Stranded on an Island

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1   Learning objectives

In this lesson you will learn

- the steps of a technology project,

- what a flow chart is, and

- how to describe a process using connectors.

2   Stranded in an Island

Imagine we are travelling on a boat in the middle of a storm. Our ship sinks and now we are stranded onn a remote and windy island. After exploring the place, we just found the following objects:

- Four batteries.

- Electric wire.

- A bulb with a lamp holder.

- Several sheets of paper.

- Cellophane tape.

- A switch.

- Scissors.

- A screwdriver.

- Terminal blocks.

2.1 Vocabulary

Remember. Look at the following pictures and guess their names:

Picture	Name
	Scissors

2.2   Previous knowledge: electrical circuits

REMEMBER. Write the names of the components that can be used to mount an electrical circuit:

UNDERSTAND. What is the function of these components? Identify component and function:

- Electricity passes through it:

- It emits light:

- It controls the pass of electricity through the circuit:

- It is the energy source:

- It can be used to join cables:

A PPLY. Can you draw a diagram of the circuit? Do not worry about using the correct symbols.
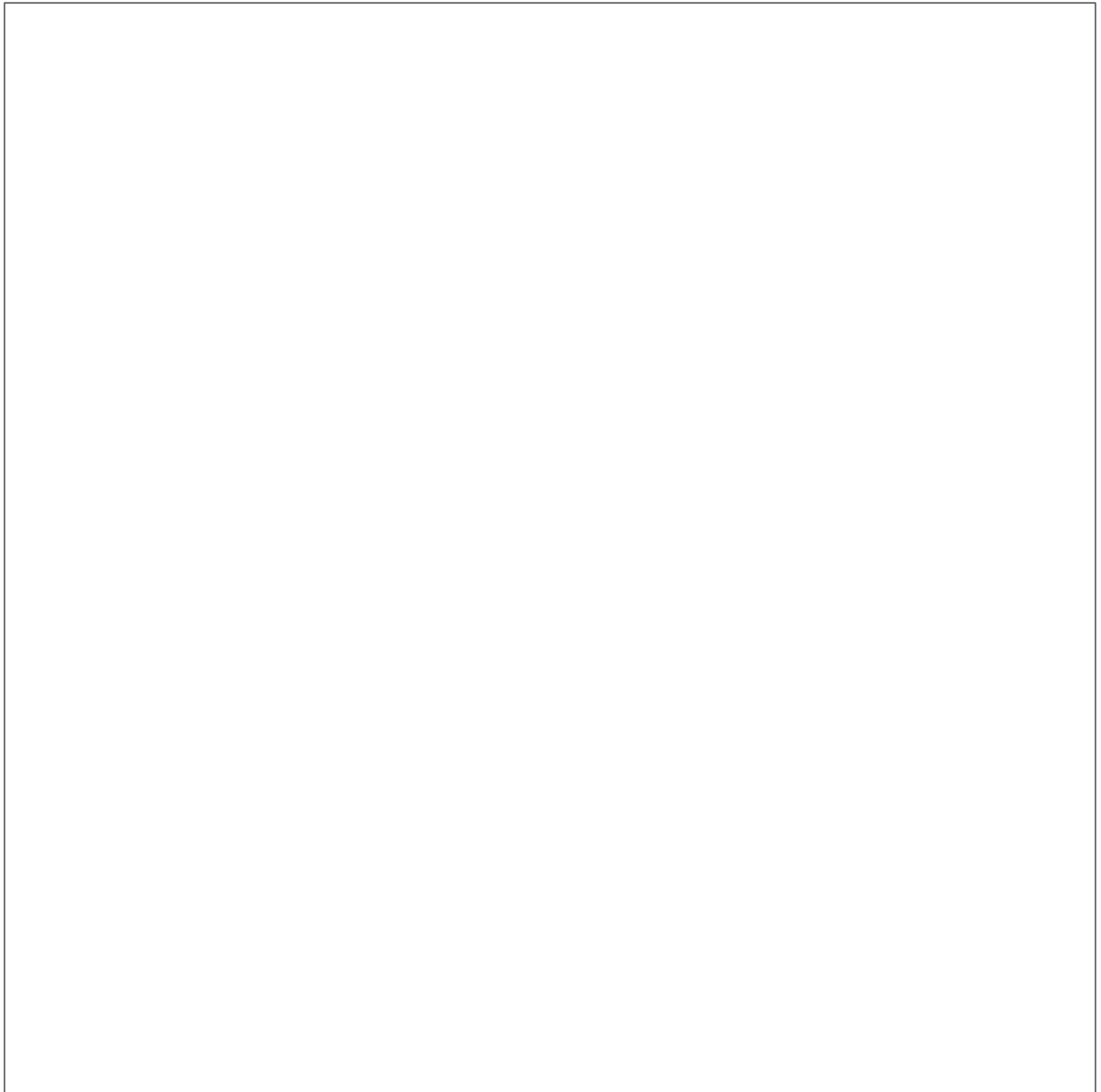
2.3 The project

2.3.1 Requirements

A NALIZE. What is the need or problem you want to tackle?

