

CHEMISTRY

is the study of **matter**:

- its **properties**
- and **structure**
- and how **energy** affects it

Why is Chemistry Important?

Cooking

How does food change as you cook it?

Why does it spoil?

How can food be preserved?

How does your body use
the food you eat?



Cleaning

What cleaner is best for dishes?

for laundry? your body? your home?

How do bleaches work?

How do disinfectants work?



Medicine

How are new medicines
developed and tested?

How can vitamins,
supplements and drugs
help you?

How they can harm you?



Environmental Issues

What makes one chemical a nutrient
and another chemical a pollutant?

How can you clean up the environment?

What processes can
produce the things
you need without
harming the
environment?



Agriculture

How fertilizers are made and why do they work?

How do pesticides work on organisms?



Energy Sources

What is nuclear energy?

What are the benefits and risks of using gasoline? Coal? Other fossil fuels?



Polymers and Plastics

How are new plastics developed?

How can they be recycled?

What are the qualities of the various types of plastics?

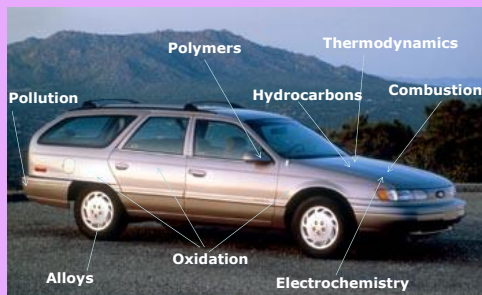


Water Quality

What chemicals are in our water sources?

How are the amounts of chemicals in water measured?

How can we be sure the water we are drinking is safe?



Body Function

Woke up	Biochemistry (melatonin)
Had a shower	Surface chemistry (soaps)
Put on deodorant	Biochemistry
Put on clothes	Polymers
Made breakfast	Food chemistry
Ate breakfast	Metabolic chemistry
Traveled (bus/car)	Combustion; pollution
Wrote notes in class	Surface chemistry (ink)
Breathing, thinking	Biochemistry

We are a big bag of chemicals undergoing numerous chemical reactions!

Fireworks and Explosions



Bottom Line:

Everyone can and should understand basic chemistry
All sciences involve matter and the interactions between types of matter.