

# Copper: never ending recycling

## How to recover copper from electrical circuits

### A. Main topics

- Recover copper from electrical circuits
- Copper from e-waste
- Copper and circular economy

### B. targeted audience

- 16-19 years old students

### C. Key concepts

- The critical raw materials issue
- Recycling
- Urban mining
- Role of copper in present and future societal needs

### D. Experimental activity

- WebQuest for cooperative learning
- Realize a ppt, a poster and flyers useful to convince to use and recycle copper.
- Activity to perform in a chemical laboratory
- Recover copper from a printed circuit board

### E. Toolkit material

- WebQuest for cooperative learning
- 4 beakers , Glass-rod stirrer, Glass stirring rod, Ring stand, wire gauze, Bunsen burner, Graduated cylinder, Funnel, filter, Balance,  $\text{HNO}_3$  12M (conc. 65%),  $\text{NaOH}$  6M,  $\text{H}_2\text{SO}_4$  6M, Zn metal,  $\text{H}_2\text{SO}_4$  3M, Deionized water

### F. RM Tutors

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