



1 Where can you see water? Point and explain.



▶ How do we find water in nature? Watch the video and learn more.

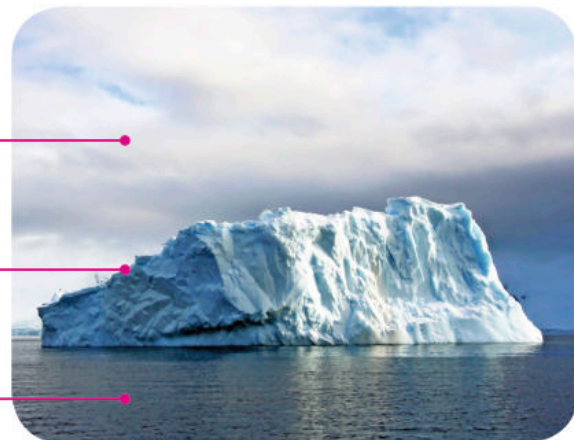
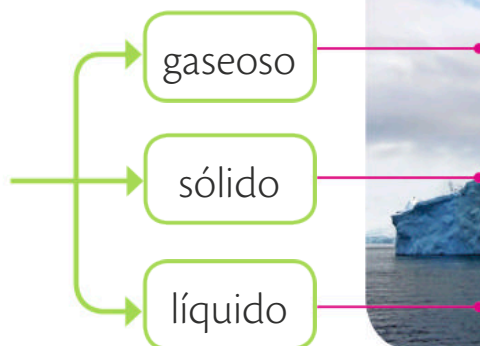
## COMPRENDEMOS



### La materia en la naturaleza

Todo lo que nos rodea es **materia**.

La materia se presenta en 3 estados:



Los **sólidos** tienen una forma fija.



Los **líquidos** adquieren la forma del recipiente que los contiene.



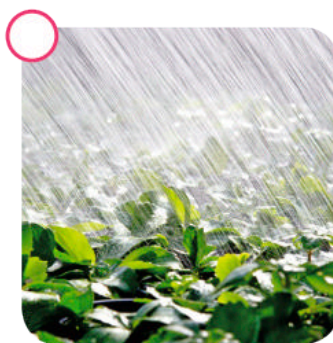
Los **gases** ocupan todo el espacio.

2 Look at the key and colour.

 solid

 liquid

 gas



46 3 Look at the pictures. Tick the right word. Then, listen and check.



- solid
- liquid
- gas



- solid
- liquid
- gas



- solid
- liquid
- gas



- solid
- liquid
- gas



- solid
- liquid
- gas



- solid
- liquid
- gas

47 4 Sing the song and act it out.



- 5 Put the stickers in the correct place. Then, write *solid*, *liquid* or *gas*.



iceberg

*solid*



geyser



waterfall



cloud



rain



snow

- 6 Complete and match.

A \_\_\_\_\_ keeps  
its shape.

A \_\_\_\_\_ occupies  
all the space available.

The shape of a \_\_\_\_\_  
depends on its container.



### Pause

¿Dónde puedes encontrar agua en estado líquido? ¿Y agua en estado sólido?





# Think Water from the Sun

7 Work in groups. Look at the picture. What is the boy doing? Explain.



When or where is this method of getting drinking water useful? In pairs, think of situations or places.

8 What's missing in these pictures? Draw and circle.



solid

liquid



gas

solid



liquid

gas

9 Solid, liquid or gas? Make a poster. Then, point and say.

OFF BOOK



It's a crayon.

Crayons are solid.





1 What are Sam and Daliya doing? What do they want to know? Explain.



▶ What can we say about matter? Watch the video and learn more.



## Masa y volumen

Todos los seres vivos e inertes del universo son **materia**.

Toda la materia tiene dos propiedades en común: la masa y el volumen.



La **masa** es la **cantidad** de materia que tiene un objeto. Los objetos pueden ser **pesados** o **ligeros**.

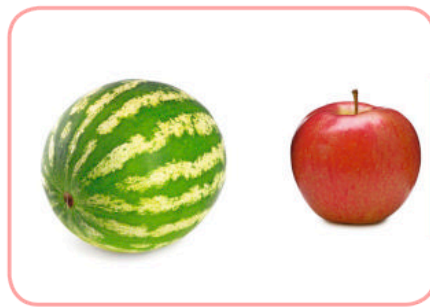


El **volumen** es la cantidad de **espacio** que ocupa un objeto.

