# Worksheet on the topic „Magnetic properties of substances“ 17. 01. 2019, Bigy, 3. B

You will watch two video clips about magnetism. Watch them closely and answer the following questions.

## Video clip from uclaphysicsvideo Youtube Channel: Paramagnetism and Diamagnetism

## <https://www.youtube.com/watch?v=u36QpPvEh2c>

1. What are two groups of the materials according to their magnetic properties? Give examples.
2. Diamagnetic materials are ……………………….. from the magnetic field.
3. Paramagnetic materials are ……………………….. into the magnetic field.

## Video clip from minutephysics Youtube Channel: MAGNETS: How do they work

<https://www.youtube.com/watch?v=hFAOXdXZ5TM>

1. Electricity and magnetism are two sides of the same coin. Give two other examples mentioned in the video: mass and ………….…………

…………..………. and space

1. What is the condition for electrically charged particles to produce a magnetic field?
2. What basic properties do elementary particles have?
3. We´ve known since 1922 that particles with an electric charge behave like …………………………
4. The electrons in filled atom shells come in pairs whose magnetic moments point in opposite directions and their magnetic fields are ……………………….
5. When can the magnetic moments of electrons in an atom point in the same direction?
6. Where in the periodic table are the elements which can behave like magnets? In the middle of the block or near to the side of the block? (Choose one option)
7. Give some examples of the elements which can behave like magnets.
8. Why is chromium not magnetic even if it has half-filled atom shells?
9. How do we call the elements that have magnetic atoms and atom magnets pointing in the same direction?
10. How do we call the elements that have magnetic atoms but atom magnets do not point in the same direction?
11. Atoms in one domain have their magnetic moments pointed in ……………………… direction, while atoms in different domains have their magnetic moments pointed in ………………….. direction.
12. What happens to domains in a ferromagnetic material when we put it into a magnetic field?