

## Cooking

Think of your kitchen as a kind of laboratory! When we cook food, we use a series of chemical reactions to change ingredients in many different ways.



## Batteries

We can use chemistry to make electrical energy! Chemical reactions inside batteries cause electrons to build up, providing power when the battery is connected to an electrical circuit.



## Changing Oceans

As the climate changes, the chemistry of our oceans is also changing and threatening many different species of plants and animals. The ocean is becoming more acidic as it absorbs higher levels of carbon dioxide from the air.



## Digestion

Chemistry helps our bodies make energy from food! Chemical reactions between the food we eat and acids in our stomach break food molecules down into nutrients we can use.



## Smelling

Every time we take a sniff, we're using chemistry! Scent receptors in our own noses react to the shape of different molecules and send a signal to our brain. Most smells are a combination of many different molecules.



## Exploring Space

Rockets use specially designed solid or liquid fuels to create chemical reactions that release energy. The powerful energy bursts help speed the rocket away from Earth.



## Fire

Every time you strike a match, burn a candle, build a fire, or light a grill, it's chemistry in action! Combustion combines energetic molecules with oxygen to produce carbon dioxide and water.



## Soaps and Detergents

Chemistry can be really clean! Oily stains chemically bind to soaps so they can be lifted away with water. Detergents actually change the chemical properties of water to rinse stains away.



## GAME RULES

- Gather 4–8 players together.
- Deal a hand of yellow word cards to every player. Players should all receive the same number of cards. The exact number depends on the size of the group. Try to give everyone at least 3 word cards.
- Place the purple deck of cards face-down in the middle of the group.
- Pick a judge for round one. The judge flips over one of the purple cards and reads it out loud.
- All players, except the judge, choose one of their word cards that they think best matches how they feel about the chemistry-related card. Players place their chosen card face-down in the middle to make a pile.
- Then the judge turns over all the yellow cards in the pile and chooses which one they think fits best.
- Discuss as a group why the judge chose that word and why everyone else picked the word that they did.
- If the judge picked your word card, you have won that round! Keep the winning card to track how many rounds you win.
- Pick a new judge for the next round, and play continues as before.
- The game ends when you run out of word or chemistry cards.

**Discuss as a group what strategies helped you win a round.** Were there things you could do to help or hurt your chances of having your card picked? How did your own values or those of the other players factor into the game?

**Discuss as a group how these cards relate to each other.** Was there anything surprising about the cards? Anything interesting? If you were to make your own object card what would it be about?

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