

Math Moment...

Wrong Answers, Great Learning!

"I've missed more than 9,000 shots in my career. I've lost almost 300 games. 26 times I've been trusted to take the game winning shot... and missed. I've failed over and over and over again in my life. That is why I succeed." - Michael Jordan

"Failures, repeated failures, are finger posts on the road to achievement. One fails forward toward success." - C. S. Lewis

"I have not failed. I've just found 10,000 ways that won't work." - Thomas Edison

Making mistakes is a natural part of all learning. Those who we consider to be "great" are clear that mistakes lead to learning.

The latest research on mathematics shows that mistakes are a very important part of learning math. When students make an error in math and have the opportunity to learn from it, they actually develop a much stronger understanding. In fact, the research states that students learn more from making mistakes than from getting all the right answers. When your child makes an error, it offers insight into what understanding your child has about a mathematical idea. It allows parents and teachers to



talk to the child about what they know, and ask questions to stretch their thinking around where they are currently developing their understanding. Parents can ask "How do you know that? What was your thinking here? Is there another way you could solve that? How did you think about X (an element they may be missing or have misunderstood)?" This conversation helps to develop the crucial skills of reasoning and communication and is therefore more helpful than simply showing a child how the math is done. When you support an attitude that values learning from mistakes, you are telling your child that mistakes are a valuable and natural ingredient in learning and lead to deeper understanding. Research shows that this attitude supports stronger achievement!

For more information about the research please visit <u>www.youcubed.org</u>.

