Thales of Miletus

1st slide - Title page - Thales of Miletus lives more than 2,500 years ago in Greece.

2nd slide - Maps - Nowadays Greece is here on the map, but back then Greece was larger so where he lived would be a part of Turkey today.

3rd slide - Greek things - Back then in Greece they worshipped the Gods of Olympus, the first race to honor Zeus had already been held (which later led to the Olympic games), they already had wonderful architecture and art. This was more than 150 years before Socrates, Plato, and Aristotle.

4th slide - two Greek guys - Thales was a really smart guy. He loved to play with numbers and notice patterns. He had a friend named Milo who said, "You're really smart and know a lot of things, but I don't think they're very useful. If you could use this to make money, that would be useful. Show me the money and then I'll believe that your knowledge is useful. I'm going away for a while, when I come back show me that you've made some money."

5th slide - olive trees, soap, olive oil - Thales didn't care about money very much, but he took the bet. Where he lived, they had a lot of olive trees. They ate some olives, but most were pressed to make oil and some of the oil was used to make soap and other items.

6th slide - shriveled olives - But there was a problem. The olive trees weren't doing very well. And hadn't been doing well for a long time. Thales was intrigued. He began to talk with people, especially old farmers who had seen olive trees do poorly in the past and had seen them do well. He paid attention to the weather patterns for the past several years and he began to look for patterns.

7th slide - olive press - Then he made his plan. Thales bought an olive press. He got it cheap because no one was using them. There weren't any olives to press. In fact he bought all the olive presses. And then he waited.

8th slide - olive branch - That year, just as Thales predicted, there was a bumper crop of olives and everyone who wanted to press their olives to make olive oil had to come to him. He was able to make a lot of money and when his friend Milo returned, he was able to "show him the money." But Thales really didn't care about money very much so he sold the olive presses back to the people at cheap prices, and if they couldn't afford it, he just gave it back.

9th slide - Egyptian pyramids - But he kept enough money to go on a trip to Egypt. The pyramids were there. The pyramids are really, really old. A guide was explaining about Cheops, the largest of the pyramids and boasted that the pyramid measured 518 cubits on each side. Thales was intrigued and asked, "How high is the pyramid?" The guide had no idea and began to ask around. Soon a discussion and argument began about how you could figure it out. You could measure the slant with a rope, but it was impossible to measure the height.

10th slide - pyramid/shadow/man/shadow - While the expert were arguing that it was impossible to figure out, Thales said, "Never mind. I've figured it out. It's 329 cubits high." He did it by noticing the shadow of the pyramid and his own shadow. He realized that there was a relationship between his height and the length of his shadow and the height of the pyramid and the length of its shadow. He could measure the length of the pyramid's shadow, and his own height, and the length of his own shadow so he had three of the four numbers and could calculate the one missing number. Everyone was amazed. News about Thale's discovery spread throughout Egypt.

11th slide - donkey crossing the river - Thales went home again to Greece. He didn't care about money very much, but you have to have money to live and Thales had a salt mine for his income. People dug salt from the mine and loaded it on donkeys to carry to market to sell. One day one of his workers said, "Thales, you have a donkey that is so stupid, you're going to have to sell him or get rid of him." "What's wrong with the donkey?" "As you know, in order to get from the salt mine to the market the donkeys have to cross a river and every day this particular donkey trips in the river." "Is he lame? Does he have an injury?" "No, that's the weird thing, the donkey is fine before he gets to the river and he's fine when he's on dry land on the other side of the river. But every time he gets in the river he trips and ruins his load of salt." Thales came to watch the donkey. He observed him carefully and laughed, "This is not a stupid donkey. This is a really smart donkey. He's learned that if he rolls over in the water it dissolves his heavy load of salt. He's dumping his load so he doesn't have to carry it. " So Thales needed to come up with a plan to train his smart donkey not to dump his load of salt.

12th slide - donkey, sponges - So he loaded the donkey's pack with sponges instead of salt. Then when the donkey rolled over in the river to "dump" his load, instead of getting lighter, it got heavier. After a few weeks, the donkey was cured of the desire to try to dump his load in the river, and he could be used to carry salt again.

13th slide - summary - just read down the list and talk about how this was done 2,500 years ago and the things Thales discovered are just as true and useful today as they were then - discussion on truth and how when real truth is discovered it is always right. Math is special, because it has a lot of truth.