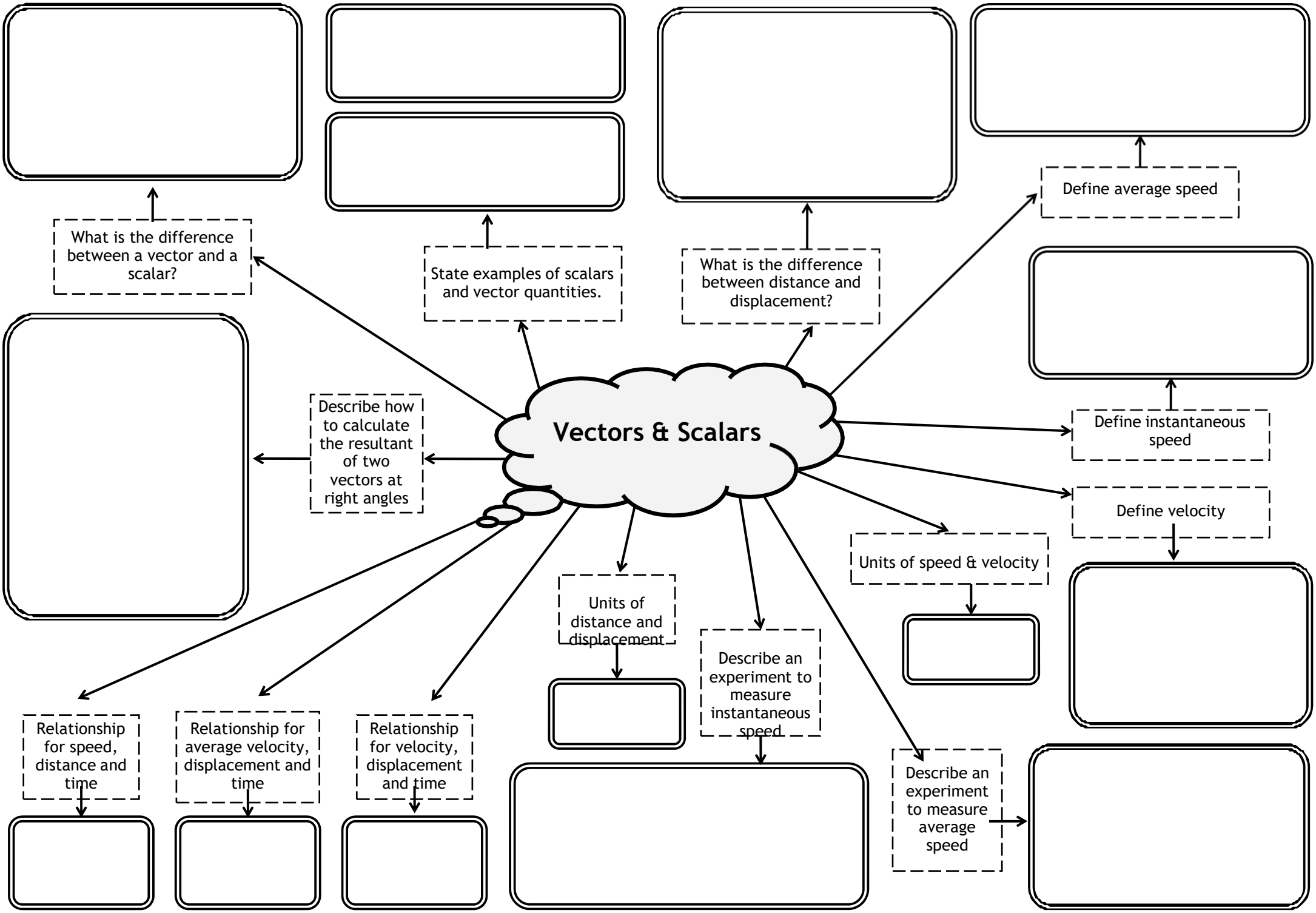

Vectors & Scalars
What is the difference between a vector and a scalar?
State examples of scalars and vector quantities.
What is the difference between distance and displacement?
Define average speed
Define instantaneous speed
Define velocity
Units of speed & velocity
Units of distance and displacement
Describe an experiment to measure instantaneous speed
Describe an experiment to measure average speed
Describe how to calculate the resultant of two vectors at right angles
Relationship for speed, distance and time
Relationship for average velocity, displacement and time
Relationship for velocity, displacement and time

Acceleration & v-t graphs

Define acceleration

Relationship to calculate acceleration

Units of acceleration

Describe an experiment to measure acceleration

Describe how to determine the distance travelled from a v-t graph

Sketch a v-t graph for an object with a constant speed

Sketch a v-t graph for an object with a constant deceleration

Sketch a v-t graph for an object with a constant acceleration

Describe how to determine acceleration from a v-t graph

Newton's Laws

State Newton's First Law of motion

What can forces change about an object?