48 **2** Which ball has more mass? Put them in order from heavy to light. Then, listen and check.



**3** Look and circle. Which item has more volume?

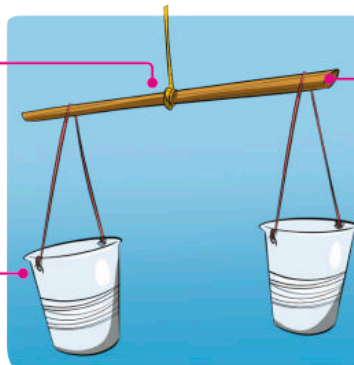


**4 Hands on!** Work in pairs. Make balance scales.

OFF BOOK

1. Tie a piece of string in the middle of a wooden bar.

2. Make two holes in the plastic cups.



3. Tie a plastic cup to each end.

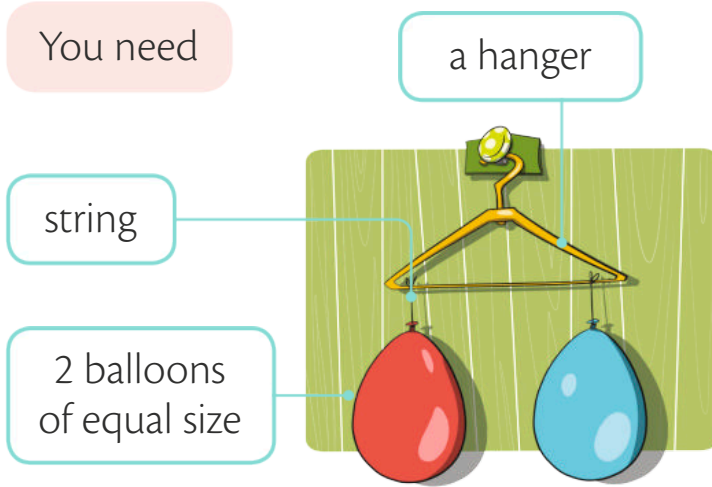
Choose three classroom objects. Make a hypothesis: Put the objects in order from light to heavy. Then, try your scales and check.

From light to heavy

<b>Hypothesis:</b>	_____	_____	_____
<b>Fact:</b>	_____	_____	_____

**5 Hands on!** Do this experiment. Draw your results and answer.

OFF BOOK



Pop a balloon.  
What happens?



**6** Look at these objects. Order them depending on their volume.



**Pause**

¿Es el aire materia? ¿Cómo puedes saberlo?







# Think The scientific method

7 Put the sequence in order. Then, label the pictures.


observation → hypothesis → experiment → theory




○



○



○



○

In groups, discuss the importance of scientific experiments.

8 Match.

- |                         |   |                       |
|-------------------------|---|-----------------------|
| Everything around us is | ● | properties of matter. |
| Objects can be          | ● | matter.               |
| Mass and volume are     | ● | light or heavy.       |

9 Work in pairs. Think about the experiment in Activity 5. Draw the sequence and explain it to your classmates.

First, get the materials.



Then, inflate the balloons.



1 What do we use for making objects? What different materials can you name?



2 What materials do we use every day? Watch the video and learn more.

## COMPRENDEMOS



### El origen de los materiales

Los **materiales** son distintos tipos de materia. Usamos diferentes tipos de materiales para elaborar objetos. Podemos clasificarlos en:

#### NATURALES

Los **obtenemos** directamente de las plantas, animales o minerales.

plantas



madera

animales



resina

minerales



metales

#### ARTIFICIALES

Los **elaboramos** a partir de materiales naturales.

madera



papel

arena



crystal

combustibles



plástico

49 2 Put the stickers in the correct place. Then, listen and check.

**Natural materials**

**Artificial materials**

3 What materials do we use for making these things? Match. Then, check in pairs.



- wood
- plastic
- glass
- cork
- cotton
- metal

4 Identify four different materials in this bedroom. Label and match.



- 5 Look and number. Label the pictures with the words in the box. Then, listen and check.

