

# Correction - NUCLEAR POWER PLANTS

## 1. Brainstorming

2. (carte mentale au tableau avec les réponses des étudiants)

## 3. Sort the energy sources

Renewable energy sources	Non-renewable sources
<ul style="list-style-type: none"> <li>- Wind</li> <li>- Hydropower</li> <li>- Solar</li> <li>- Geothermal</li> <li>- Biomass</li> <li>- Gravity</li> </ul>	<ul style="list-style-type: none"> <li>- Coal</li> <li>- Oil</li> <li>- Natural gas</li> <li>- Nuclear</li> <li>- Hydrogen</li> </ul>

## 4. What is a nuclear power plant? How do you think it works?

Par deux pendant deux ou trois minutes, puis recap ensemble. Possibilité de faire un dessin

**Video "Journey to the heart of energy"**

<https://www.youtube.com/watch?v=-8JkzeQDHKM>

## 4. Vocabulary. Find the English equivalents in the video.

1. une centrale nucléaire	<b>A nuclear power plant</b>	2. de la chaleur	<b>heat</b>
3. relâcher ERREUR DANS LE LIVRET	<b>To release</b>	4. autonome, indépendant ERREUR DANS LE LIVRET	<b>Stand-alone</b>
5. refroidissant	<b>cooling</b>	6. le carburant, le combustible	<b>The fuel</b>
7. des pastilles d'uranium	<b>Uranium pellets</b>	8. des barres de combustible	<b>Fuel rods</b>
9. de l'acier	<b>Steel</b>	10. un reservoir	<b>A tank</b>
11. rempli(e) de	<b>Filled with</b>	12. le coeur du réacteur	<b>The reactor's core</b>
13. à l'état liquide	<b>In a liquid state</b>	14. de la vapeur	<b>steam</b>

15. du cuivre	<b>Copper</b>	16. une bobine	<b>A coil</b>
17. de cette façon, par ce moyen	<b>Thereby</b>	18. le courant	<b>the draught (GB) / the draft (US) (electric) current</b>
19. une tour de refroidissement	<b>A water cooling tower</b>	20. des déchets radioactifs	<b>Radioactive waste</b>
21. de la plus haute importance	<b>Of utmost importance</b>	22. trier	<b>To sort</b>
23. stocker	<b>To store</b>	24. des gaz à effet de serre	<b>Greenhouse gases</b>

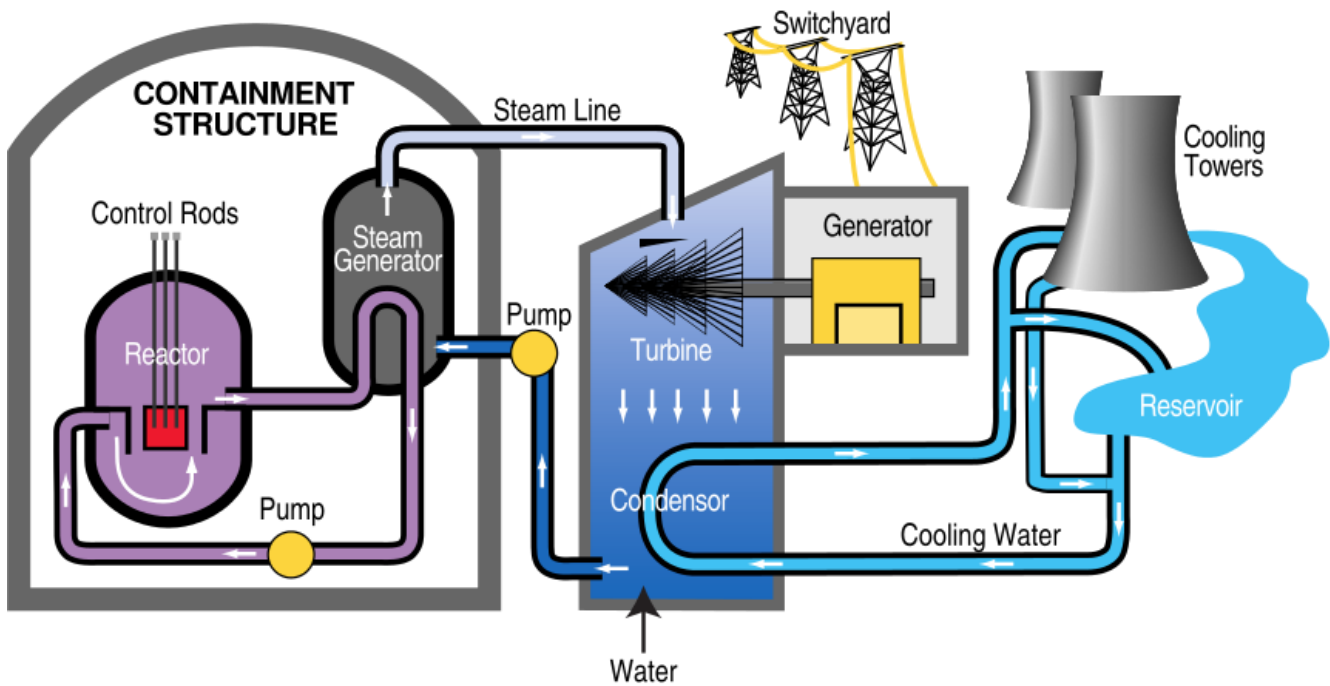
### 5. Match the words with their definition

