



## State of Texas Assessments of Academic Readiness (STAAR™) Performance Level Descriptors Physics

### Performance Level Descriptors

Scientific process skills are not assessed in isolation but are incorporated into questions that assess the physics content. These process skills focus on safe, environmentally appropriate, and ethical laboratory and field investigations; using a systematic approach to answer questions; and using critical thinking, scientific reasoning, and problem solving to make informed decisions.

#### **Students achieving Level III: Advanced Academic Performance can**

- Evaluate and predict the effects of force on motion
- Predict the effects of electromagnetic forces in varied contexts
- Analyze the relationship between current, potential difference, power, and resistance in complex electric circuits
- Predict wave characteristics and behaviors in varied contexts

#### **Students achieving Level II: Satisfactory Academic Performance can**

- Describe and analyze the laws of motion qualitatively and quantitatively
- Investigate and describe gravitational, electromagnetic, and nuclear forces
- Interpret relationships between current, potential difference, power, and resistance in electric circuits
- Apply the laws of conservation of energy and momentum qualitatively and quantitatively to a variety of situations
- Analyze thermodynamic systems in terms of energy transfer and conservation
- Analyze wave characteristics, behaviors, and applications
- Describe and recognize examples of atomic, nuclear, and quantum phenomena

#### **Students achieving Level I: Unsatisfactory Academic Performance can**

- Use physics formulas to solve motion problems when given all needed values
- Use physics formulas to solve energy problems when given all needed values
- Identify characteristics and behaviors of waves