**Sample Know/Need to Know List**

**Objectives:** Learners will be able to…

**1.3, 6.1:** Explain and calculate gravitational and electrostatic forces at the nanoscale.

* What forces affect particles?
* Are the forces different at the nanoscale?

**3.1, 3.3, 3.4, 5.6, 6.1:** Explain how size-dependent properties (surface-area-to-volume ratio, forces) change at the nanoscale through macroscopic models.

* What is the nanoscale?
* What is nanotechnology?
* How does nanotechnology work?

**5.7:** Explain and demonstrate how energy is converted into different forms (thermal, light, etc.).

**8.1, 8.5, 8.6, 8.7:** Determine the needs and uses of energy in a community.

**8.2, 8.3, 8.4:** Develop practical and optimal energy sources for a group of people (business, city, country, school, etc.).

* What types of energy does our city use?
* How much energy do we use?
* How much does energy cost?
* How do we optimize energy?

**\***The bulleted questions are possible student generated questions from the entry event.