Units of force

Weight

Mass

Gravitational field strength

Define

Relationship to calculate weight

What is the gravitational field strength on Earth?

State the relationship for Newton's Second Law of motion

State Newton's Third Law of motion

What is freefall? Explain it using Newtons laws

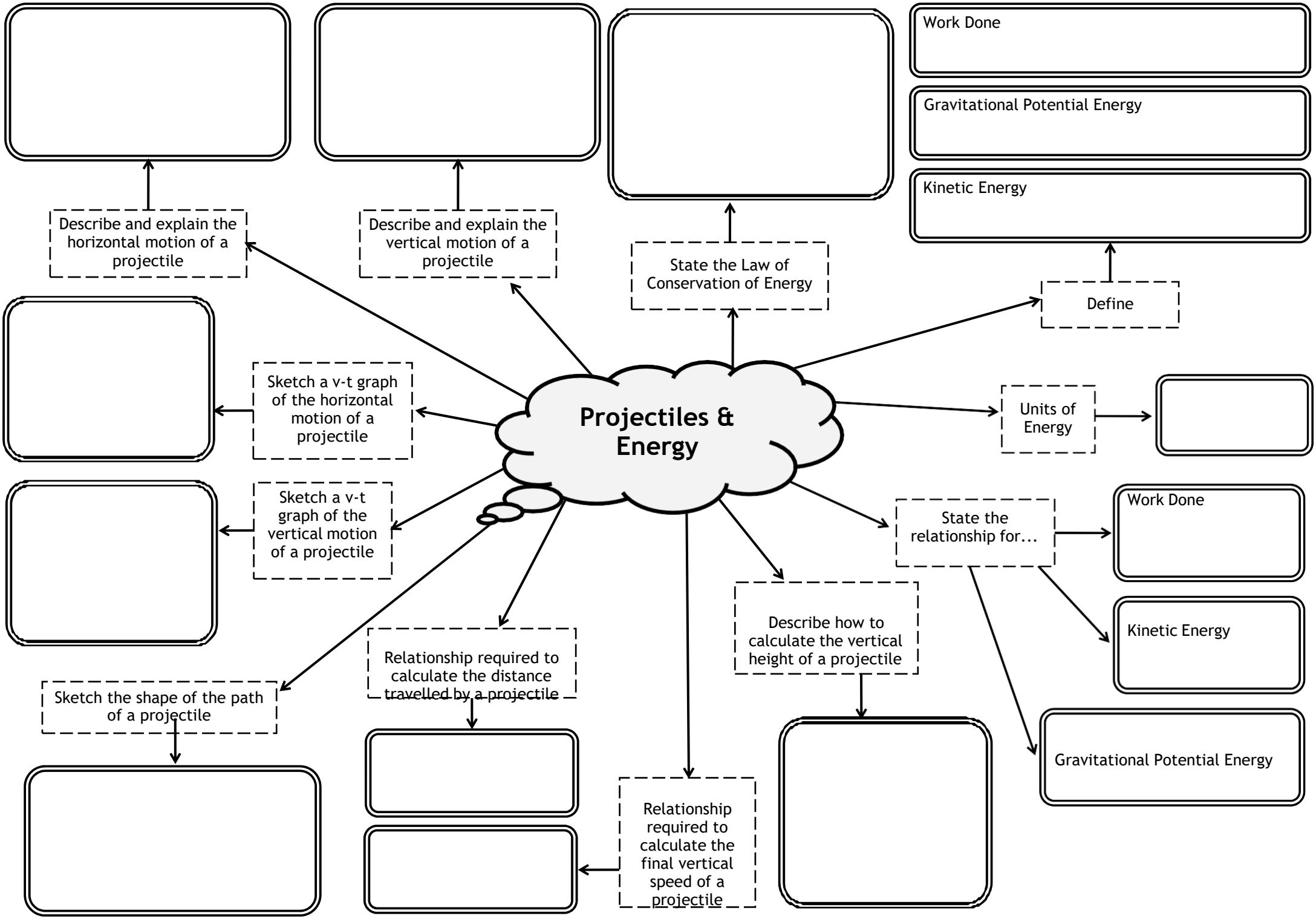
What is terminal velocity? Explain it using Newtons laws

What is friction?

Describe the motion of an object when forces are unbalanced

Describe the motion of an object when forces are balanced

Give an example of Newton's Third Law of motion


Projectiles & Energy
Describe and explain the horizontal motion of a projectile
Describe and explain the vertical motion of a projectile
State the Law of Conservation of Energy
Define
Work Done
Gravitational Potential Energy
Kinetic Energy
Sketch a v-t graph of the horizontal motion of a projectile
Sketch a v-t graph of the vertical motion of a projectile
Units of Energy
State the relationship for...
Work Done
Kinetic Energy
Gravitational Potential Energy
Describe how to calculate the vertical height of a projectile
Relationship required to calculate the distance travelled by a projectile
Sketch the shape of the path of a projectile
Relationship required to calculate the final vertical speed of a projectile