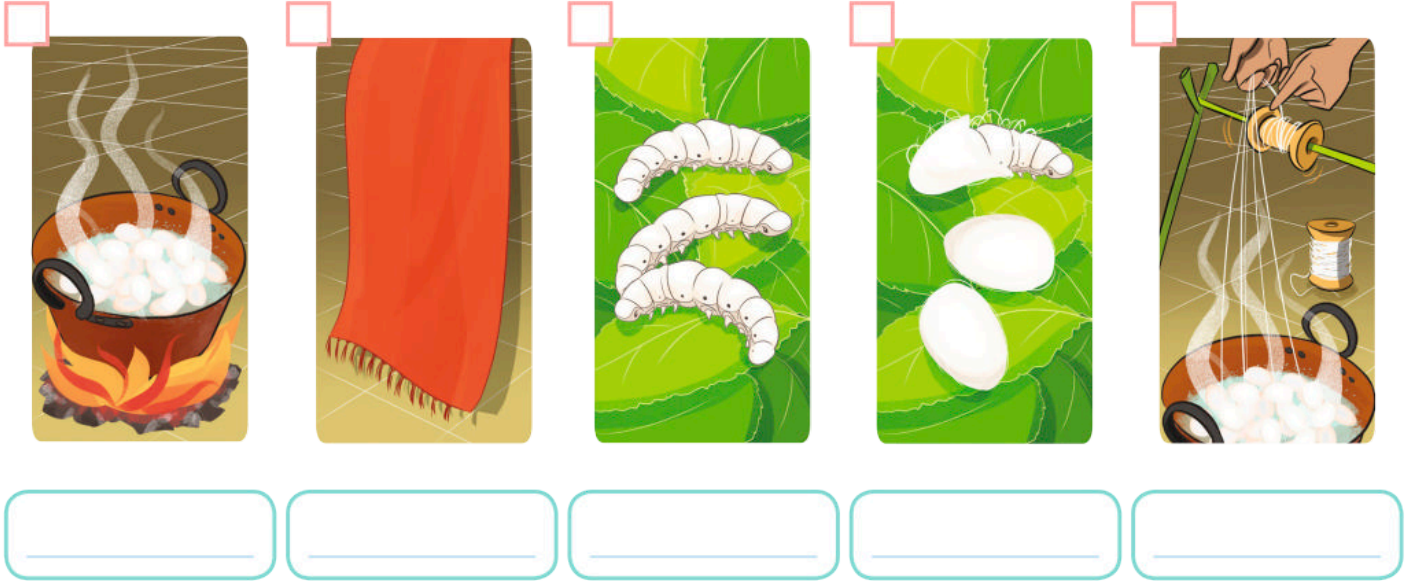
textile

cocoon

worm

thread

boiling



- 6 **Hands on!** Let's make paper. Follow the instructions in the pictures.

**Materials:** container, old newspapers, water, plaster of Paris, mould.  
**Tools:** electric mixer, strainer.

### Instructions



### Pause

¿Podemos reducir la contaminación si utilizamos materiales naturales?



# Think Reduce, reuse and recycle

**7** Discuss your ideas about helping the environment in groups. Then, make a 'to-do' list.

- How can we reduce our use of paper?
- How can we reuse paper?
- Can we recycle paper?

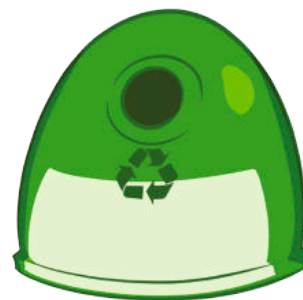
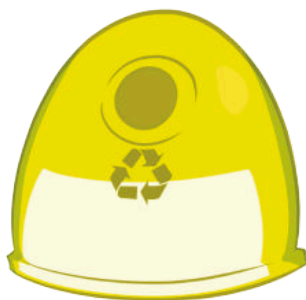
Find ways of making a new thing from an old item.



**8** Say the chant.



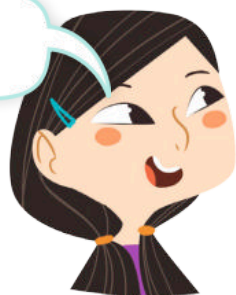
**9** Use the stickers and identify the containers. Draw an object in each container.



