

What your child will learn in Grade 8 Science

Science and Technology: Fluids

Your daughter will learn what fluids are and why their properties matter. Fluids include everyday substances like air, water, oil and natural gas. She will discover that many household materials, from paint to shampoo, are fluids or contain fluids, and that understanding how fluids behave helps us use them safely and effectively. [See the curriculum.](#)

She will investigate fluids in technological devices and everyday materials around your home. She will learn to read WHMIS safety symbols on bottles and containers, understand why certain precautions matter when handling cleaning products or other substances, and recognize how fluids are used to transport and process materials. [See the curriculum.](#)

Your daughter will learn to tell the difference between pure substances, mixtures and solutions by looking at common examples from your kitchen or bathroom. She will investigate how quickly different materials dissolve in water, measure how much salt or sugar can dissolve, and discover what factors speed up or slow down dissolving, such as temperature and how finely a substance is ground. [See the curriculum.](#)

She will compare the properties of gases and liquids, and learn how to measure density using a simple formula. She will understand why some objects float and others sink, how pressure works (such as the force in a fire hose or air in a bicycle tire), and how gases can be squeezed but liquids cannot. [See the curriculum.](#)

Your daughter will explore technologies that depend on fluid properties. She will learn how salt mining uses dissolving, why different motor oils work better in winter or summer, and how hydraulic systems use fluids to move or lift heavy objects. She may even build a model device that uses fluids to apply force or control motion. [See the curriculum.](#)

How to help at home: Science and Technology

Ask your daughter to find fluids around your home. Look in the kitchen, bathroom and garage together. Ask her to explain why each one is a fluid and what it is used for. This builds her ability to recognize fluids in everyday life. [See the curriculum.](#)

Read safety labels together. Next time you use a cleaning product, paint or other household substance, ask your daughter to find and explain the WHMIS symbols on the label. Ask what precautions the label recommends and why they matter. [See the curriculum.](#)

Dissolve things in water and observe. Stir salt, sugar or food colouring into water at room temperature, then try the same experiment with warm water. Ask your daughter which dissolved faster and why. This shows her how temperature affects dissolving. [See the curriculum.](#)

Measure the density of liquids. Collect small equal volumes of different liquids (water, oil, honey, milk) in clear containers. Ask your daughter to predict which will be heaviest, then weigh them on a kitchen scale. Help her calculate density by dividing mass by volume. [See the curriculum.](#)

Float and sink experiments. Collect objects of different weights and materials. Ask your daughter to predict which will float in fresh water, then test them. Try adding salt to the water and see what happens to buoyancy. This demonstrates how density affects whether things float. [See the curriculum.](#)

Nature of Science: Living Things and Body Systems

Your daughter will learn that all living things, from the tiniest cell to the largest animal, share common features and ways of working. She will discover that organisms are made of cells, tissues and organs that work together as systems, and that understanding these patterns helps us make sense of the

incredible diversity of life. [See the curriculum.](#)

She will investigate how cells are the basic unit of life. She will learn the difference between single-celled organisms like amoebas and multicelled organisms like humans, and between plant and animal cells. She will understand how gases and liquids move in and out of cells, and how cells, tissues and organs work together to build living structures. [See the curriculum.](#)

Your daughter will learn about the major systems in the human body: respiration, circulation, digestion, excretion and the senses. She will understand how the lungs exchange oxygen and carbon dioxide, how the heart pumps blood to deliver oxygen and nutrients throughout the body, how the digestive system breaks down food, and how the nervous system helps the body sense and respond to its surroundings. [See the curriculum.](#)

She will discover how the body reacts to changes. When she exercises, her heart rate increases to deliver more oxygen to her muscles. When she is cold, her body generates heat. When she touches something hot, her hand pulls away automatically. These responses show how body systems work together to keep her healthy. [See the curriculum.](#)

Your daughter will learn about scientific research that has improved human health. She will explore how scientists study cells, organs and body systems to develop medicines, design better diets for specific health needs, and create immunization procedures that protect people from disease. [See the curriculum.](#)

How to help at home: Nature of Science

Observe living things together. Find an organism in your yard or neighbourhood, an insect, plant, bird or other animal. Ask your daughter to describe its structures and guess what each part does. This builds her ability to connect structure to function. [See the curriculum.](#)

Feel your pulse and measure heart rate. Ask your daughter to find her pulse on her wrist or neck. Count the beats together for one minute at rest, then again after she runs up and down stairs. Ask why her heart beats faster after exercise. This shows her how the body responds to changing conditions. [See the curriculum.](#)

Trace the path of food through digestion. Ask your daughter to describe what happens to a piece of bread from the moment she chews it until it leaves her body. Talk about the role of teeth, saliva, the stomach and intestines. This reinforces how organs work together. [See the curriculum.](#)

Compare plant and animal cells. Look at pictures or videos of plant and animal cells together. Ask your daughter to spot the differences, such as the cell wall in plants. Discuss why plants need a cell wall but animal cells do not. [See the curriculum.](#)

Research a health topic together. Choose something your daughter is curious about, how vaccines work, why we need sleep, or how exercise strengthens bones. Look up recent research or news articles together and discuss what scientists have learned. [See the curriculum.](#)

Note: 41 learning outcome blocks were left out to fit the 6000-token curriculum budget for this kind of material. Use "Split into parts" to generate one document per organizing idea.