

1 ESO / Technology / Summer Homework Activities /

Student: ..... Course: ..... Date:

1st TERM: The Technological Process and Projects

1.- Fill in the blanks in this paragraph with the adequate VERBS:

Technology p ..... objects and d..... strategies that  
r..... our problems and satisfy our needs.

The technological process c..... of various stages organised to  
o..... a solution to a problem or need.

2.- Write good examples of the **needs of primitive men and women.**

Give at least 3 Basic needs	Give at least 3 Secondary needs

3. Write a list (at least 5 words) with the MATERIALS the primitive humans used and transformed into objects.

4.- Match each number with the appropriate letter

tool	function
a. straight ruler	1) we use it to draw marks on the wood strip
b. carpenter's ruler	2) we use it to help adjusting the clamp to the table
c. saw	3) we use it to draw lines on the wood strip before sawing
d. hammer	4) we use it to hold the wood on the table
e. clamp	5) we use it to "cut" the wood strip in pieces
Answers	a      b      c      d      e

5.a) Name the seven steps you should follow to develop a Technological Project.

5.b) Explain, with your own words, the following **steps of a Technological project**:

- a) Specify the Need
- b) Brainstorm
- c) Recycling
- d) Verification/Test
- e) Design

**6.- Classify the following words in this grid**

Seeds / farm / Steam / Horticultural / bones / Satellites / horseshoes / shape / Industrial / Hunter-gatherer /

Type of society/characteristics	New technology that marked a turning point	Objects or systems developed
..... societies	Ability to ..... a stone	Use of natural objects (stones, .....), making axes and spears
..... societies	Use of ..... animals	Use of ..... and planting
Agricultural-urban societies	Use of ploughs	Ploughing, ..... , windmills
..... societies	Use of ..... machines	Steam engines, batteries, radios, etc.
Post-industrial societies	Invention of transistors	....., mobile phones, etc.

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2nd TERM: Graphic Expression and (3-view) orthographic drawing

1. Complete these sentences using the right words:

- Pencils have ..... (en català, “mines”) of different hardness in a scale that ranges from “B” to “H”.
- The most common protractor has ..... degrees.
- We use compass to draw circumferences and .....
- The space between the two points of the compass is the ..... of the circle.
- ..... (en català, “escaire”) is a right-angle isosceles triangle with one angle of 90° and two of ..... degrees.

2.a) Give five examples of things that you would **scale down** to draw them in a DIN A4 paper and 2.b) five examples of things that you would **scale up** to draw them in a DIN A4 paper. **Write your answers in the following columns.**

a) 5 things to be scaled <b>down</b>	b) 5 things to be scaled <b>up</b>

3. Write "T" (for true) or "F" (for false) at the end of the sentences. NOTE: If you consider the sentence false, then explain how the right sentence would be.

- a) The softer the pencil, the faster it consumes. ....
- b) We use protractors to draw parallel lines. ....
- c) A sketch is a freehand drawing of an object .....
- d) The 3 views we use to show an object are Plan (or Top), Back and Side. ....
- e) The scale 1:20 means that the drawing is 20 times bigger than the real dimensions. ....

4.- Using as a reference crosses in the line below.

- a) **Draw an angle of 64°**, opening from the left
- b) **Draw an angle of 142°**, opening from the right

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5.- **Trace three concentric circles (1<sup>st</sup> radius=2cm; 2<sup>nd</sup> radius=3cm; 3<sup>rd</sup> radius=3,5 cm)** with their centre at the cross.

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3rd TERM: Materials (& their properties) for Technical Use & Wood

1. Fill the gaps with the appropriate words:

- a) A ..... material is a substance that we get directly form .....
- b) A ..... material has been ..... from a raw material and is available for making other products.

c) Fill the following boxes with the right words

Raw material transformed into...	... a new processed material
Wood	
	juice
milk	
Iron ore	
	hamburger

2.- Find the words that match these definitions:

Definition	Defined word (written as an adjective)	Opposite word (written as an adjective)
a.- difficult to scratch		
b.- easily broken by shocks		
c.- squeezing into a thin new shape when compressed		
d.- able to conduct electricity		
e.- changing its shape when we apply forces on it but recovering the original shape when forces stop		

3.- Match the properties with their explanation.

properties	explanation
a.- Electrical conductor	1.- is the ability of a material to be pushed through a hole that gives the desired shape
b.- Mouldability	2.- is the capacity of a substance to damage an organism by ingestion, inhalation or skin contact
c.- Extrudability	3.- a material through which electrons can move
d.- Toxicity	4.- is the capacity of a material to be used again to make another object
e.- Recyclability	5.- the ability of a material to fill a mould

Answers:                    /                    /                    /                    /                    /                    /                    /

4- **Classify these properties** into the appropriate column. NOTE: you only need to write the right letter in the proper box.

(a) Density / (b) Freezing point / (c) Thermal conductivity / (d) Melting point / (e) Electrical conductivity / (f) Extrudability / (g) Recyclability / (h) Mouldability / (i) Toxicity

Technological properties	Ecological properties	Physical properties

5.- **Fill the gaps**, with the proper word, about wood fibres.

Wood is a ..... of plant origin.

It is composed of 2 types of fibres:

- a) ..... fibres, which act as the ..... of all plants, and
- b) ..... fibres which makes it ..... and .....

6.- **“3-view” Exercise.** Remember the following:

- a) use a ruler to draw the outlines (silhouette) and partitions
- b) use the colour code and the number code, both in the perspective and the views.
- c) write the names of the views in the correct location.

PIEZA Nº 5

