

What your child will learn in Grade 8 Science

Fluids and Their Properties

This year your daughter will learn that fluids are all around her, in the air she breathes, the water she drinks, the gasoline in a car, and even the ketchup on her fries. She will look at where fluids show up in the human body, in machines, and in nature, and learn to read hazard symbols on labels — the WHMIS symbols used on workplace and laboratory chemicals, as well as the consumer hazard symbols found on household cleaning products. [See the curriculum.](#)

She will learn the difference between a pure substance, a mixture, and a solution, using things found in almost any kitchen, like salt water or a fizzy drink. She will also learn what "concentration" means (how much of one substance is dissolved in another) and what makes something dissolve faster or slower. [See the curriculum.](#)

Your daughter will compare how thick or thin different fluids flow (called viscosity), calculate how dense a liquid is by weighing and measuring it, and learn why some things float and others sink. She will also learn what pressure means in a fluid, using examples like water in a garden hose or air in a tire. [See the curriculum.](#)

She will connect these ideas to real technology: how oil companies pump heavy tar-sand oil, why squeeze bottles work the way they do, and how engineers move liquids through pipelines. She may even build a working model, such as a small hydraulic lift or a submarine that sinks and floats. [See the curriculum.](#)

Living Things and Body Systems

Your daughter will explore what living things, from a single cell to a full-grown grizzly bear, have in common, and how scientists make sense of that huge variety by looking for shared patterns, like the idea that living things are organized systems. [See the curriculum.](#)

She will learn that the cell is the basic building block of life, and she will compare simple one-celled organisms to complex ones like plants and animals. She will also learn how materials move into and out of cells, and how plant cells differ from animal cells. [See the curriculum.](#)

She will study the body's major systems, breathing, blood circulation, digestion, waste removal, and the senses, and learn how organs like the lungs and heart keep the body running. She will also learn how the body responds to change, such as a faster heartbeat during exercise. [See the curriculum.](#)

Finally, she will look at how scientific research has led to real improvements in human health, from vaccines to medicine to nutrition, and she will investigate what keeps the respiratory, circulatory, and digestive systems working well. [See the curriculum.](#)

How to help at home

Fluids and Their Properties

Pull a few bottles of cleaning products or cooking oil out of the cupboard and ask your daughter to find and explain the hazard symbols on the labels, and to compare these consumer symbols with the WHMIS symbols she sees in the lab; this builds the safety habits the course expects her to practice both at home and in the lab. [See the curriculum: 1, 2.](#)

Make salt water or sugar water together and ask her to figure out how much salt or sugar the water can hold before it stops dissolving, then try it again with warm versus cold water; this is exactly the kind of hands-on investigation into solubility and concentration she will be doing in class. [See the curriculum.](#)

Compare how honey, dish soap, and water pour, and ask her which one is more "viscous" and why that matters for something like motor oil in winter versus summer; this connects directly to the properties of fluids she is learning to measure and compare. [See the curriculum](#).

Ask her to explain why a submarine sinks or floats, or why a stiletto heel sinks into soft ground while a flat shoe does not; these everyday examples use the same ideas about density and pressure covered in her outcomes. [See the curriculum](#): [1](#), [2](#).

If she brings home a design project, like a model hydraulic lift built from syringes and tubing, offer to test it with her and help troubleshoot leaks; working through problems together mirrors the teamwork and problem-solving skills the course asks her to practice. [See the curriculum](#): [1](#), [2](#).

Living Things and Body Systems

Take her pulse before and after a short burst of exercise, like running up and down the stairs, and ask her to explain why her heart rate changed; this is a simple home version of the investigations she does into how the body responds to activity. [See the curriculum](#): [1](#), [2](#).

If you have a magnifying glass or a microscope at home, look at a leaf, an onion skin, or a drop of pond water together and ask her to describe what she sees; this builds the observation skills she uses when studying cells. [See the curriculum](#): [1](#), [2](#).

Talk with her about a recent medical news story, a new vaccine or treatment, and ask how she thinks that research might help people stay healthy; this connects to what she is learning about how scientific research improves human health. [See the curriculum](#).

Ask her to draw and label a simple diagram of one body system, like the digestive or circulatory system, and explain it to you in her own words; this practices the same kind of communication the course expects her to use with diagrams and charts. [See the curriculum](#).

Encourage her to think about how her own choices, sleep, food, exercise, affect her body's systems, and talk about the family's role in staying healthy; this builds the sense of responsibility for personal and community health the course encourages. [See the curriculum](#): [1](#), [2](#).