an atom (e) - a control rod (d) - a generator (b) - a switchyard (c) - uranium (a) - a turbine (f)

- a. **uranium**: a silver-white, radioactive metal element used in the production of nuclear energy.
- b. **a generator**: a machine that converts one form of energy into another
- c. **a switchyard**: a usually enclosed area for the switching facilities of a power station
- d. **a control rod**: a steel or aluminum rod used in nuclear reactors in order to control the rate of fission of the nuclear fuel
- e. **an atom**: one of the smallest units of all matter that has all the chemical properties of a particular element
- f. **a turbine**: a type of machine in which a wheel is driven by the movement of liquid or gas so that power is produced

### 6. Place the elements on the picture:

Control rods – cooling water – generator – reactor – turbine – reservoir – switchyard



[https://commons.wikimedia.org/wiki/File:PWR\\_nuclear\\_power\\_plant\\_diagram.svg](https://commons.wikimedia.org/wiki/File:PWR_nuclear_power_plant_diagram.svg)

7. Speaking. Do you believe the video is an objective presentation of nuclear power?

## Part 2 – Grammar and expressions: comparing and contrasting

### 1. Lesson: quick recap of comparisons

Short adjectives and long adjectives

### 2. Exercise. Make sentences using comparisons and the following words:

2. a. lead (du plomb) / cheap / gold

Lead is cheaper than gold.

2. b. coal / to pollute / wind turbines

Coal pollutes more than wind turbines (do).

2. c. mass / proton / to be equal to / mass / neutron

The mass of the proton is equal to the mass of the neutron.

2. d. When a thermometer is heated, high / temperature / long / column of mercury  
When a thermometer is heated, the higher the temperature the longer the column of mercury.

2. e. MRI / clear / X-rays  
MRIs produce clearer images than X-rays (do).

2. f. Jupiter / to orbit / far from the sun / the Earth  
Jupiter orbits further from the sun than the Earth (does).

2. g. Scientists / to discover / a star / 2x / big / sun.  
Scientists have discovered a star twice as big as the sun.

### 3. Idioms. Can you explain these expressions?

- Better late than never
- Better safe than sorry
- The sooner the better
- Sooner or later
- As clear as crystal
- Easier said than done

**Part 3 at home :** "Our Friend The Atom" Watch it once and share your opinion about it. (une heure : nous utilisons les 4 min 26 du début)

**si besoin d'un 2<sup>ème</sup> visionnage, aller directement à 2'25min**

Watch the full video here (optional):

<https://www.youtube.com/watch?v=pkwadgJORFM>