**10** Play! Name an object we make with ...

OFF BOOK

Glass!



paper



metal



cotton



glass



wood



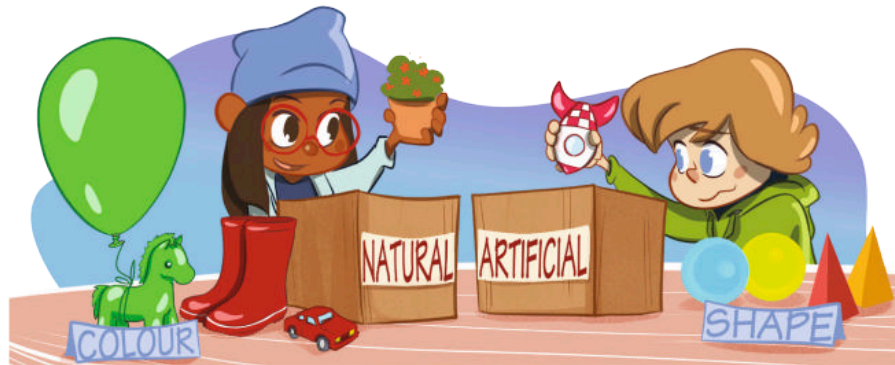
plastic



We make windows with glass.



1 How are Sam and Daliya classifying these objects? Look and explain.



Watch the video and learn about some characteristics of materials.

## COMPRENDEMOS



### Las propiedades de los materiales

Cada material tiene unas características particulares que denominamos **propiedades**.

Los materiales pueden ser:



duros



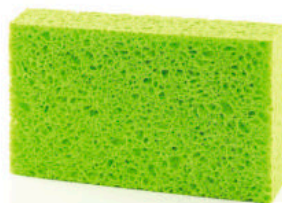
blandos



flexibles



rígidos



absorbentes



impermeables

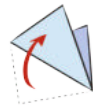
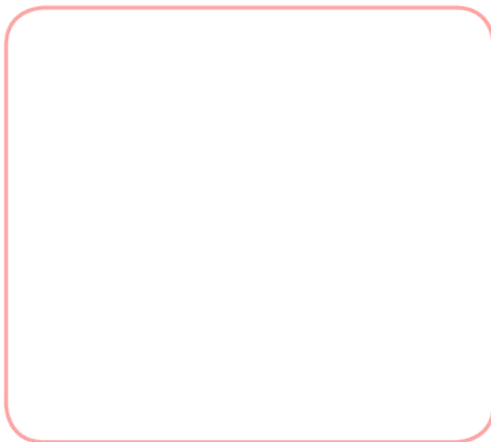


52

2 Listen and number.



3 Choose an object in the classroom. Draw it. Try these actions and answer.



Can you bend it?

Yes

No



Can you stretch it?

Yes

No



Can you change its shape?

Yes

No

4 Match the materials to the objects. Then, write A (absorbent) or W (waterproof).

sponge



towel

rubber boots




raincoat

53

5 Say the chant.



 6 Study the pictures and complete the chart. Then, check in pairs.

			
We make it with ...	_____	cloth	_____
Is it hard or soft?	_____	_____	_____
Is it rigid or flexible?	_____	_____	_____
Is it absorbent or waterproof?	_____	_____	_____
We use it for ...	_____	_____	_____

 7 **Hands on!** Let's do science: from absorbent to waterproof.

OFF BOOK

Hypothesis

I think we can make this cloth waterproof.



Experiment

A

Rub the cloth with a wax candle.



B

Pour water on the cloth. What happens?



Pause

¿Qué propiedades de los cristales conoces?



# Think Choosing the right material

8 In groups, make a list of common things you use every day. Describe their properties and materials. Are they appropriate for their function?



Why do we use metals for pots and pans? And why do we make the handles with wood or plastic? Investigate.

9 Read and stick the correct object.



It is light, soft and flexible.

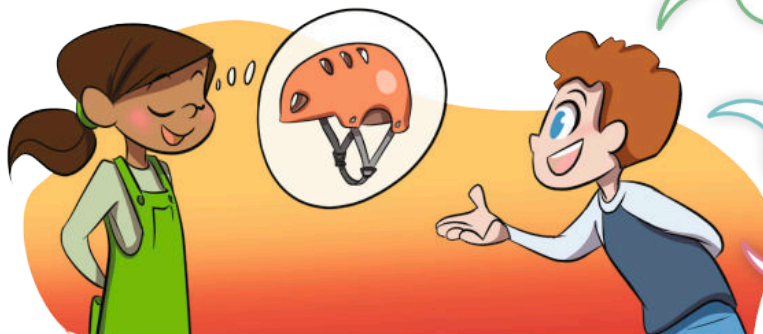


It is hard, flexible and waterproof.



It is hard, rigid and waterproof.

10 Play! Material detectives.



Is it heavy or light?

How do we use it?

Is it rigid?

