Writing Learning Goals

The learning goals need to:
- Be specific.
- Use action verbs that can be measured.
- Challenge the students to learn something from the simulation.

Action Verbs/Phrases for use in writing Learning Goals

Analyze	Decide	Estimate	Predict
Apply	Describe	Evaluate	Provide reasoning
Argue	Define in own words	Examine	Recognize
Build	Design	Explain	Relate
Calculate	Determine	Formulate	Revise
Categorize	Differentiate	Identify	Select
Clarify	Discuss	Illustrate	Sketch
Communicate	Distinguish	Infer	Suggest a solution
Compare	Draw	Interpret	Summarize
Construct		List	Use
Convert		Measure	Use reasoning
Create		Organize	Write

Good sentences:
- Predict how _____ would look different.
- What changes can you make to your ideas about _____ to reconcile your previous thinking to the things that you have discovered?
- Describe what you have discovered about _____.

Examples of Learning goals:
Students will be able to
- Determine the variables that affect how charged bodies interact
- Predict how charged bodies will interact
- Describe the strength and direction of the electric field around a charged body.
- Use free-body diagrams and vector addition to help explain the interactions.
- Build combination circuits from schematic drawings,
- Provide reasoning to explain the measurements in circuits.
- Sketch how the graph of a line changes as the coefficient and constant vary
- Identify the characteristics of electromagnets that are variable and what effects each variable has on the magnetic field's strength and direction.
- Explain why waves might be represented in these different ways.
- Describe matter in terms of molecular motion. The description should include
  - Diagrams to support the description.
  - How the particle mass and temperature affect the image.
  - What are the differences and similarities between solid, liquid and gas particle motion
  - How the size and speed of gas molecules relate to everyday objects
- Create an image of gases using words and diagrams.
- Make sense of the measurable quantities of gases by giving examples of macroscopic *(visible)* things that are similar
- Interpret and draw position, velocity and acceleration graphs for common situations and explain their reasoning.