

WORDS TO KNOW

A dimension is any way that something can be measured, such as height, width, or depth. We live in a three-dimensional world because the things in our world can have height, width, and depth. Here is a look at the first four dimensions.

First dimension: This dimension has only one measurement. For example, this line has only the first dimension of length.

Second dimension: To get the second dimension, we square the line so that it makes a flat square. This two-dimensional shape has length and width.



Third dimension: If you square the square, you end up with a three-dimensional cube that has length, width, and depth.



Fourth dimension: The fourth dimension is also referred to as time, or space-time, which is brought up in Chapter 5 as the “wrinkle” in time. When Charles Wallace asks Meg about the fourth dimension, she says, “I know it’s got something to do with Einstein and time. I guess maybe you could call the fourth dimension Time.” Einstein’s Theory of Special Relativity relates time and motion. It shows that the faster something moves, the slower time passes. For example, if you were to send an identical twin into space for 20 years, when he came back, he would be younger than his brother who stayed behind on Earth. Because his spaceship would be travelling faster than the Earth, time would pass slower and the twin on the ship would age more slowly.



Fifth dimension: If you were to square the cube and add a hypotenuse to each open right angle created, you would have a shape like your tesseract, which has a fourth measurement that goes beyond the first three. Madeleine L’Engle refers to the tesseract as the fifth dimension because it has many triangular faces beyond the seven cubes on the inside.

Wrinkle in Time: In Chapter 5, the “wrinkle” in time is introduced. When time wrinkles, the distance of time and space collapses, creating a shortcut, and as the ant in the illustration shows, it can be instantly at a far distant point in space-time.

PULP FICTION:
HOW THE SCI-FI THRILLER BEGAN

Modern science fiction began in the late 19th century with writers like Jules Verne, H. G. Wells, and, later, Edgar Rice Burroughs. Verne’s novels revolved around such topics as exploring the depths of the Earth, in *Journey to the Center of the Earth*; space travel—people were blasted to the moon in *From the Earth to the Moon*; and a mad scientist who conquers the oceans, in *20,000 Leagues Under the Sea*. He even imagined a city that could fly, in *Propeller Island*.

H. G. Wells’s novels explored such themes as time travel through the fourth dimension, in *The Time Machine*, and an attack on Earth by monsters from Mars, in *War of the Worlds*.

Although Edgar Rice Burroughs is most famous for writing the Tarzan stories, he was also a sci-fi master with such creations as *Under the Moons of Mars*, *The Land That Time Forgot*, *The Moon Maid*, and—let’s not forget that timeless classic—*Tarzan and the Ant Men*.

As science fiction grew in popularity, pulp magazines became its greatest affordable source. Pulp magazines were named for the inexpensive brown paper they were printed on. A unique magazine titled *Weird Tales* began in 1923, but it contained more horror and fantasy than sci-fi. In 1926, a publisher of popular science, electronics, and radio magazines, introduced *Amazing Stories*, which only published “scientification” stories. It began by reprinting Jules Verne, H. G. Wells, and Edgar Rice Burroughs but soon introduced new writers. *Astounding* was the king of the science fiction pulps in the 1930s and featured dozens of spectacularly talented writers who first appeared in these cheaply mass-printed magazines. These writers may have achieved a kind of fame in the pulps, but certainly not fortune, as the going rate was often a penny per word for their fiction.

Today, science fiction is one of the most popular forms of writing. Hundreds of new titles are added every year, and classics are reprinted. Science fiction fans are some of literature’s most devoted. They hold conventions, sponsor websites, watch movies, and collect books. Modern sci-fi may not have been around long, but it is definitely here to stay.

