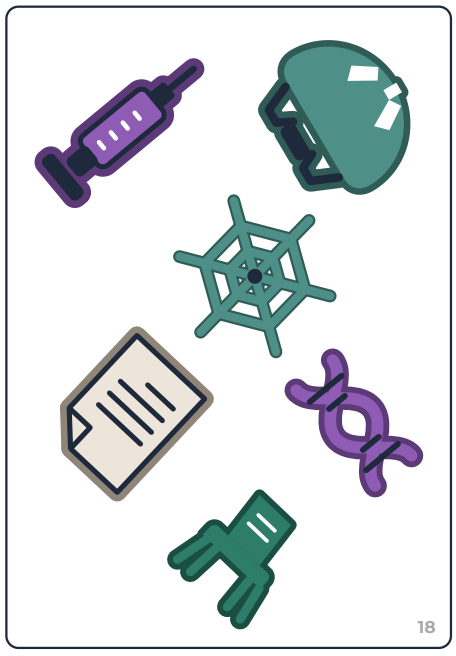
POLYMAT PLAY 16

PRESENTATION · 16/16

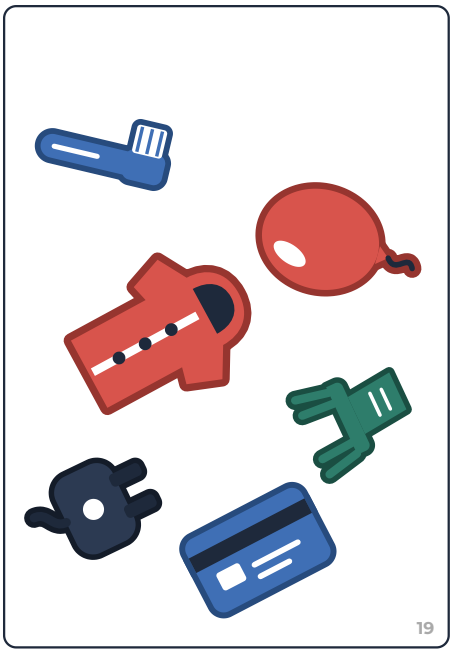


Spider web
Silk: a protein tougher than steel.

POLYMAT PLAY 17

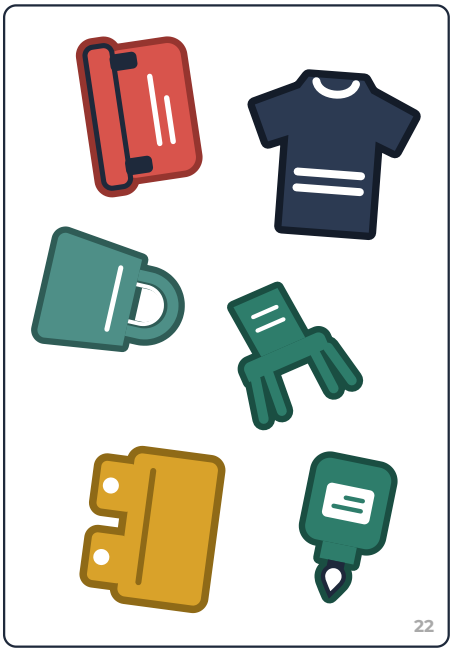


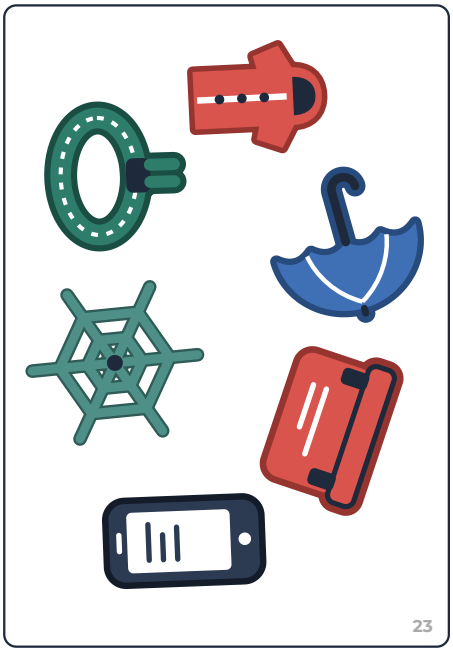
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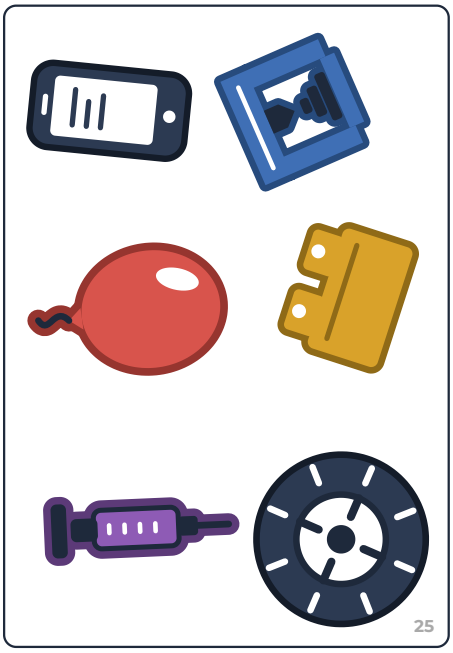

