

SCIENCE FOR THE YOUNGEST

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Electromagnetism in action

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Our fascination with the electricity and other related phenomena was the main origin of this projekt.

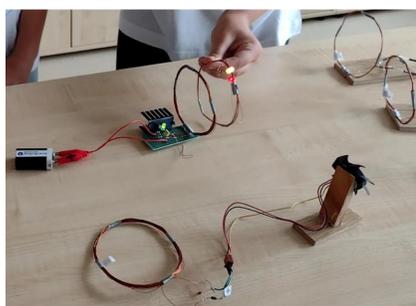
We started with simple experiments in electromagnetism. Then we applied the knowledge which was gained in three research projects.



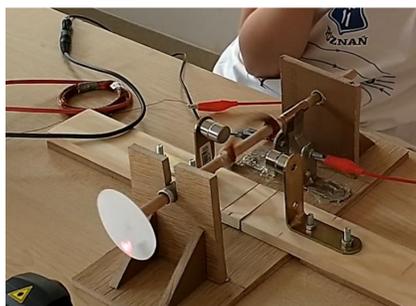
We built a model of power plant, through which electricity was generated. We became curious about factors which can affect the performance of our power plant.



We wanted to transmit electricity. We used electromagnetic induction and we discovered what affects the transmission.



We were amazed how electricity could be used. Hence, we developed a model of electric motor and checked how it works.



We noted that:

- The voltage decreases with increasing distance between the coil and the rotating magnets.
- The highest voltage occurs when the coil is placed perpendicular to the plane of the rotating magnets.
- The induced voltage decreases as the rotation speed of the magnets decreases.

We observed that:

- The voltage induced in the secondary winding decreases with the distance between the coils.
- The value of the induced voltage increases as the number of turns increases.
- The electromagnetic field does not penetrate metals.

We conclude that:

- The rotor speed increases as we increase the number of magnets close to the rotor coil.
- The revolutions speed increases as we increase the number of turns of the rotor coil.
- The higher the voltage applied to the rotor winding, the higher the rotor speed.

Conclusion: Electromagnetism is magic. Our science team had a great time... and we will.