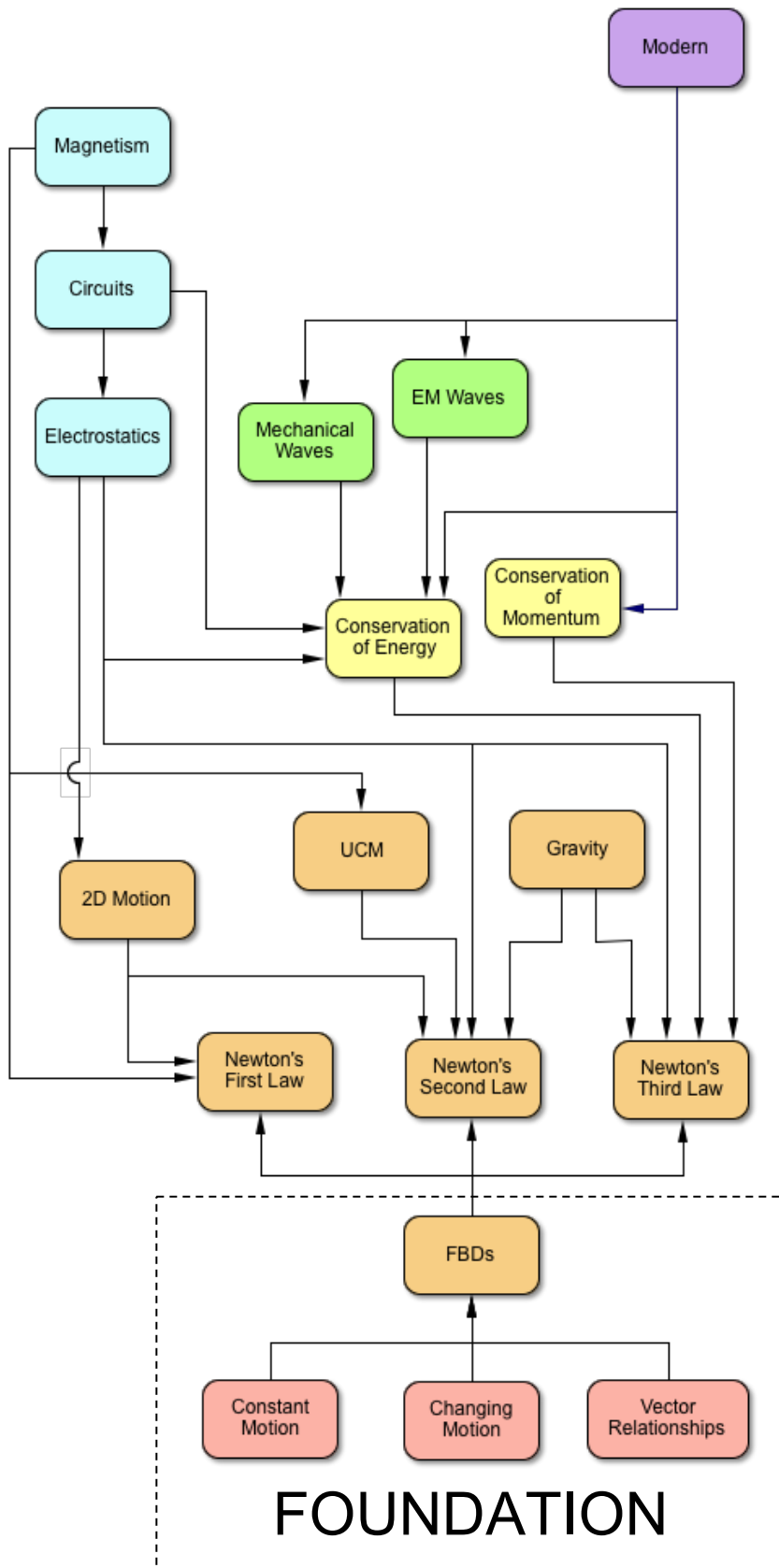


Physics Concept Map



The study of physics requires students to interpret relationships and recognize the connectedness between topics. The simplest relationship is a ratio. The ratios of speed, velocity and acceleration are the foundation in the study of physics.

For example, students having difficulty with physics are asked “You took the distance traveled (40 meters) and divided it by the time of travel (10 seconds).” How would you interpret this number, 40/10? What does it mean in the simplest possible words?

Possible answers are:

- It's speed or velocity. This response shows that the students have not separated the “term”, the name of the resulting number, from the verbal interpretation of its meaning. The name is not an interpretation.
- When it's pointed out that the name is not an interpretation, students may restate their interpretation to: it's distance over time, it's meters per second, it's the number of meters in 10 seconds, or it's how fast the object is moving.

The simplest expression is an object will travel 4 meters in one second.



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