DECISION TREES: 1 MODEL FOR ANY SCIENCE LESSON

Big Idea

Not all models need to be physical - food webs and nutrient/water cycles are conceptual, pen-and-paper models of what's happening. But, all good models have the same qualities I call RPMs: they're representative, predictive, and modifiable. For example, in a food wool, which represents relationships between plants and animals, predator and prey, if we were to remove one, we could predict what would happen to the others.

A decision tree is a simple way to create a conceptual model. What makes it so simple is that it uses yes and no questions to come to an answer to a larger question. I'm using decision trees to teach and practice model making.
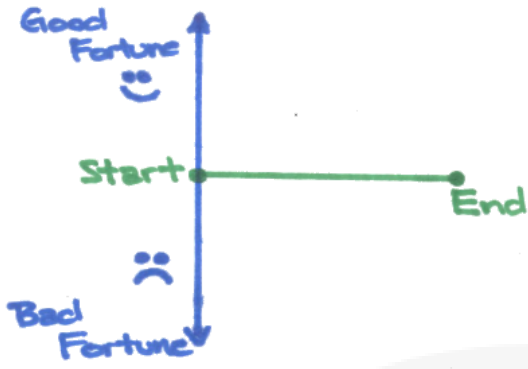
Instructions

Step 1: Give students an overarching question to answewr.

Step 2: Have students develop Yes or No questions that will lead to an answer.

NOTE: there can be more than 2 answers. Also, one response may lead to more questions which, eventually, will get to the answer.

Vonnegut's graph has "Fortune" on the vertical axis (ie. the good and bad fortune a character goes through during the story) and "Time" on the horizontal axis (ie. beginning to end of the story).

Rise

Ex. Rocky

Fall

Ex. Animal Farm

Rise/Fall

Ex. Titanic

Fall/Rise

Ex. Finding Nemo

Rise/Fall/Rise

Ex. Cinderella

Fall/Rise/Fall

Ex. Parasite