
CONDENSATION OF Atoms

By Mary Wissinger

Illustrated by Harriet Kim Anh Rodis

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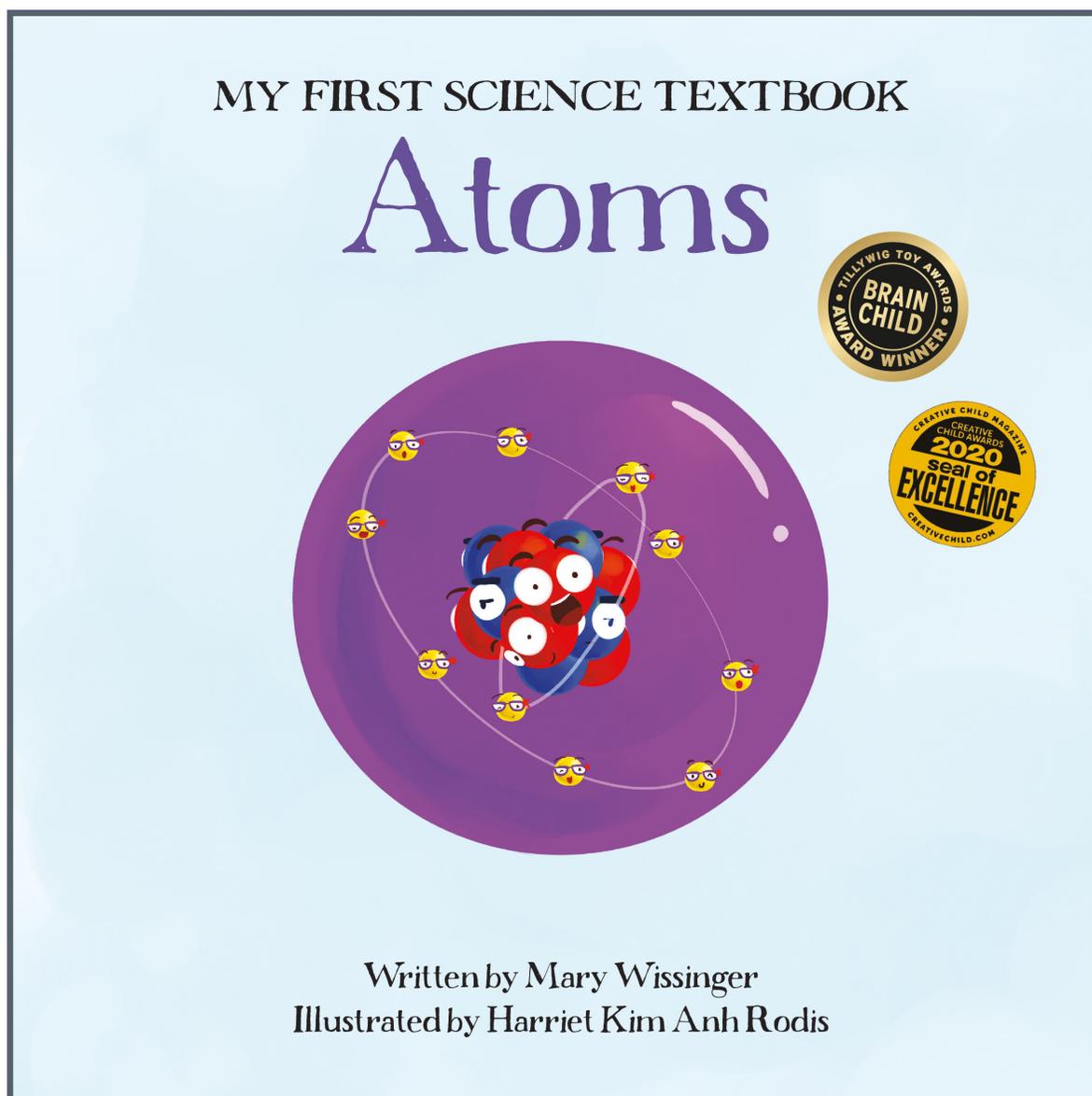
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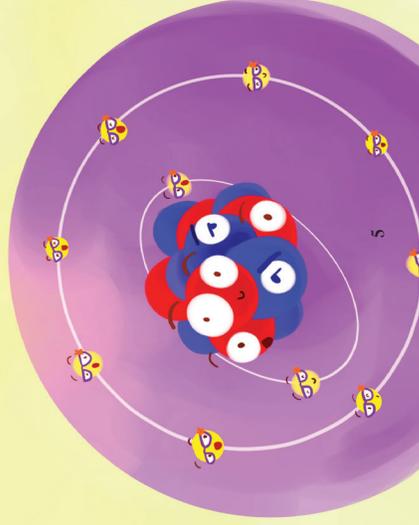
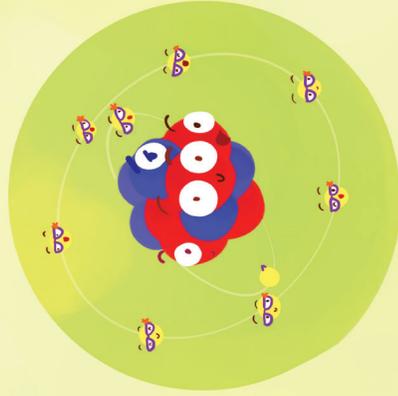
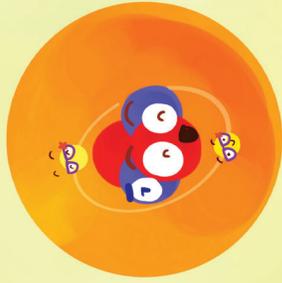