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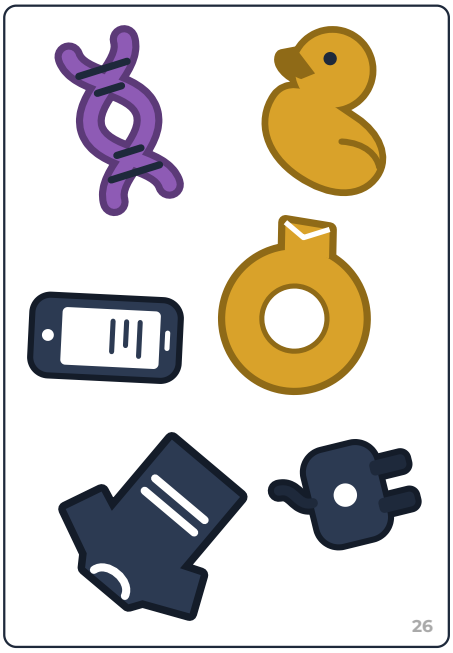

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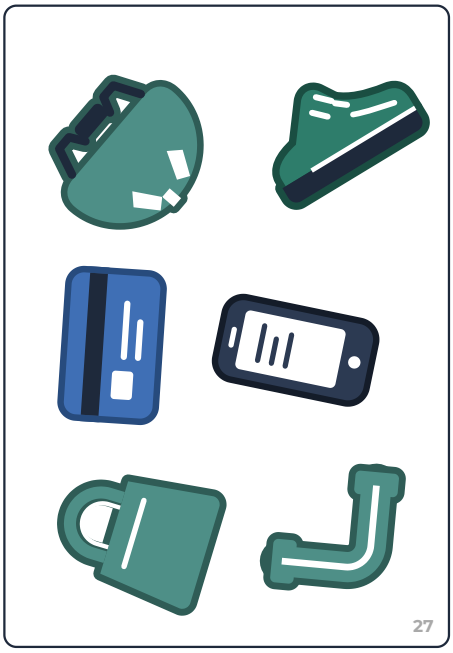

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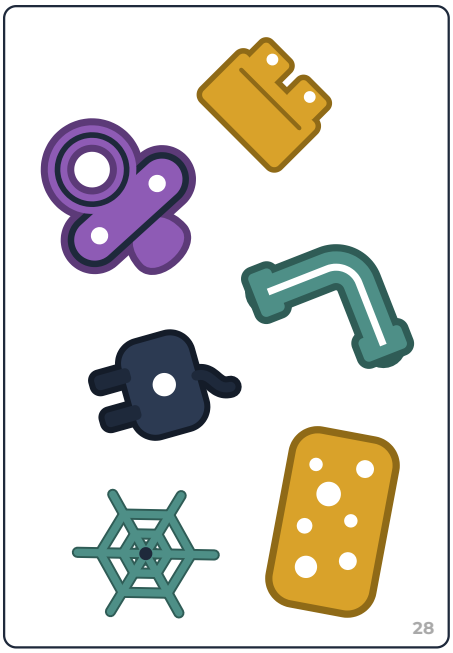

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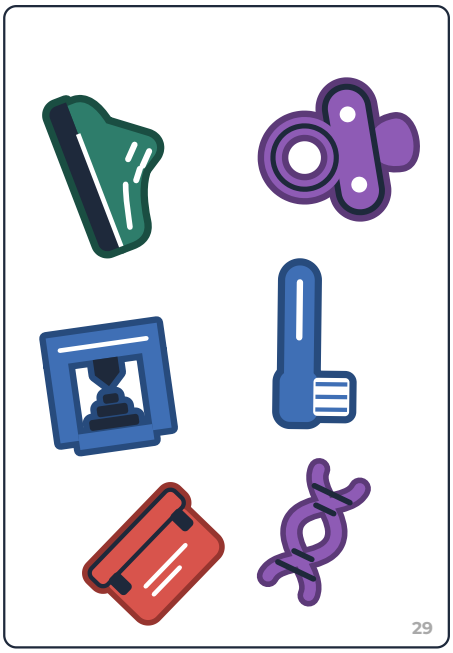

