THE ELECTROMAGNETIC SPECTRUM may advance the following

ENERGY LITERACY PRINCIPLES AND CONCEPTS

1 Energy is a physical quantity that follows precise natural laws.

1.1 Energy is a quantity that is transferred from system to system.

1.3 Energy is neither created nor destroyed.

1.4 Energy available to do useful work decreases as it is transferred from system to system.

1.5 Energy comes in different forms and can be divided into categories.

1.6 Chemical and nuclear reactions involve transfer and transformation of energy.

1.7 Many different units are used to quantify energy.

2 Physical processes on Earth are the result of energy flow through the Earth system.

2.1 Earth is constantly changing as energy flows through the system.

2.2 Sunlight, gravitational potential, decay of radioactive isotopes, and rotation of the Earth are the major sources of energy driving physical processes on Earth.

4 Various sources of energy can be used to power human activities, and often this energy must be transferred from source to destination.

4.1 Humans transfer and transform energy from the environment into forms useful for human endeavors.

4.2 Human use of energy is subject to limits and constraints.

4.7 Different sources of energy and the different ways energy can be transformed, transported, and stored each have different benefits and drawbacks.

6 The amount of energy used by human society depends on many factors.

6.5 Social and technological innovation affects the amount of energy used by human society.

6.6 Behavior and design affect the amount of energy used by human society.

6.8 Amount of energy used can be calculated and monitored.