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Say hello to the atoms that build
everything you see.



*your hands, this book, the air,
giraffes, and every single tree.*





It's called an **element**,
and each **element** has a name.



There is a special word for when
atoms look and act the same.

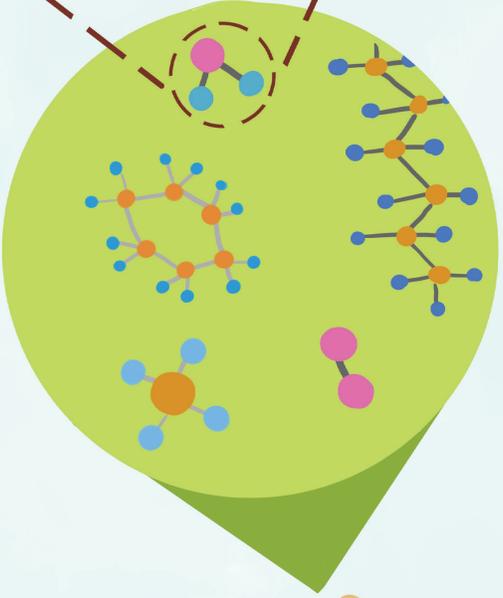
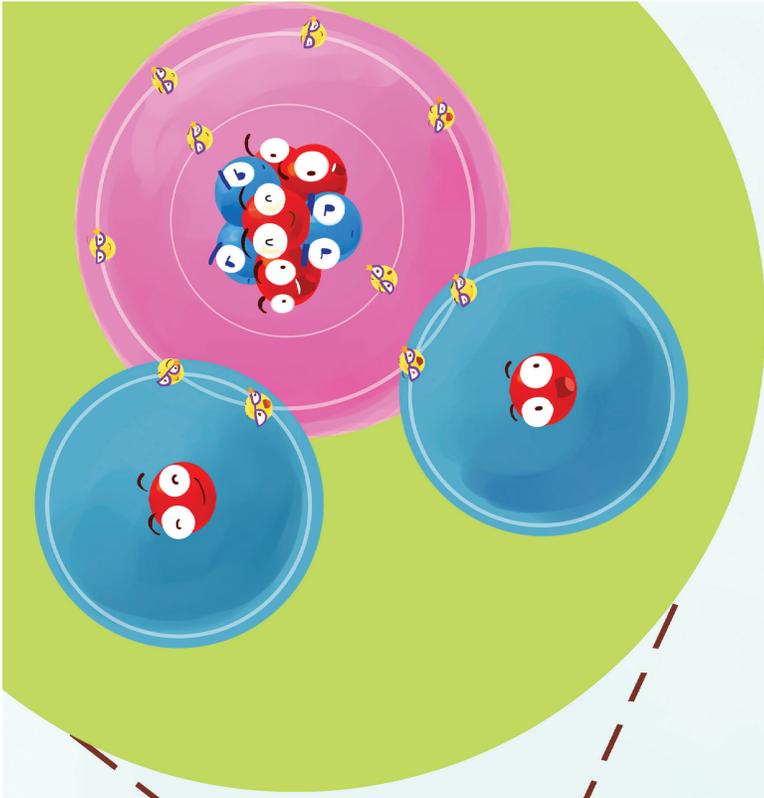


These universal particles
are the same on Earth
as they are on Mars.