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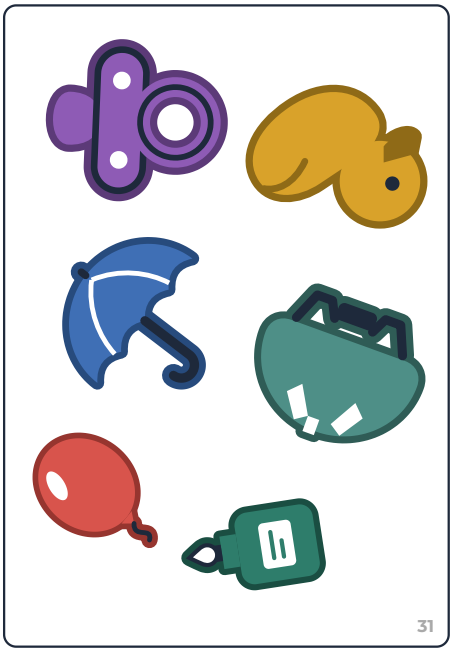

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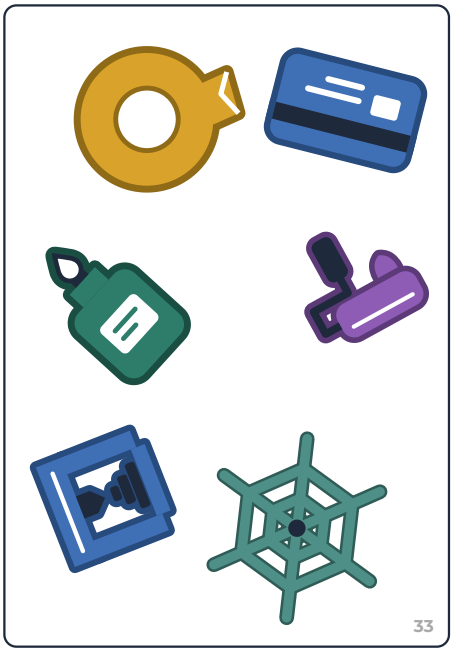

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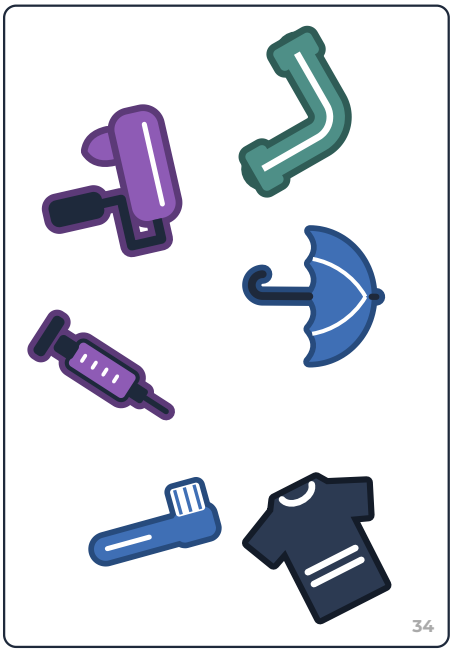

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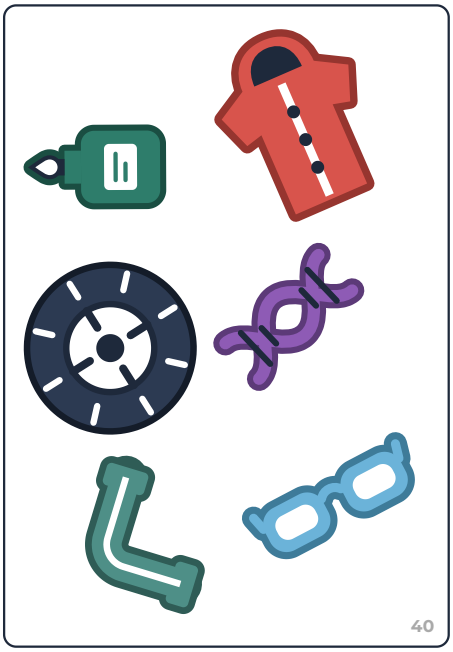

