# GRADE 8: TN Science Standards

## *Earth Force's Community Action and Problem-Solving Process would be best utilized with STANDARD 5: Biodiversity and Change unit*

### Grade Level Expectations

GLE 0807.Inq.1 Design and conduct open-ended scientific investigations.

GLE 0807.Inq.2 Use appropriate tools and techniques to gather, organize, analyze, and interpret data.

GLE 0807.Inq.3 Synthesize information to determine cause and effect relationships between evidence and explanations.

GLE 0807.Inq.4 Recognize possible sources of bias and error, alternative explanations, and questions for further exploration.

GLE 0807.Inq.5 Communicate scientific understanding using descriptions, explanations, and models.

### Checks for Understanding

90807.Inq.1 Design and conduct an open-ended scientific investigation to answer a question that includes a control and appropriate variables.

90807.Inq.2 Identify tools and techniques needed to gather, organize, analyze, and interpret data collected from a moderately complex scientific investigation.

90807.Inq.3 Use evidence from a dataset to determine cause and effect relationships that explain a phenomenon.

90807.Inq.4 Review an experimental design to determine possible sources of bias or error, state alternative explanations, and identify questions

90807.Inq.5 Design a method to explain the results of an investigation using descriptions, explanations, or models.

### State Performance Indicators

SPI 0807.Inq.1 Design a simple experimental procedure with an identified control and appropriate variables.

SPI 0807.Inq.2 Select tools and procedures needed to conduct a moderately complex experiment.

SPI 0807.Inq.3 Interpret and translate data into a table, graph, or diagram.

SPI 0807.Inq.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence.

SPI 0807.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error. Revised 06.29.09 for further investigation.

## Grade 7: TN State Science Standards

### *The Process would be best utilized with STANDARD 5: Biodiversity and Change unit*

**Grade Level Expectations**

GLE 0707.Inq.1 Design and conduct open-ended scientific investigations.

GLE 0707.Inq.2 Use appropriate tools and techniques to gather, organize, analyze, and interpret data.

GLE 0707.Inq.3 Synthesize information to determine cause and effect relationships between evidence and explanations.

GLE 0707.Inq.4 Recognize possible sources of bias and error, alternative explanations, and questions for further exploration.

GLE 0707.Inq.5 Communicate scientific understanding using descriptions, explanations, and models.

**Checks for Understanding**

90707.Inq.1 Design and conduct an open-ended scientific investigation to answer a question that includes a control and appropriate variables.

90707.Inq.2 Identify tools and techniques needed to gather, organize, analyze, and interpret data collected from a moderately complex scientific investigation.

90707.Inq.3 Use evidence from a dataset to determine cause and effect relationships that explain a phenomenon.

90707.Inq.4 Review an experimental design to determine possible sources of bias or error, state alternative explanations, and identify questions for further investigation.

90707.Inq.5 Design a method to explain the results of an investigation using descriptions, explanations, or models.

**State Performance Indicators**

SPI 0707.Inq.1 Design a simple experimental procedure with an identified control and appropriate variables.

SPI 0707.Inq.2 Select tools and procedures needed to conduct a moderately complex experiment.

SPI 0707.Inq.3 Interpret and translate data in a table, graph, or diagram.

SPI 0707.Inq.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence.

SPI 0707.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error.

## Grade 6: TN Science Standards

### *The Process would be best utilized with STANDARD 2: Interdependence unit*

**Grade Level Expectations**

GLE 0607.Inq.1 Design and conduct open-ended scientific investigations.

GLE 0607.Inq.2 Use appropriate tools and techniques to gather, organize, analyze, and interpret data.

GLE 0607.Inq.3 Synthesize information to determine cause and effect relationships between evidence and explanations.

GLE 0607.Inq.4 Recognize possible sources of bias and error, alternative explanations, and questions for further exploration.

GLE 0607.Inq.5 Communicate scientific understanding using descriptions, explanations, and models.

**Checks for Understanding**

90607.Inq.1 Design and conduct an open-ended scientific investigation to answer a question that includes a control and appropriate variables.

90607.Inq.2 Identify tools and techniques needed to gather, organize, analyze, and interpret data collected from a moderately complex scientific investigation.

90607.Inq.3 Use evidence from a dataset to determine cause and effect relationships that explain a phenomenon.

90607.Inq.4 Review an experimental design to determine possible sources of bias or error, state alternative explanations, and identify questions for further investigation.

90607.Inq.5 Design a method to explain the results of an investigation using descriptions, explanations, or models.

**State Performance Indicators**

SPI 0607.Inq.1 Design a simple experimental procedure with an identified control and appropriate variables.

SPI 0607.Inq.2 Select tools and procedures needed to conduct a moderately complex experiment.

SPI 0607.Inq.3 Interpret and translate data in a table, graph, or diagram.

SPI 0607.Inq.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence.

SPI 0607.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error.