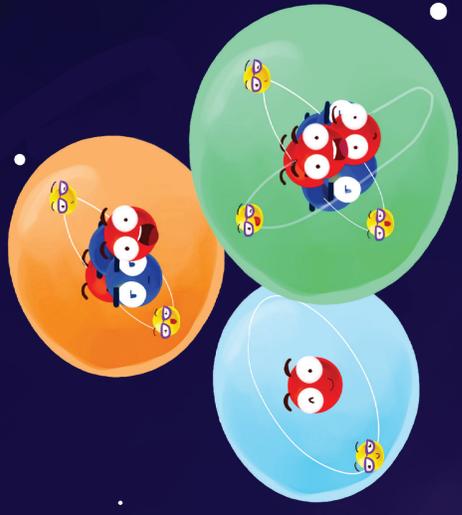
Atoms compose each tiny speck
from here to distant stars.





You contain galaxies of atoms, so
protons, **neutrons**, and **electrons**, too.

You live in the universe,
and a universe lives in you.



Glossary

ATOMIC MASS: The combined number of protons and neutrons in an atom. On the periodic table, it is shown as the number under each element's full name.

ATOMIC NUMBER: The number of protons in an atom determines an element's atomic number, which is used to categorize elements. On the periodic table, the atomic number is shown in the top left-hand corner of each element label.

ATOMS: Atoms are the building blocks for all matter in our universe. They are so small that you can't see them, and are made up of even smaller particles called protons, neutrons, and electrons.

CHEMICAL BONDS: Chemical bonds are what join atoms together to create molecules. There are several types of chemical bonds, including covalent and ionic bonds.

CHEMICAL SYMBOL: The abbreviation for the name of an element. The chemical symbol for each element is listed in the periodic table.

COVALENT BOND: A chemical bond that forms between two atoms when they share electrons.

ELECTRONS: Very teeny particles with a negative electric charge. Electrons travel around the nucleus of every atom.

ELEMENT: A pure substance made of one type of atom.

FORCE: The push or pull on something when it interacts with something else. A force can cause an object to move faster, slow down, stay in place, or change shape.

GALAXY: In astronomy, a galaxy is made up of billions of stars, which are each orbited by planets, gas, and dust. It can also mean a large group of people or things.

ION: An atom or molecule that carries a positive or negative electric charge as a result of having gained or lost electrons.

IONIC BOND: A chemical bond that forms when one atom gives away electrons to another atom. The atom that loses electrons becomes positively charged, and the atom that gains electrons becomes negatively charged.

MASS: A measure of how much matter is in an object. Mass is usually measured in kilograms (1 kg = a little over 2 pounds). Mass is different from weight because the mass of an object never changes, but its weight will change based on its location in the universe.

MATTER: Matter makes up everything around you, and anything in the universe that takes up space and has mass.

MOLECULE: A group of atoms that are bonded together to form the smallest unit of a substance that has all the properties of that substance. For example, a water molecule is the smallest unit that is still water.

NUCLEUS: The center part of an atom, made up of protons and neutrons.

NEUTRONS: Very teeny particles with no electric charge, found in the nucleus of most atoms.

PARTICLES: Tiny, singular bits of matter that can range in size from subatomic particles, such as electrons, to ones large enough to be seen, such as particles of dust floating in sunlight.

PERIODIC TABLE: A chart that arranges chemical elements. It is organized by the element's atomic number.

PROTONS: Very teeny particles with a positive electric charge. Protons are in the nucleus of every atom.

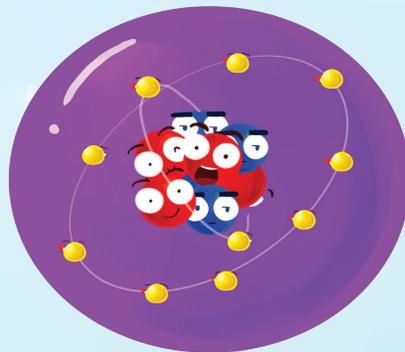
SUBATOMIC PARTICLE: A particle that is smaller than an atom and exists within it, like protons, neutrons, or electrons.

UNIVERSE: A word to describe everything that exists. The universe includes all matter and energy on Earth and in space.

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