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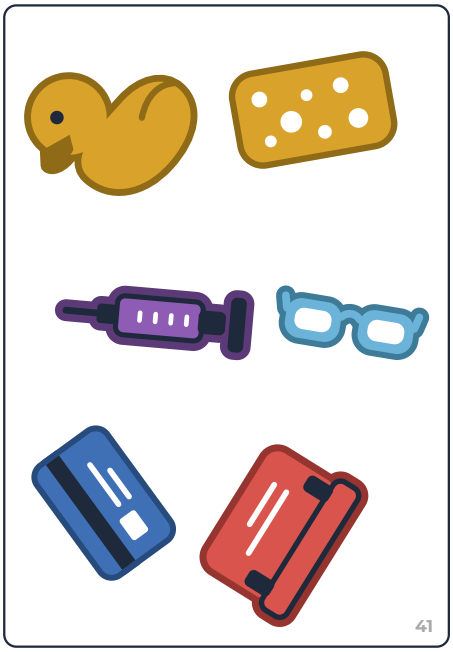

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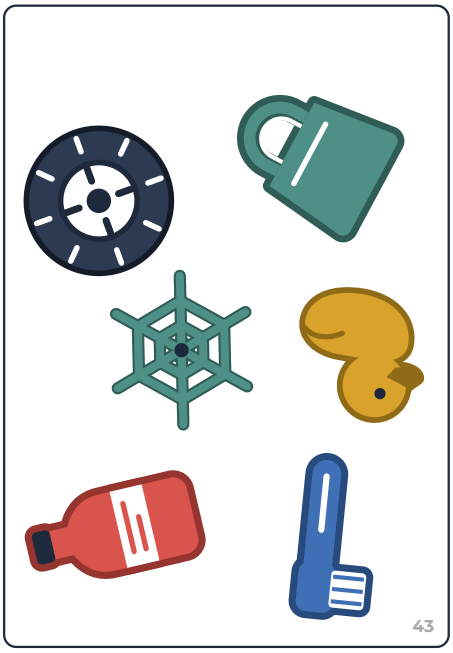

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MODE

The tower

Matching polymer

- Deal one card to each player, face up. Put all the rest in a pile in the middle, face up.
- When you name the symbol your card shares with the middle card, take the middle card and put it on top of yours.
- That new card is the one you play with from now on. When the pile runs out, whoever has the most cards wins.

POLYMAT PL>Y 49



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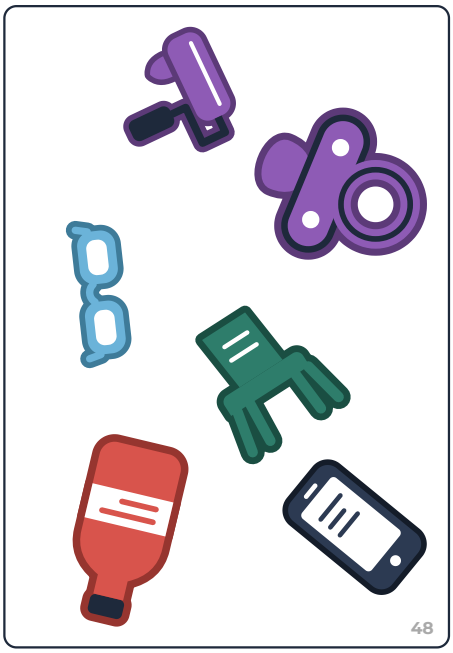
MODE

The well

Matching polymer

- Deal all the cards among the players, face down, except one, which goes in the middle face up.
- Name the symbol your top card shares with the middle card and drop yours in the middle.
- Play goes on with that new card. The first player to run out of cards wins.

POLYMAT PL>Y 50



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MODE

All on the table

Matching polymer

- Lay all the cards on the table, face up and spread out.
- When you name the symbol two cards share, take them both.
- Whoever collects the most pairs wins.
- A relaxed way to play, with no rush, to learn the vocabulary.

POLYMAT PL>Y 51

THE DECK

Why always one, and only one?

The deck is a projective plane: 31 cards, 31 symbols, six symbols on every card and every symbol on six cards. Mathematics guarantees that any two cards share one symbol and only one, whichever they are. It is not luck: it is geometry.

