Grade 4 Tier 2 - *Emerging*

*A fourth-grade Tier 2 student performing at the **Emerging** Level solves routine problems and demonstrates a progressing academic awareness of some of the basic skills and concepts outlined by the Alternate Eligible Content in at least one of the Pennsylvania Science Reporting Categories.*

Students performing at this level demonstrate these abilities by
- ✓ identifying specific technologies given a specific situation or need
- ✓ identifying the position of an object relative to another
- ✓ identifying the plants and animals that live in different environments
- ✓ matching objects based on physical characteristics in order to solve a problem
- ✓ predicting weather conditions based on weather symbols or pictures

Grade 4 Tier 2 - *Novice*

*A fourth-grade Tier 2 student performing at the **Novice** Level solves routine as well as simple multi-step problems and demonstrates a developing understanding of some of the basic skills, concepts and vocabulary outlined by the Alternate Eligible Content in at least two Pennsylvania Science Reporting Categories.*

In addition to the skills demonstrated by students performing at the *Emerging* Level, students performing at this level demonstrate these abilities by
- ✓ selecting the appropriate measuring tools to gather specific information and solve problems
- ✓ identifying the basic needs of plants and animals,
- ✓ identifying Earth's prominent features when displayed on a map
- ✓ identifying products that can be recycled or reused
- ✓ identifying changes to object and living things
- ✓ recognizing the observations that support a scientific fact
- ✓ identifying objects changing states of matter
- ✓ predicting weather conditions based on weather symbols or pictures

Grade 4 Tier 2 - *Proficient*

*A fourth-grade Tier 2 student performing at the **Proficient** Level solves multi-step problems and demonstrates a fundamental academic awareness of most of the basic as well as some complex skills, concepts and vocabulary outlined by the Alternate Eligible Content in at least three of the Pennsylvania Science Reporting Categories.*

In addition to the skills demonstrated by students performing at the *Novice* Level, students performing at this level demonstrate these abilities by
- ✓ identifying common technologies and the old technologies they replace
- ✓ selecting the appropriate tools for making observations
- ✓ distinguishing whether a system is natural or human made
- ✓ identifying how specific structures of plants and animals function together to provide basic needs
- ✓ sequencing individual stages of life cycles of different organisms
- ✓ matching the source of pollution with its impact on the environment
- ✓ recognizing the relationship between push and pull forces and the direction an object moves
- ✓ identifying the sources of recyclable products

Grade 4 Tier 2 - *Advanced*

*A fourth-grade Tier 2 student performing at the **Advanced** Level solves multi-step problems and demonstrates advanced academic awareness of most of the basic and complex skills, concepts, and vocabulary outlined by the Alternate Eligible Content in all four Pennsylvania Science Reporting Categories.*

In addition to the skills demonstrated by students performing at the *Novice* and *Proficient* Levels, students performing at this level demonstrate these abilities by

- ✓ identifying patterns seen in nature
- ✓ identifying how seasons affect trees and animals using specific scientific vocabulary
- ✓ comparing objects by shape, size, volume and weight to solve problems
- ✓ identifying the position of one object to another within a common context
- ✓ identifying the plant or animal source of food and clothing