

**Potenziamento**

**Name & surname** \_\_\_\_\_ **Class** \_\_\_\_\_ **Date** \_\_\_\_\_ **Tot** ...../40

**Nuclear energy**

Many scientists say nuclear energy is our future. Many normal people aren't so sure. I think most of us worry about nuclear energy. We hear on the news about the dangers of nuclear power.

Many years ago, in 1986, there was a big accident in Chernobyl power plant (Ukraine in Russia). As a consequence of an experiment very poorly planned, one of the four reactors went on fire and melted. Because of this, deadly nuclear radiation spread across the whole of Europe. There were reports that sheep (pecore) in England caught radiation sickness. The radiation arrived also in France and Northern Italy. The quantity of radiation in the atmosphere were higher than that of the atomic bombs on Hiroshima and Nagasaki.

In 2011 there was another terrible nuclear accident at Fukushima. This time it was due to a 9.0 magnitude earthquake where about 1,000 people died.

I think things are safer now. Many countries trust (aver fiducia) nuclear energy. France and Japan each has dozens of nuclear power stations. I think it's probably a good idea. We really need to stop using fossil fuels. Nuclear power is a lot less harmful to the environment. Perhaps we need to spend more money on making it safer.

**1. Say if the following sentences are True or False (T/F) ...../13**

The accident at Chernobyl happened in the XX century. \_\_\_\_\_

It occurred in Europe. \_\_\_\_\_

The Chernobyl disaster was due to a human error. \_\_\_\_\_

There was only one reactor at Chernobyl nuclear plant \_\_\_\_\_

The nuclear radiations only diffused in Russia \_\_\_\_\_

Italy wasn't affected by Chernobyl nuclear disaster \_\_\_\_\_

The amount of radiation released at Chernobyl was higher than that of the nuclear bombing during World War II \_\_\_\_\_

Another terrible accident occurred in Asia \_\_\_\_\_

Fukushima accident was due to a natural phenomena \_\_\_\_\_

At Fukushima there were about 100 victims \_\_\_\_\_

France and Japan have twelve power plants \_\_\_\_\_

According to the article, common people don't trust nuclear energy too much. \_\_\_\_\_

The writer of the article is in favour of nuclear energy \_\_\_\_\_

**Ex. 2- Answer the following questions** **/12**

1. What is the opinion of scientists and normal people about nuclear?

\_\_\_\_\_

2. What happened at Chernobyl?

\_\_\_\_\_

3. What happened in England?

\_\_\_\_\_

4. What happened in Japan in 2011?

\_\_\_\_\_

5. What is the situation in France and Japan?

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6. What's the writer's opinion about nuclear power?

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### **Nuclear fission**

**3.Put the following sentences in the right order ...../7**

..... The uranium atom splits into 2 lighter elements.

..... The mass obtained after the splitting of the atom is less than the original uranium.

..... that is "nuclear fission".

..... But a chain reaction is necessary to give start to a new fission,

.....1.. Fission process begins when neutrons bombard the uranium atom.

..... Finally, if the chain reaction is slow electricity is produced

..... In fact the difference between the original mass of uranium and the final mass is released as energy.

..... but, if the chain reaction is fast, the result can be an atomic explosion.

#### 4. Pros or cons

Tot...../8

Write an **A** (Advantage) or a **D** (Disadvantage) in using nuclear power next to each sentence.  
Scrivi accanto ad ogni frase se si tratta di un vantaggio o di uno svantaggio nell'usare l'energia nucleare.

- Nuclear fuels are less harmful to the environment than fossil fuels.....
- Nuclear reactors can never be 100% safe .....
- Building nuclear stations cost more than building fossil fuels stations .....
- Nuclear plants create radioactive waste matter that remains risky for thousands of years .....
- Nuclear plants require little fuel .....
- Nuclear stations produce little air pollution.....
- A nation producing nuclear power doesn't depend on other nations for producing energy .....
- Producing nuclear power is cheaper than producing energy from fossil fuels .....