POLYMAT PL>Y 52

DIGITAL

Matching polymer

Play the digital version

`labur.eus/polimeroak`

Scan the code or type the address into your browser.

POLYMAT PL>Y 53

ENDING

31 symbols, 31 polymers

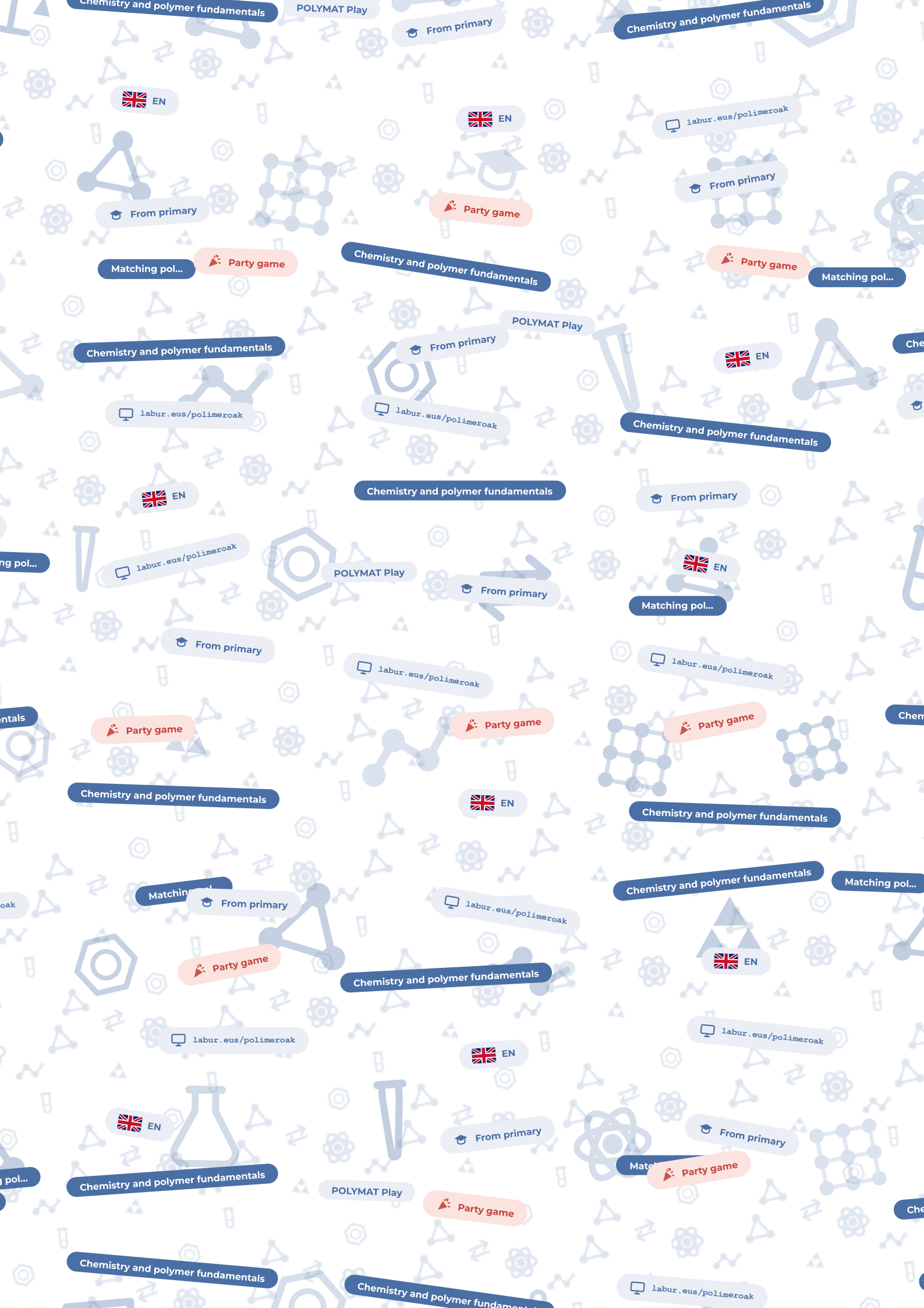
Behind every object you have seen there is a polymer: the PET of the bottle, the polyethylene of the bag, the polycarbonate of the glasses. Next time, look around you: how many can you find?

Author: Beñat Olave · POLYMAT Play · CC BY-NC-SA 4.0

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POLYMAT PL>Y 54


Chemistry and polymer fundamentals
POLYMAT Play
From primary
EN
Party game
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Matching pol...