OFF BOOK





1 Look. Which objects does Mr. Brown use for each task?



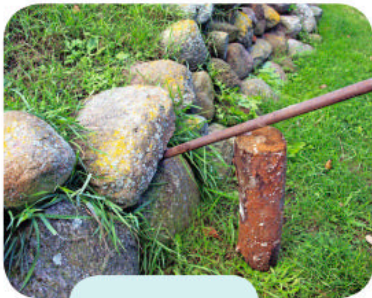
▶ How do machines help us? Watch the video and learn more.

## COMPRENDEMOS



### Utilizamos máquinas todos los días

Las **máquinas** nos ayudan a diario y nos ayudan a reducir el esfuerzo humano.



palanca

Podemos **levantar** objetos pesados.



rampa

Podemos mover objetos fácilmente.

Algunas máquinas necesitan **energía humana**.



tijeras de podar

Otras necesitan **electricidad** o **combustible**.



aspirador

55

2 Listen and number. What are the gardeners using the machines for? Write *lifting*, *moving* or *cutting*.



3 What do we use these machines for? Match. Circle the electrical machines.

cutting



cleaning

talking



repairing

cooking



drying

digging



travelling

56

4 Sing the song and act it out.



 **5 Hands on!** Let's make a pulley!

OFF BOOK

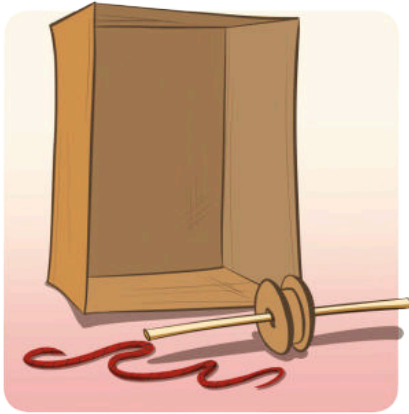
### You need

1 cardboard box, 4 cardboard circles, 1 wooden stick, string, scissors, glue.

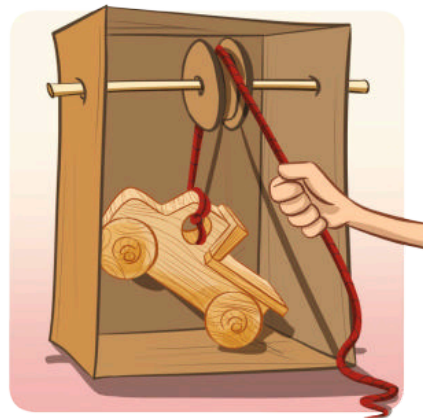


### Instructions

(A)



(B)



**6** Look at the pictures. What machines are they using? Write *lever*, *pulley* or *ramp*.



### Pause

¿Qué tipo de máquinas utilizas a diario?





# Think Safety first!

7 Study the pictures in groups. What are the dangers in these situations?



Do not use electric devices near water.



Be careful with machines when they are hot.



Use gloves and glasses.

In groups, think and write advice for using machines in a safe way.

8 In pairs, ask and answer questions about these machines.



What do you want to do?

I want to cut bread.



You need a knife.



9 Shuffle the cards and find the pairs: Who uses what?

OFF BOOK

It's a pair of shears.



Gardeners use shears.





1 Help Sam and Daliya put these telephones in order for their exhibition.



▶ Watch the video and learn more about some great inventions.

## COMPRENDEMOS



### Los inventos en la vida cotidiana

Los **inventores** buscan soluciones a las distintas necesidades del ser humano y crean **inventos**: nuevos objetos y utensilios que no existían antes.

Los inventos se mejoran constantemente y siempre aparecen nuevos inventos.



