

CO₂ hunters!

Target	Fifth Grades of Primary School First/second/third grades of Secondary School
Duration	1 hour
Abstract	The participants, divided into teams, face each other in the challenge of the century, the reduction of CO ₂ ! Each team must connect colored balls (e.g. carbon, oxygen, and hydrogen atoms) together with special rods (chemical bonds) to form molecules. Each molecule gives a score, calculated according to its market cost. At the end of the game, the team that has scored the most points wins!
Learning objectives	Learn the difference between atoms, chemical bonds, and molecules. To know the work of those who do research. Know the peer review process that regulates the publication of scientific articles.
List of durable materials (e.g. microscope, scale, etc.)	Models of atoms, bonds and orbits for learning molecular chemistry. Available on online stores or at educational game stores. Posters with rules of the game.
List of consumables (e.g. reagents, pipettes, tubes, etc.)	Chocolate bars for game participants. Printing of 1 sheet per team with rules of the game Printing of 1 small certificate per player (to all participating teams).
General description of the laboratory and experimental procedures	Initially, the facilitator presents some slides (or describes orally) the typical actions of the research work, focusing on the chemical transformations of carbon dioxide into more useful ones. The participants are then divided into teams (of 4-5 people each) and find themselves carrying out the transformations through chemical models. Each team must then connect carbon, oxygen, and hydrogen atoms (balls of different colors) with special rods (chemical bonds) to form molecules. Each molecule gives a score, calculated according to the market cost of the final product. At the end of the game, the teams verify each other's scores, naturally implementing the peer review process that is implemented to regulate scientific publications. The team that has built the most valuable molecules wins and its members are rewarded with a certificate. All participants receive a chocolate bar.
Special set-up requirements (e.g. dark room, etc.)	Needed: Team tables Optional: Projector for initial explanation of the rules of the game.