

Science Lesson #5

Quantum Computing is Cool

(Dry Ice)

www.bickart.org



Introduction to Fables and Science

Today's Lesson

Quantum computers are cool if you cool them down to at least -100 degrees below zero Fahrenheit. To do this, you can use dry ice (solid carbon dioxide) that is a little colder than that. This is a new breakthrough in making quantum computers. Before May, 2020, when two scientists from the UK created a dry ice cooling, we had to use liquid nitrogen which required being kept more than 300 degrees below zero (F).

Watch the video to hear about the science behind quantum computing and the science of dry ice. Dare I say it one more time - it's very cool. [*\[Play video here to see live demonstration.\]*](#)

Two great and bizarre effects of quantum mechanics are Entanglement and the Observer Effect.

Look at [[Fable #19](#)] (Bickart, 2020, Volume 1) to see an example of one way to make this point.



#19 *The 5 Rules of Living*



A traveling rooster claimed he could teach the most important life lessons a new-hatched chick should know. He declared that he could tell them how to make the adjustment from heaven to earth! And he brazenly boasted that he was the owner of THE 5 RULES OF LIVING! “It’s quite simple,” he would say, “I’ll just explain how in heaven everything was together; but here on earth everything appears separate.” Here are his rules. See what you think ...

1. Do not touch other chicks’ stuff or person. It’s not yours. You are separate. (Yet, somehow ... try to act as if you are not separate.)

2. If stuff is not yet claimed, grab it before someone else does. For example, if there’s some food on the ground and someone else grabs it, your body will go hungry. You see, the food will go in their body. You are not one with their body. You’re separate. So quickly grab it for yourself. (Yet, somehow ... try to learn to leave some for someone else.)

3. Watch out for mine-not-yours-certificates. They come in round, metal coins and rectangular paper. Grab them, too. If you do not, your body won't be allowed to buy stuff; but the other bodies will. (Yet, somehow ... try to leave some of these, too.)

4. You will be told repeatedly to share. This means willingly not keeping stuff for your body so that it goes to some other body. This mostly works while adults are watching. This usually does not work out in the yard, in private, or pretty much anywhere else. (Yet, somehow...try to learn this, anyway.)

5. Try to find how to undo physical separateness. It is called oneness. Your chances are slim because most chickens do not even believe it is possible. It happens to approximately 1 in a million chickens, 1 in a million times. Good luck. (Yet, somehow ... if you can achieve oneness against all of these odds and against all of the above difficulties down here on earth, it may be the most important thing you do in your life!)”

**SEPARATENESS IS A SUBTLE DECEPTION
OF LIFE ON EARTH**

What is provocative here?

One of the coolest things about quantum mechanics - to me - is *entanglement*. This is the effect where quantum particles behave in ways that seem new to humankind. They seem to be connected, even when they are apart. Since everything is made of quantum particles (they are the sub particles of the atom, after all), many scientists are saying today, that we are all connected much more than we knew. Now, actually, this is what just about every culture has said, if you look back far enough in history! Could it be we are really ONE?

Why Use Fables to Teach Science?

The 5 Rules of Living

Conversation Starters

- How do you feel when you hear about another set of rules? Are there any rules that you like?
- What do you think the “*mine-not-yours-certificates*” are? Why do you think they were called that in the story?
- What do you think of sharing? Do adults share? If so, in what situations? When don't they?
- Do you think that the human race might be connected? Do you think any other species are? What else might be connected and in what way?

References

Bickart, J. (2020). *Bickart's Just-in-Time Fables (Volume 1)*
(Vol. 1). Asheville, NC: Red Shirt Interactive Group.