

Magical thinking begins at an early age

by Lloyd Robertson

When I was four years old I was convinced cream separators magically turned water into milk. I had seen it with my own eyes! Oh, I had seen cows being milked before. But my uncle showed me a quicker way: he poured water into the top of the cream separator and a white liquid came out of the bottom. He was so pleased with his accomplishment that he laughed heartily.

Beginning in childhood, we seek to understand how the world works. Children are good observers but are not so good at finding meaning. For example, a child who observes his parents fighting might think that he is the cause of the fight even tho he had nothing to do with it. Similarly, children may observe things in nature and come to explanations that feel right but are factually wrong. In a recent address to the British Psychological Society, Karen Pine listed some common beliefs of young children:

- * the sun turns into the moon at night
- * little stones can grow into big stones
- * tall people are older than short people
- * big objects are always heavier than little objects
- * children only grow on their birthdays
- * all animals are furry and have 4 legs
- * seeds contain baby plants
- * refrigerators are cold and therefore don't use any electricity

Most parents, most adults, find these kinds of beliefs "cute", but these beliefs, called fallacies, can lead to future problems. By the time they start school, kids have created explanations about all kinds of things. "Trying to undo these myths can be a long and difficult task", said Dr. Pine.

The reason the task of re-educating children can be "long and difficult" is that once we have adopted a belief as our own we tend to disregard evidence to the contrary. Teachers are left frustrated trying to explain scientific reality, because children are reluctant to alter their beliefs about the way the world works.

Simply teaching children about science doesn't guarantee they'll give up their misconceptions. Even if a teacher demonstrates a concept using an experiment (like proving that small and large objects can weigh the same), it can fail to convince, because children may disregard the result or reinterpret it to confirm their own belief. Such children may develop mental "blocks" to certain lessons or subjects in school.

All young children go thru a period of believing in magical thinking. Things can happen just because someone wills it. The sun can magically turn into the moon at night. Why? Because it wants to.

We parents can teach the difference between reality and make-believe. Harry Potter books are fun, but they belong in the world of make-believe. Most children can understand that. Most

children also want real explanations as to how things work. Patient and realistic explanations may sometimes appear to be "over the head" of the young one, it may still boil down to "because Daddy said so", but these realistic explanations set the stage, the readiness, for more concrete understandings when the child is capable. The result will make your child more successful in his or her education.

Talk to your young children about things that are "real". Answer their questions. Patiently explain cause and effect. You are your child's first teacher.