brújula



microscopio



imprensa



ordenador




gafas



avión

57

2 Look and classify. Then, listen and check.

 TRANSPORT

 MEDICINE

 COMMUNICATION

\_\_\_\_\_

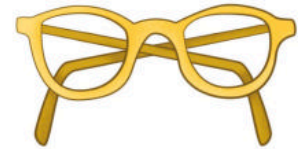
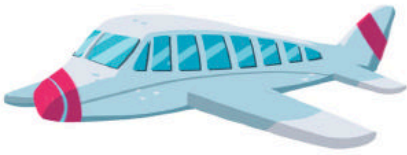
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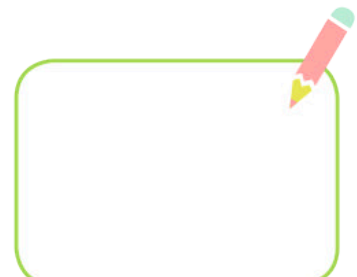
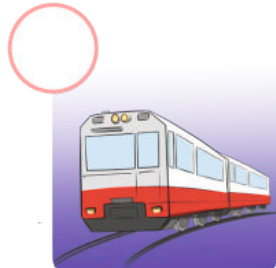
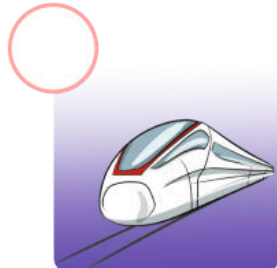
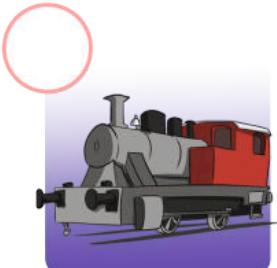
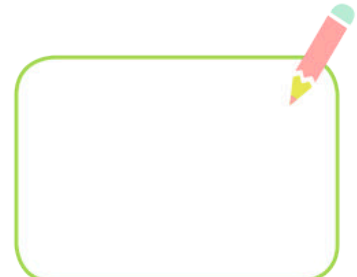
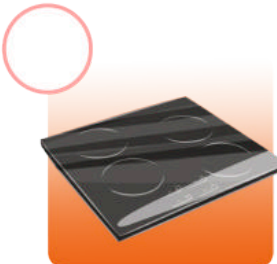
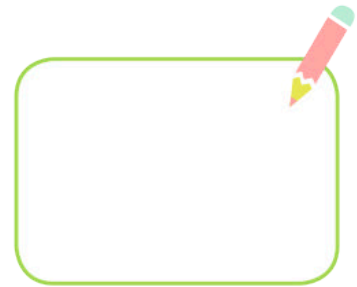
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\_\_\_\_\_

\_\_\_\_\_



3 Put these sequences in order from old to new. Then, imagine and draw these objects in the future.





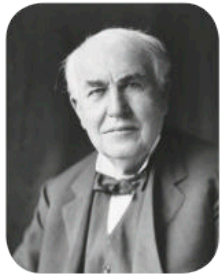
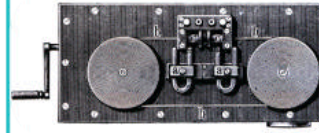
4 Work in pairs. Find information about these inventions. Label the pictures with the words in the box. Match the inventions and the inventors.

lightbulb

cinema

telephone

radio



58

5 Listen and put the stickers beside their inventors. Then, complete.



Hedy Lamarr is famous  
as the inventor of \_\_\_\_\_.



Ángela Ruiz is famous  
as the inventor of the first  
\_\_\_\_\_.

### Pause

¿Qué inventos crees que mejoran nuestra vida diaria?

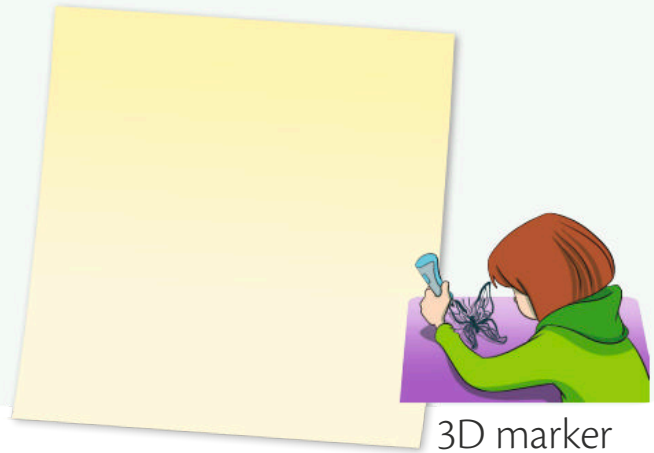


# Think Creating solutions

6 What is your favourite invention? Find information. Make a poster with:

- Name of inventor
- Date of invention
- Function
- Evolution of the invention

Invent a useful machine.  
Draw it and explain its function.



3D marker

7 Read the names of the components and draw the invention.

CPU

screen

keyboard



mouse

webcam

printer

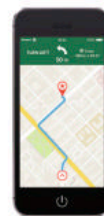


8 Play Guessing game.

OFF BOOK

What do you use it for?

When do you use it?



Why is it useful?

