What is the CLIL about:

- Content Language Integrated Learning
- Improves both the subject and the language
- Goales achieving method

The CLIL student must be:

- Brave:
  - Able to jump into the water however he knows, he is not good in swimming
  - Not giving up if something is going wrong
  - Not being affraid of bad results (sometimes)

If something is too difficult - the scaffolding:

- https://educator.vujta.cz/CLIL, more resources will come soon

Warm Up:

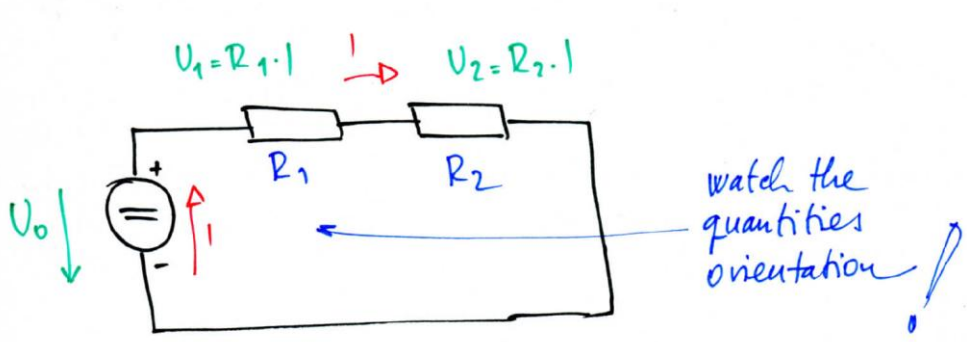
- **Vocab – ELT, describe the word (Voltage, Current, Power (ELT)):**

$$\frac{J}{C} \cdot \frac{C}{s} = \frac{J}{s} = W$$

- **The Energy Consevation Law:**
  - **All the ELT Enegeneering is based on ECL.**
  - **We can see it everywhere, the electrical circuit for example:**

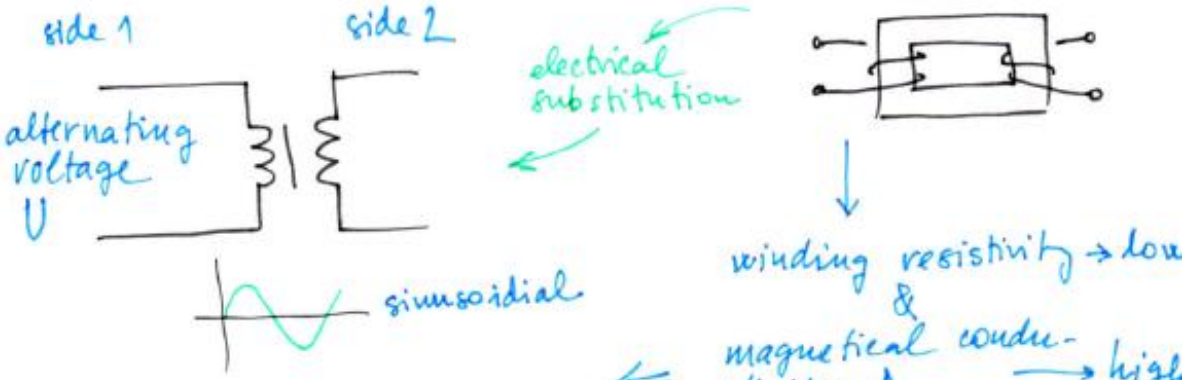
The elementary circuit consists of:

- **The source (galv., generator MECH – ELT): gives, has a negative balance.**
- **The resistors: consume, have a positive balance.**



Topic: **Principes of transformation (soft CLIL)**

Transformator = iron core coil & two windings :



winding resistivity → low
&
magnetical conductivity Λ → high

$L = N^2 \cdot \Lambda$

L: inductivity (what in it)

$X_L = 2\pi \cdot f \cdot L$

X_L: inductive reactance

for sine wave

Ohm law:

$I = \frac{U}{X_L}$ } low ← high

I: alternating current

Laplace's principle:

alternating → current I ⇓ mg. intensity H ⇓ mg. induction B (μ = const.) ⇓ mg. flux ϕ

Faraday:

$\phi_{AC} \Rightarrow U_{i\,AC}$ (side two) — the voltage transformati

Ohm law:

$$U_{i2} > \phi \Rightarrow I_2 = \frac{U_{i2}}{Z_2} > \phi$$

mg. effect of I_2 compensed by I_1 →

→ the current transformation

Why the current compensation ?

$U = X \cdot I$

$X = 2\pi f \cdot L$

$L = \frac{B \cdot S}{l} \cdot N$ Hopkinson law

$U = 2\pi f \cdot \frac{B \cdot S}{l} \cdot N \cdot l = 2\pi f B S N$

truncation

$B = \frac{U}{2\pi f S N}$

$B = const.$, does not depande on the currents

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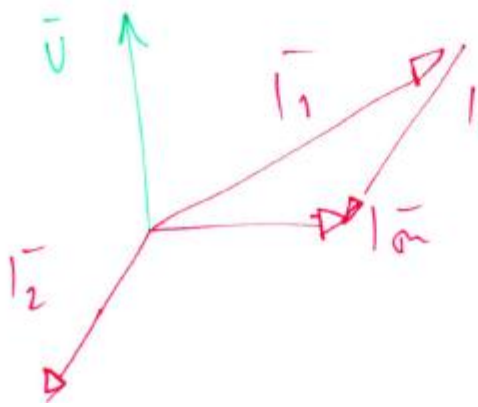
both the currents are not able to change the induction



the first Kirchhoff's Law

Conclusion:

- **Little assassment**