

# Science Lesson #1

## *Could Aristotle's Four Elements Be Alive?*

(Hot & Cold)

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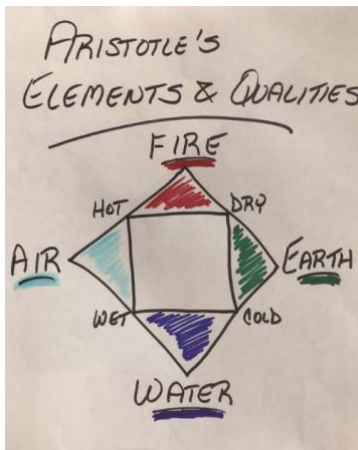
### Introduction to Fables and Science

**Today's lesson** shows how hot water rises and cold water sinks. Heat causes expansion, which makes matter lighter. Taking away heat (or making matter cold), causes contraction, which increases density and therefore weight. To read more about this, look up density, specific gravity, and specific heat. Therefore, hot air rises and cold air sinks. Hot water rises and cold water sinks. You've

seen hot air balloons? They rise by having a fire on board that heats the air whenever you want it to rise. Have you also gone swimming in a lake or the ocean and found the deeper water to be colder than the shallow water? Before we mix hot and cold water, let's look at what something the ancients said about this.

**Did you know** that Socrates was Plato's teacher, and Plato was Aristotle's teacher? They lived about 300 years before Christ. Socratic method is what we use to question ideas in order to think critically about them. Some say Aristotle is the father of science. Let's look at one of Aristotle's views on hot and cold.

**Aristotle** related the four **Elements** to the four **Qualities**:



Fire is hot and dry.  
Air is hot and wet.  
Water is cold and wet.  
Earth is cold and dry.

Some say that this was a simple attempt to start the Periodic Table of Elements that we have today. But, that is not giving enough respect to some of the greatest thinkers of all time! Yes, this

spurred on the idea of today's Periodic Table - but let us not think that our knowledge today is the accumulation of all that has ever been known. There may have been things that the ancients knew - **THAT WE DO NOT KNOW!** We are not the epitome, the top of humankind, understanding everything that came before us. So, here comes a very provocative idea that you can think about.

[\[Play video here to see live demonstration.\]](#)

What if Socrates and Plato and Aristotle were writing down the wisdom of their ancients as in [\[Fable #38\]](#) [\[Fable #61\]](#) [\[Fable #131\]](#). Some of those great ideas that were ancient to them came from a time before people wrote things down! We sometimes think that they were not smart enough to write, but here's a provocative thought - what if they were smart, but were too busy using their creative, right brain, instead of the left brain to read and write - like we do today. Sure, both sides of the brain interact and help each other, but what if the ancients to the ancients were not being intellectual and taking tests like we do in our schools today. What if they were using their intuitive right brains to understand nature and learn from very large ideas. What if Aristotle's four elements were very large idea beings! What if the Earth, Air, Fire and Water are somehow alive? Wouldn't that be curious! That thought caused me to write [\[Fable #130\]](#) (Bickart, 2020, Volume 3) below. And it gave me a whole different way of looking at the four qualities of hot versus cold and dry versus wet. This lesson has been given to adults in a U.S. State prison, to high school, middle school, third graders, and to kindergartners. *I think the adults liked it best.*



## *#130 The First Plants*



*Many cultures have creation stories that go something like this.*

...

*Long, long, long ago, the Earth was born. Beings that are very large took care of it. They poured the blue Sky down to make blue Waters. They were cold and wet. Then the very large beings poured yellow Sunlight down onto the Earth. It was hot and dry. When the cold of the blue Sky and Water mixed with the hot of the yellow Sunlight, the green Plants of the Earth were created.*

*COULD SOME MYTHS BE REAL?*

## Why Use Fables to Teach Science?

### **Conversation Starters**

- What sentence or phrase is most controversial to you?
- Why does that sentence or phrase interest you?
- Do you think the “Beings that are very large” have anything to do with science?
- Do you think that myths have value? Do they have value in science?

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### **References**

Bickart, J. (2020). *Bickart's Just-in-Time Fables (Volume 3)*  
(Vol. 3). Asheville, NC: Red Shirt Interactive Group.