A NALIZE. What are the requirements of that need?

- *It must be made with the components I have found on the island*

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2.3.2 Individual proposal

CREATE. With the objects you have found in the island, you have to **think of something** for other people to see you. But remember, it is a windy island. **Draw a draft** of your **individual** proposal.

AUTHOR:	DATE:
SCALE:	STRANDED ON AN ISLAND
WORKING DRAWING: MY PROPOSAL	SHEET N. 1
SECONDARY SCHOOL:	

2.3.3   Group discussion

ANALIZE.   **Discuss** the different proposals with the other members of your team.

2.3.4   Construction

APPLY.   Now it is time to build the structure you have decided as a group.

2.3.5   Verification

EVALUATE.   Taking into account the feedback from your teacher and your own observations, think of two things to improve your project:

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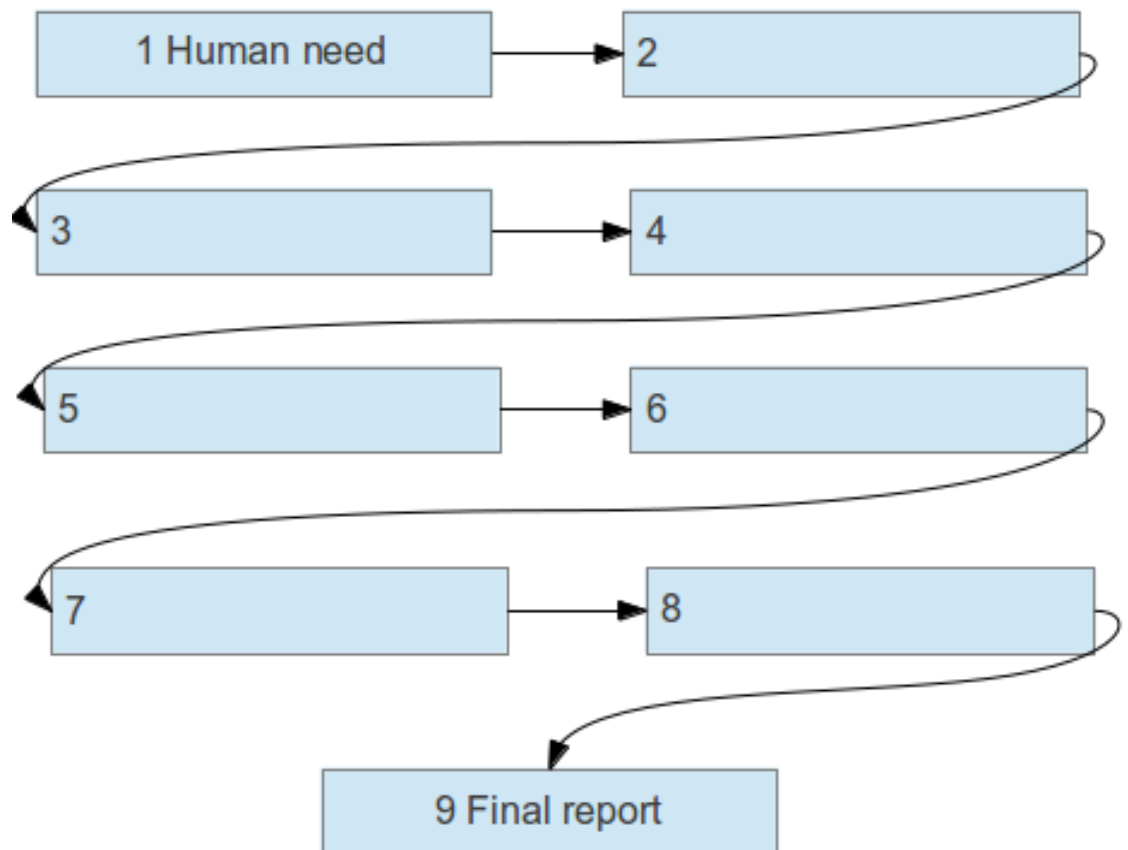# 3   The steps of the technological process

3.1   Vocabulary

Requirement, requisite, need, necessity, brain storming, budget, schedule, programme, design, reconsider, construct, improve, report, evaluate, check, verify, draft, proposal, step, stage, feedback, flow chart, observe, fulfil and achieve.

