

OXYGEN

Read the questions written below. Check if you understand them. Do not hesitate to ask if you have any doubts. Then watch the video <http://ed.ted.com/periodic-videos> and answer the questions.

1. You can use an electric current to obtain oxygen and hydrogen from water. What is this process called?

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2. What are the properties of liquid oxygen? Underline correct properties.

colourless / has a nice blue colour / is strongly reactive/ is chemically inactive/does not sticks to the magnet/ has magnetic properties

3. "Last night I had a horrible nightmare", said the organic chemist to the theoretical one. "I could see the blue color of liquid oxygen!" Why is this beautiful liquid so feared by organic chemists?

- ☐ because liquid oxygen is extremely toxic
- ☐ because liquid oxygen is extremely radioactive
- ☐ because liquid oxygen is extremely reactive and can cause an explosion when it comes in contact with organic compounds

4. What does the professor demonstrate to his university students with a magnet and a test tube full of liquid oxygen?

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5. In the upper atmosphere, we can find a high concentration of ozone. Why is this ozone layer so important to us?

- ☐ because it absorbs dangerous infra-red light that comes from the sun
- ☐ because it absorbs dangerous ultra-violet light that comes from the sun
- ☐ because it absorbs dangerous visible light that comes from the sun

6. What are the two forms of oxygen?

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***7. We need oxygen to live. When we breathe, the oxygen, contained within the air, is distributed throughout our bodies by our arteries. Oxygen is carried by red blood cells. These red blood cells are linked to a metalloprotein, which have an iron atom in its middle. What is the name of this molecule?**

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***8. Hemoglobin can bind to oxygen molecules, thanks to the iron atom in the centre of this metalloprotein. However, another molecule (which forms a gas) can bind to hemoglobin and block oxygen from binding. What is this poisonous gas? In which situations can we stay dangerously surrounded by it?**

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