REMEMBER.   Select a word or words from the list: *evaluate, brain storming, requirements, feedback, report, budget, programme.*

1. To estimate the cost of a project: to _____

2. To give a list of intended events and times: to _____

3. A document where we specify the evaluation of the project: _____

4. The specific characteristics that our project must **fulfil** or **achieve**: _____

5. To **check** that something is OK: to _____

6. A list of ideas generated by the different members of a team: _____

7. When you get _____ on your work or progress, someone tells you how well or badly you are doing, and how you could improve.

3.2 Flowchart

A NALIZE. Fill the blanks in the flow chart using the words from the list: **human need, verification and evaluation, final report, budget and programme, discuss to find the best solution, design the project, propose drafts, construction, study the requirements**.

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1 Human need  ──────▶ 2

3 ◀─────────────  ──────▶ 4

5 ◀─────────────  ──────▶ 6

7 ◀─────────────  ──────▶ 8

9 Final report
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E VALUATE. Is there any missing items? How to include them?

4   Self-assessment: crossword

R EMEMBER.   Complete the following crossword related to the technological process:
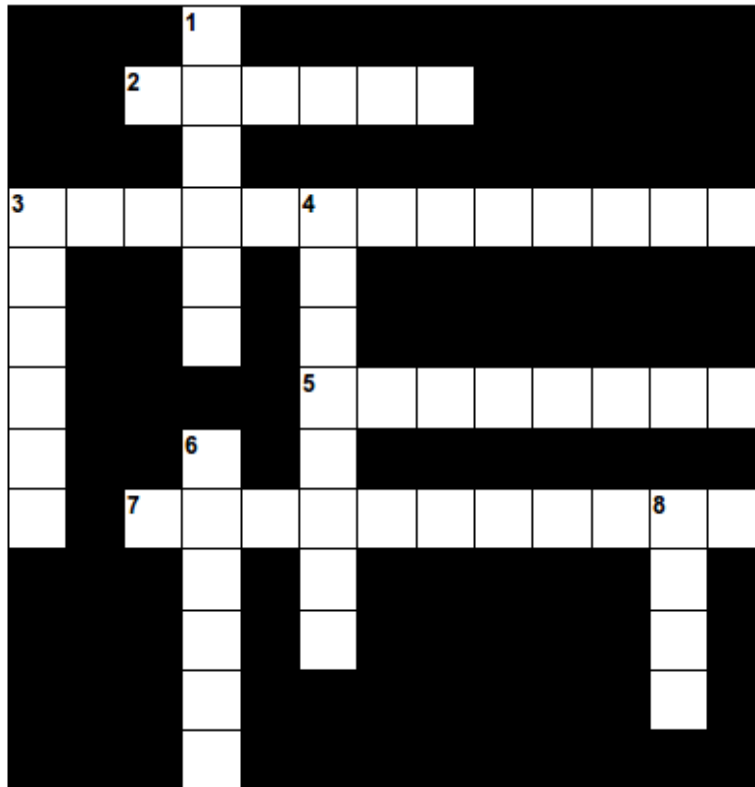
Across:
2. A drawing from which something may be made.
3. A method for solving problems in which all the members of a group suggest ideas and discuss them.
5. To form an idea of the quality of something.
7. A thing that is needed or a condition that must be fulfilled.

Down:
1. To check that everything is OK.
3. An estimate of the quantity of money needed for an specific purpose.
4. A programme of work to be done or of planned events.
6. A document used to inform about the result of a scientific experiment or a technological project.
8. Necessity.

How many wrong answer did you have?

5 Extension: Describing a process

5.1 Mixed-up sentence

U NDERSTAND. Write the sentences bellow in the right order:
//Secondly, we have to analyse the requirements.//Now, we have to construct and check our project.//The starting point is always a need.//Finally, we must write the final report and evaluate the whole project.//After that, we have to design: prepare plans, choose materials and tools, budget and schedule. //Then, We have to propose different solutions, discuss them and choose the best.//

Solution:

5.2 Connectors

U NDERSTAND. Reading the description of the technological process, write the connectors that are used to:

- Introduce the process:

- The intermediate steps:

- The final remark: