

## Report Profile Report

04-Apr-02

# Sunshine State 6-8 Math-science

## Language Arts

Reading Standards 1-2,

1-2,

Viewing, Speaking, Standards 1-3,

Writing Standards

Listening,

Language Standards 1-2

- L2 M71.00 V02 Follows written instructions to complete a crossword.
- L2 M71.10 V03 Follows instructions to load a satellite image.
- L2 M71.20 V02 Interprets a brief to design a bridge.
- L2 M71.20 V02 Follows a construction brief.
- L2 M71.30 V03 Follows instructions to open sample CAD files.
- L2 M71.30 V03 Follows a design brief to draw a mechanical component.
- L2 M71.30 V03 Interprets text, instructions, tables and diagrams.
- L2 M71.30 V03 Writes a report on Computer Aided Design.
- L2 M71.30 V03 Maintains and organizes a record of work.
- L2 M71.30 V03 Demonstrates the correct usage of the rules regarding sentence construction.
- L2 M71.40 V03 Interprets instructions for a specific task.
- L2 M71.40 V03 Interprets technical data.
- L2 M71.40 V03 Writes a report on Basic Electricity.
- L2 M71.40 V03 Maintains and organizes a record of work.
- L2 M71.40 V03 Demonstrates the correct usage of the rules regarding sentence construction.
- L2 M71.50 V02 Follows instructions to correctly operate the track power switch.
- L2 M71.50 V02 Interprets written words from a short piece of text relating to the Design Loop.
- L2 M71.50 V02 Writes a report on Research and Design.
- L2 M71.60 V03 Interprets text, instructions, tables and diagrams.
- L2 M71.60 V03 Makes a presentation to a group on Health Management.
- L2 M71.60 V03 Writes a report on Health Management.
- L2 M71.70 V02 Interprets data from a Temperature, Pulse and Respiration chart.
- L2 M71.70 V02 Follows written instructions to correctly order a sequence of events.
- L2 M71.70 V02 Reads information from graphs and tables.
- L2 M71.70 V02 Writes a report on Biomedical Technology.
- L2 M71.70 V02 Makes a presentation to a group on Biomedical Technology.
- L2 M71.80 V02 Writes a report on Aerodynamics Technology.
- L2 M71.80 V02 Makes a presentation to a group on Aerodynamics Technology.
- L2 M71.90 V03 Makes a presentation to a group on Aerodynamics Technology.

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- L2 M71.90 V03 Writes a report on Space Technology.
- L2 M71.90 V03 Makes a presentation to a group on Space Technology.
- L2 M71.00 V03 Follows instructions to set-up a microwave communication link.
- L2 M71.00 V03 Writes a report on Electronic Communications.
- L2 M71.00 V03 Makes a presentation to a group on Electronic Communications.
- L2 M71.10 V04 Obtains technical information about wave files from various sources
- L2 M71.10 V04 Follows instructions to edit recorded files.
- L2 M71.10 V04 Writes a report on Digital Sound Technology.
- L2 M71.10 V04 Makes a presentation to a group on Digital Sound Technology.
- L2 M71.20 V04 Reads text in software and on paper.
- L2 M71.20 V04 Uses a simple word processor to read and write information to disk.
- L2 M71.20 V04 Interprets written words.
- L2 M71.20 V04 Writes a report on Computer Applications.
- L2 M71.20 V04 Makes a presentation to a group on Computer Applications.
- L2 M71.30 V03 Identifies copy errors on a document.
- L2 M71.30 V03 Extracts technical information from research material.
- L2 M71.30 V03 Identifies and corrects errors in a document.
- L2 M71.30 V03 Writes a report on Computer Aided Publishing.
- L2 M71.30 V03 Makes a presentation to a group on Computer Aided Publishing.
- L2 M71.40 V04 Follows written instructions to discover the degree of base rotation of a model robot.
- L2 M71.40 V04 Interprets information from robot sequence diagrams.
- L2 M71.40 V04 Interprets written instructions to operate a robot.
- L2 M71.40 V04 Writes a report on Robotics and Automation.
- L2 M71.40 V04 Makes a presentation to a group on Robotics and Automation.
- L2 M71.50 V01 Writes a report on CNC Technology.
- L2 M71.50 V01 Makes a presentation to a group on CNC Technology.
- L2 M71.60 V03 Interprets text, instructions, tables and diagrams.
- L2 M71.60 V03 Writes a report on Mechanisms.
- L2 M71.60 V03 Makes a presentation to a group on Mechanisms.
- L2 M71.70 V04 Interprets written words describing pneumatic principles.
- L2 M71.70 V04 Uses symbols to draw a pneumatic circuit diagram.
- L2 M71.70 V04 Uses symbols to draw a pneumatic circuit diagram.
- L2 M71.70 V04 Interprets written words describing pneumatic principles.
- L2 M71.70 V04 Writes a report on Pneumatics.
- L2 M71.70 V04 Makes a presentation to a group on Pneumatics.
- L2 M71.80 V03 Interprets text, instructions, tables and diagrams.
- L2 M71.80 V03 Writes a report on Hydraulics.
- L2 M71.80 V03 Makes a presentation to a group on Hydraulics.
- L2 M71.90 V03 Follows instructions to operate a conveyor belt.
- L2 M71.90 V03 Reads a diagram showing an input-output sequence for a manual control task.

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- L2 M71.90 V03 Uses a table to identify actuators on an Industrial Control Work-Cell.
- L2 M71.90 V03 Follows instructions to open and run a PLC program.
- L2 M71.90 V03 Reads a diagram showing an input-output sequence for a computer control task.
- L2 M71.90 V03 Uses diagrams to identify logic gate symbols.
- L2 M71.90 V03 Identifies details of a program from a design brief.
- L2 M71.90 V03 Writes a report on Industrial Control Technology.
- L2 M71.90 V03 makes a presentation to a group on Industrial Control Technology.
- L2 M71.00 V03 Interprets text-describing milestones in the history of animation.
- L2 M71.00 V03 Interprets from a piece of text when tweening occurs in animation.
- L2 M71.00 V03 Interprets text describing various methods of animation.
- L2 M71.00 V03 Interprets text describing a theme for an animation.
- L2 M71.00 V03 Interprets text stating the problem of animating two objects on the same layer.
- L2 M71.00 V03 Interprets text and diagrams showing the affect of light source positions on an object.
- L2 M71.00 V03 Interprets text describing the effects of gravity, stretch and squash in animation.
- L2 M71.00 V03 Interprets text describing the effects of follow through in animation.
- L2 M71.00 V03 Interprets from a piece of text the use of x-ray vision.
- L2 M71.00 V03 Interprets the position of a shape in an animation from a piece of text.
- L2 M71.00 V03 Writes a report on Graphics and Animation.
- L2 M71.00 V03 Makes a presentation to a group on Graphics and Animation.
- L2 M71.10 V02 Interprets video system diagrams showing signal flow.
- L2 M71.10 V02 Writes a script and storyboard for a video.
- L2 M71.10 V02 Writes a video script.
- L2 M71.20 V05 Interprets a diagram of linked slides.
- L2 M71.20 V05 Enter and formats text in a diary slide.
- L2 M71.20 V05 Interprets screen layout and instructions in a diagram.
- L2 M71.30 V02 Interprets text from a book relating to the application of electronics technology.
- L2 M71.30 V02 Interprets diagrams in software programs relating to electronic components and systems.
- L2 M71.30 V02 Identifies Input, Process, Output and Feedback devices from a diagram.
- L2 M71.30 V02 Identifies a complete circuit path from a diagram of a breadboard.
- L2 M71.30 V02 Interprets electrical diagrams showing different connections for a multimeter in a circuit.
- L2 M71.30 V02 Interprets text, instructions and diagrams.
- L2 M71.30 V02 Uses an accurate technical vocabulary to describe electronic devices and circuits.
- L2 M71.30 V02 Writes a report on Electronics Technology.
- L2 M71.30 V02 Makes a presentation to a group on Electronics Technology.
- L2 M71.40 V01 Interprets information from reference material.
- L2 M71.40 V01 Extracts information from text related to search and display functions in an encyclopedia.
- L2 M71.40 V01 Searches an encyclopedia to find appropriate information relating to an unfamiliar subject.
- L2 M71.40 V01 Edits and sorts information in a document.
- L2 M71.40 V01 Incorporates text and graphics into a document.

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- L2 M71.50 V01 Follows instructions to select a sample of material.
- L2 M71.50 V01 Uses a diagram to locate input parts on a thermoplastic molder.
- L2 M71.50 V01 Follows instructions to run a simulated hardness test on a computer.
- L2 M71.50 V01 Selects a secondary material from a table.
- L2 M71.50 V01 Follows written instructions to run a simulated melting point test on a computer.
- L2 M71.50 V01 Interprets a diagram of a sliding door system to calculate extrusion lengths.
- L2 M71.50 V01 Follows written instructions to run a simulated density test on a computer.
- L2 M71.50 V01 Uses a diagram to locate process parts of a thermoplastic molder.
- L2 M71.50 V01 Extracts material information from a table to make a tabletop game.
- L2 M71.50 V01 Extracts part information from a diagram to make a tabletop game.
- L2 M71.50 V01 Interprets text, instructions, tables and diagrams.
- L2 M71.50 V01 Extracts information about secondary materials from a table.
- L2 M71.50 V01 Writes a report on Materials and Processes.
- L2 M71.50 V01 Makes a presentation to a group on Materials and Processes.
- L2 M71.70 V01 Identifies from text an application and the meaning of GPS.
- L2 M71.70 V01 Interprets text of famous explorers.
- L2 M71.70 V01 Uses an accurate technical vocabulary to identify GPS & Navigation terms.
- L2 M71.70 V01 Writes a report on Navigation and GPS.
- L2 M71.70 V01 Makes a presentation to a group on Navigation and GPS.
- L2 M71.80 V01 Identifies and names files by following written instructions.
- L2 M71.80 V01 Identifies the parts of a camera from a labeled diagram.
- L2 M71.80 V01 Writes a report on Digital Photography.
- L2 M71.80 V01 Makes a presentation to a group on Digital Photography.
- L2 M71.90 V01 Interprets text describing the design process of a car.
- L2 M71.90 V01 Writes a report on Automotive Technology.
- L2 M71.90 V01 Makes a presentation to a group on Automotive Technology.
- L2 M71.00 V01 Creates a blank screen by following written instructions.
- L2 M71.00 V01 Edits source footage scenes by following written instructions.
- L2 M71.00 V01 Interprets a video shooting script.
- L2 M71.00 V01 Interprets a video storyboard.

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## Mathematics

**Standard 1: Understand the different ways numbers are represented and used in the Real world.**

**Standard 2: Understand number systems.**

**Standard 3: Understand the effects of operations on numbers and the relationship Among these operations select appropriate operations, and compute for Problem solving.**

**Standard 4: Use estimation in problem solving and compilation.**

**Standard 5: Understands and applies theories related to numbers.**

L2 M71.00 V02 Calculates the speed in RPM of a motor.

L2 M71.00 V02 Calculates 95% of 800.

L2 M71.00 V02 Calculates  $1/60$  of 360.

L2 M71.00 V02 Works with algebra to convert watts into kilowatts.

L2 M71.00 V02 Calculates percentages.

L2 M71.00 V02 Calculates the power output of a single generator.

L2 M71.00 V02 Calculates the average speed of a body.

L2 M71.10 V03 Uses information from a graph to calculate temperature readings.

L2 M71.10 V03 Uses information from a graph to calculate instantaneous and average rainfall.

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- L2 M71.10 V03 Calculates the distance of a thunderstorm, by counting seconds.
- L2 M71.20 V02 Calculates angles in structural shapes.
- L2 M71.20 V02 Calculates the circumference of a circle.
- L2 M71.20 V02 Calculates a load on a bridge.
- L2 M71.20 V02 Calculates insulation efficiency.
- L2 M71.20 V02 Calculates the averages of building heights and areas.
- L2 M71.20 V02 Calculates a load on a suspension bridge.
- L2 M71.20 V02 Quotes the algebraic formula for calculating stress.
- L2 M71.20 V02 Calculates angles in structures.
- L2 M71.20 V02 Recognizes geometric shapes in structures.
- L2 M71.30 V03 Calculates a value working with negative numbers.
- L2 M71.30 V03 Identifies the properties of a polygon.
- L2 M71.30 V03 Calculates the difference between the radii of two circles.
- L2 M71.30 V03 Calculates the diameter of a circle.
- L2 M71.30 V03 Calculates the height of a component part.
- L2 M71.30 V03 Calculates the angle between posts arranged in a circle.
- L2 M71.30 V03 Solves math problems.
- L2 M71.40 V03 Calculates the total of several whole numbers.
- L2 M71.40 V03 Solves a problem involving ratios.
- L2 M71.40 V03 Calculates an unknown from an algebraic expression.
- L2 M71.40 V03 Solves math problems using substitution into Ohm's Law expression.
- L2 M71.40 V03 Calculates percentage from a whole number ratio.
- L2 M71.40 V03 Calculates total by addition of decimal numbers.
- L2 M71.40 V03 Solves math problems involving fractions.
- L2 M71.40 V03 Explains weaknesses in a problem solution.
- L2 M71.40 V03 Solves math problems in Basic Electricity.
- L2 M71.50 V02 Calculates velocity from given values.
- L2 M71.50 V02 Calculates velocity from a table.
- L2 M71.50 V02 Works with units of measure of velocity.
- L2 M71.50 V02 Calculates speed using the formula  $d \div t$ .
- L2 M71.60 V03 Calculates the cost of a recipe.
- L2 M71.60 V03 Solves math problems relating to health management.
- L2 M71.70 V02 Calculates the percentage loss in body weight of an infant.
- L2 M71.70 V02 Measures distance between lines to show that they are parallel.
- L2 M71.70 V02 Calculates quantity from percentages.
- L2 M71.70 V02 Converts infant weight from kg to lbs.
- L2 M71.80 V02 Interprets meter readings using a graph.
- L2 M71.80 V02 Calculates facing area of shapes.
- L2 M71.80 V02 Plots a graph to convert drag meter readings into grams.
- L2 M71.80 V02 Calculates value of lift meter reading.
- L2 M71.90 V03 Measures the value of an angle using a protractor.

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- L2 M71.90 V03S elects values from a tangent table to determine height of rockets in flight.
- L2 M71.90 V03 Applies formula for calculating velocity to a simulated space mission.
- L2 M71.90 V03 Applies velocity formula to data from a model rocket launch.
- L2 M71.90 V03 Applies height formula to data from a model rocket launch.
- L2 M71.90 V03 Calculates average speed of a rocket in flight.
- L2 M71.90 V03 Practices application of formula for calculating velocity.
- L2 M71.90 V03 Practices application of formula for calculating height.
- L2 M71.90 V03 Solves math problems for space technology.
- L2 M71.00 V03 Calculates the obstructed signal percentage for a microwave link.
- L2 M71.00 V03 Calculates the time delay of a long distance telephone call.
- L2 M71.00 V03 Calculates the change in angle from one transmitter position to another.
- L2 M71.00 V03 Calculates the cost of a communication link.
- L2 M71.00 V03 Performs calculations to evaluate communication systems.
- L2 M71.10 V04 Completes calculations using a voice-activated calculator.
- L2 M71.10 V04 Calculates the number of combination of access codes to open a virtual safe.
- L2 M71.20 V04 Calculates storage and rotational speed for a computer disk drive.
- L2 M71.20 V04 Calculates areas of squares and rectangles used by printers.
- L2 M71.20 V04 Express as a fraction the number of characters created in font set.
- L2 M71.20 V04 Applies module math to determine remainders for a programming exercise.
- L2 M71.20 V04 Uses percentages to calculate the number of illuminated LEDs.
- L2 M71.20 V04 Solves math problems in computer applications.
- L2 M71.30 V03 Solves math problems in computer aided publishing.
- L2 M71.40 V04 Calculates output of a robot using basic multiplication.
- L2 M71.40 V04 Calculates cost of robot elements using basic addition and subtraction.
- L2 M71.40 V04 Calculates the volume of a robot workspace using fractions.
- L2 M71.40 V04 Calculates number of divisions in a sheet of metal using fractions.
- L2 M71.40 V04 Calculates robot position coordinates using algebra.
- L2 M71.40 V04 Calculates the number of cars coming off a production line using basic addition.
- L2 M71.40 V04 Calculates the number of items on a production line using basic multiplication.
- L2 M71.40 V04 Calculates the area of a factory floor.
- L2 M71.40 V04 Calculates area and volume using units of measure.
- L2 M71.40 V04 Calculates the production figures of a robot using basic multiplication.
- L2 M71.40 V04 Solves math problems in Robotics and Automation.
- L2 M71.50 V01 Calculates the number of passes needed to cut a piece of aluminum on a lathe.
- L2 M71.60 V03 Performs gear ratio calculations.
- L2 M71.60 V03 Calculates ratios in a belt driven system.
- L2 M71.60 V03 Uses formula to calculate mechanical advantage.
- L2 M71.60 V03 Uses ratios to calculate mechanical advantage.
- L2 M71.60 V03 Solves math problems for mechanical systems.

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- L2 M71.70 V04 Calculates bore sizes of pneumatic cylinders.
- L2 M71.70 V04 Calculates cylinder sizes for pneumatic systems.
- L2 M71.70 V04 Solves math problems for pneumatic applications.
- L2 M71.80 V03 Calculates areas of simple shapes.
- L2 M71.80 V03 Calculates the area of a piston in a hydraulic cylinder.
- L2 M71.80 V03 Solves math problems for hydraulic systems.
- L2 M71.90 V03 Calculates the average time for a bobbin to travel along a conveyor.
- L2 M71.90 V03 Calculates the time, in tenths of a second, that a bobbin interrupts a sensor beam.
- L2 M71.90 V03 Converts a time period in tenths of a second.
- L2 M71.00 V03 Calculates the total number of frames contained in 4 animations.
- L2 M71.10 V02 Calculates the final length of a video film.
- L2 M71.30 V02 Solves math problems for electronic systems.
- L2 M71.50 V01 Compares fixed and variable costs for manufacturing.
- L2 M71.50 V01 Calculates the number of parts needed for a tabletop game.
- L2 M71.50 V01 Solves math problems.
- L2 M71.60 V01 Uses a calculator program to solve mathematical problems.
- L2 M71.60 V01 Adds and subtracts numbers using a calculator program.
- L2 M71.60 V01 Uses formulae to work out distance and speed.
- L2 M71.60 V01 Uses formulae to calculate speed.
- L2 M71.70 V01 Uses a simple alphanumeric grid reference system to identify location.
- L2 M71.70 V01 Uses a four-figure grid reference system to identify location.
- L2 M71.70 V01 Calculates distance between features on a map using a scale.
- L2 M71.70 V01 States the number of degrees in a circle.
- L2 M71.70 V01 Calculates the difference in degrees of latitude and longitude between two locations.
- L2 M71.70 V01 Calculates the difference in seconds of latitude and longitude between two locations.
- L2 M71.70 V01 Reads latitude and longitude in degrees, minutes and seconds on a GPS receiver.
- L2 M71.70 V01 Calculates journey time from average speed and distance.
- L2 M71.70 V01 Calculates the sum of three angles.
- L2 M71.70 V01 Rounds a number to the nearest 100.
- L2 M71.70 V01 Uses standard notation to specify a scale.
- L2 M71.90 V01 Calculates the speed of a road vehicle.
- L2 M71.90 V01 Calculates the fuel consumption of a road vehicle.
- L2 M71.90 V01 Calculates the voltage of a battery using multiplication.

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## Measurement

**Standard 1: The student measures quantities in the real world and uses the Measurement to solve problems.**

**Standard 2: Student compares, contrasts, and converts within systems of Measurement.**

**Standard 3: Student estimates measurements in real world problem situations.**

**Standard 4: Student select and uses appropriate units and instruments for Measurement to achieve the degree of precision and accuracy required in Real world situations.**

- L2 M71.10 V03 Translates weather data into a fraction.
- L2 M71.10 V03 Identifies temperature estimate from a graph.
- L2 M71.10 V03 Measures localized weather conditions.
- L2 M71.40 V03 Measures d.c. Voltage.
- L2 M71.40 V03 Measures d.c. Current.
- L2 M71.40 V03 Measures resistance.
- L2 M71.40 V03 Measures d.c. Current in a circuit containing a variable resistor.
- L2 M71.40 V03 Measures resistor values, using a multimeter.
- L2 M71.40 V03 Measures quantities in a d.c. Circuit, using a digital multimeter.
- L2 M71.50 V02 Measures the minimum force required to move a vehicle.
- L2 M71.50 V02 Works with units of measure of velocity.
- L2 M71.50 V02 Creates tables, graphs and flowcharts when conducting research.
- L2 M71.50 V02 States the maximum-recorded value from a graph.
- L2 M71.60 V03 Measures pulse and blood pressure.
- L2 M71.70 V02 Plots weight and age data for infants on a growth chart.
- L2 M71.70 V02 Interprets data from growth charts.
- L2 M71.70 V02 Uses data to create a growth chart.
- L2 M71.70 V02 Measures distance between lines to show that they are parallel.
- L2 M71.70 V02 Measures temperature, pulse and respiration rates.
- L2 M71.70 V02 Interprets basic information about vital signs.
- L2 M71.70 V02 States how to use a thermometer.
- L2 M71.70 V02 Takes temperature readings using traditional and hi-tech thermometers.
- L2 M71.70 V02 Completes a Temperature, Pulse and Respiration chart.
- L2 M71.70 V02 Uses a Temperature, Pulse and Respiration chart to recognize the health state of patient.

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- L2 M71.70 V02 Interprets data from a Temperature, Pulse and Respiration chart.
- L2 M71.70 V02 Converts infant weight from kg to lbs.
- L2 M71.80 V02 Interprets meter readings using a graph.
- L2 M71.80 V02 Uses the wind tunnel to measure drag.
- L2 M71.80 V02 Calculates the effect of adjusting the drag range on meter readings.
- L2 M71.80 V02 Plots a graph to convert drag meter readings into grams.
- L2 M71.80 V02 Measures chord length of wing section.
- L2 M71.80 V02 States vertical angle measured using protractor and plumb line.
- L2 M71.80 V02 Measures the effect of increasing the angle of attack.
- L2 M71.80 V02 Calibrates a wind tunnel lift meter.
- L2 M71.80 V02 Measures lift force created by a flat wing section.
- L2 M71.80 V02 Calculates the effect of adjusting the lift/drag range on meter readings.
- L2 M71.80 V02 Calculates value of lift meter reading.
- L2 M71.80 V02 Measures lift readings to compare different wing types.
- L2 M71.80 V02 Converts between different measuring systems.
- L2 M71.80 V02 Measures angles of wings in airflow.
- L2 M71.90 V03 Measures the value of an angle using a protractor.
- L2 M71.10 V04 Evaluates storage space required for a recorded sound file.
- L2 M71.40 V04 Predicts robot movement from a program sequence.
- L2 M71.50 V01 States reading from dial calipers.
- L2 M71.50 V01 Selects coordinates of a point for a lathe program from a table.
- L2 M71.60 V03 Performs calculations and makes inferences about gear train speeds.
- L2 M71.60 V03 Interprets force diagrams.
- L2 M71.60 V03 Measures force.
- L2 M71.60 V03 Estimates distance.
- L2 M71.60 V03 Interprets experimental observations.
- L2 M71.60 V03 Measures forces on an inclined plane.
- L2 M71.60 V03 Solves problems involving gear ratios.
- L2 M71.70 V04 Compares the sizes of dust particles able to pass through a filter element.
- L2 M71.70 V04 Performs force-pressure-area evaluation on cylinder applications.
- L2 M71.90 V03 Investigates the use of counters in ladder logic programs.
- L2 M71.90 V03 Investigates the use of timers and timed sequences in ladder logic programs.
- L2 M71.90 V03 Completes a ladder logic program used to identify object widths.
- L2 M71.90 V03 Uses ladder logic counters and timers to identify object widths.
- L2 M71.30 V02 States the effects of connecting a multimeter into a circuit.
- L2 M71.70 V01 Uses a simple alphanumeric grid reference system to identify location.
- L2 M71.70 V01 Uses a four-figure grid reference system to identify location.
- L2 M71.70 V01 Uses a four-figure grid reference system to locate features on a simple map.

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- L2 M71.70 V01I identifies features on a map from given four figure grid references.
- L2 M71.70 V01 Calculates distance between features on a map using a scale.
- L2 M71.70 V01 Estimates journey time between features on a map.
- L2 M71.70 V01 Translates the four cardinal points (N, S, E, W) into degrees.
- L2 M71.70 V01 Translates halfway points (NE, SE, SW, NW) into degrees.
- L2 M71.70 V01 Measures distance using a map scale.
- L2 M71.70 V01 States suitable applications for maps with various scales.
- L2 M71.70 V01 Recognizes that map detail is related to the scale used.
- L2 M71.70 V01 Converts degrees into minutes and minutes into seconds.
- L2 M71.70 V01 Reads latitude and longitude in degrees, minutes and seconds on a GPS receiver.
- L2 M71.70 V01 States the number of degrees in a circle around the Earth.
- L2 M71.70 V01 Predicts four figure grid references from known coordinates.
- L2 M71.70 V01 Predicts latitude and longitude relative to known locations.
- L2 M71.70 V01 Reads latitude and longitude in degrees, minutes and seconds on a GPS receiver.
- L2 M71.70 V01 Compares predicted with actual latitude and longitude GPS readings.
- L2 M71.70 V01 Uses information from GPS systems accurately.
- L2 M71.70 V01 Uses grid references to identify points on a map.
- L2 M71.70 V01 Uses distance and coordinate data to help plan routes.
- L2 M71.70 V01 Uses scales to relate distances on maps.
- L2 M71.70 V01 Uses simple grid references to identify points on a map.

## Geometry And spatial Sense

**Standard 1: Student describes, draws, identifies, and analyzes two and three Dimensional shapes.**

**Standard 2: Student visualizes and illustrates ways in which shapes can be combined, Subdivided, and changed.**

**Standard 3: Students uses coordinate geometry to locate objects in both two and three Dimensions and to describe objects algebraically.**

- L2 M71.20 V02Calculates angles in structural shapes.
- L2 M71.20 V02 Identifies structural shapes.
- L2 M71.20 V02 Relates structural shape and strength.
- L2 M71.20 V02 Plots and reads a graph of load against beam deflection.
- L2 M71.20 V02 Recognizes geometric shapes in structures.
- L2 M71.20 V02 Calculates angles in structures.

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- L2 M71.20 V02 Quotes the algebraic formula for calculating stress.
- L2 M71.30 V03 Draws the top view of a component part.
- L2 M71.30 V03 Determines the center point of an object.
- L2 M71.30 V03 Draws the front view of a component part.
- L2 M71.30 V03 Explores the principles of orthographic projection.
- L2 M71.30 V03 Investigates three-dimensional coordinate systems.
- L2 M71.30 V03 Identifies how to draw a three-dimensional object by adding elevation.
- L2 M71.30 V03 Identifies the properties of a polygon.
- L2 M71.30 V03 Draws a three-dimensional mechanical component.
- L2 M71.30 V03 Calculates the difference between the radii of two circles.
- L2 M71.30 V03 Draws an orthographic projection of a 3D model.
- L2 M71.30 V03 Examines the use of CAD in architectural drafting.
- L2 M71.30 V03 Constructs CAD images using coordinate systems.
- L2 M71.30 V03 Uses CAD to create 3D models.
- L2 M71.30 V03 Translates 'real world' information into working drawings.
- L2 M71.30 V03 Identifies some applications, which require a grid layout.
- L2 M71.30 V03 Uses resizing tools and design tools to alter a graphic.
- L2 M71.00 V03 Creates animations to change the shape of objects using shape tweening.
- L2 M71.00 V03 Creates an animation of a bouncing ball using deformation techniques.
- L2 M71.00 V03 Identifies the name of a graphic symbol contained in an animation library.
- L2 M71.00 V03 Calculates the total number of frames contained in 4 animations.
- L2 M71.20 V05 Copies and positions graphic objects.
- L2 M71.20 V05 Creates a transition to move from one slide to another.
- L2 M71.20 V05 Describes types of object animation effects.
- L2 M71.70 V01 Uses a simple alphanumeric grid reference system to identify location.
- L2 M71.70 V01 Identifies direction of travel relative to the cardinal points of a compass.
- L2 M71.70 V01 Uses a four-figure grid reference system to identify location.

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## Algebraic Thinking

**Standard 1: Student describes, analyzes, and generalizes a wide variety of patterns, Relationships and functions.**

**Standard 2: Student uses expressions, equations, inequalities, graphs, and formulas to Represent and interpret situations.**

- L2 M71.00 V02 Works with algebra to convert watts into kilowatts.
- L2 M71.20 V02 Quotes the algebraic formula for calculating stress.
- L2 M71.20 V02 Reads characteristics from load deflection graphs.

## Data Analysis and Probability

**Standard 1: Student understands and uses the tools of data analysis for managing Information.**

**Standard 2: Student identifies patterns and makes predictions from an orderly Display of data using concepts of probability and statistics.**

**Standard 3: Student uses statistical methods to make inferences and valid Arguments about real world situations.**

- L2 M71.00 V02 Interprets data from a color reading chart.
- L2 M71.00 V02 States that energy can be transformed.
- L2 M71.00 V02 Compares results in a table and identifies the highest wind speeds.
- L2 M71.00 V02 Analyzes data to select the most appropriate technology for a given problem.
- L2 M71.00 V02 Investigates the greenhouse effect using experimental models.
- L2 M71.10 V03 Records readings from weather sensors.
- L2 M71.10 V03 Identifies methods for gathering weather data.
- L2 M71.10 V03 Extracts a temperature reading from a table of weather data.
- L2 M71.10 V03 Uses information from a graph to calculate temperature readings.
- L2 M71.10 V03 Extracts data from an air to ground lightning strike map.
- L2 M71.10 V03 Uses information from a graph to calculate instantaneous and average rainfall.
- L2 M71.10 V03 Translates weather data into a fraction.
- L2 M71.10 V03 Identifies temperature estimate from a graph.
- L2 M71.10 V03 Predicts weather conditions for cities in the path of a hurricane.
- L2 M71.20 V02 Plots and reads a graph of load against beam deflection.

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- L2 M71.70 V02 Plots weight and age data for infants on a growth chart.
- L2 M71.70 V02 Interprets data from growth charts.
- L2 M71.70 V02 Uses data to create a growth chart.
- L2 M71.70 V02 Interprets data from a Temperature, Pulse and Respiration chart.
- L2 M71.80 V02 Interprets meter readings using a graph.
- L2 M71.80 V02 Plots a graph to convert drag meter readings into grams.
- L2 M71.90 V03 Selects information about the stages of model rocket flight from a table.
- L2 M71.90 V03 Applies height formula to data from a model rocket launch.
- L2 M71.90 V03 Applies velocity formula to data from a model rocket launch.
- L2 M71.90 V03 Applies formula for calculating velocity to a simulated space mission.
- L2 M71.90 V03 Selects values from a tangent table to determine height of rockets in flight.
- L2 M71.90 V03 Selects values from a tangent table.
- L2 M71.00 V02 Maintains and organizes a record of work.
- L2 M71.50 V02 Creates tables, graphs and flowcharts when conducting research.

## Science The Nature of Matter

**Standard 1: Student understand that all matter has observable measurable Properties.**

**Standard 2: Student understands the basic principles of atomic theory.**

- L2 M71.00 V02 Identifies the correct energy flow in a nuclear power plant.
- L2 M71.00 V02 States how a greenhouse creates a temperature difference.
- L2 M71.00 V02 States that energy can be transformed.
- L2 M71.00 V02 States that wind energy can be used to generate electricity.
- L2 M71.00 V02 States that water can be used to generate electricity.
- L2 M71.00 V02 Identifies the processes involved when using nuclear energy to generate electricity.
- L2 M71.00 V02 Identifies the possible dangers of using nuclear energy.
- L2 M71.00 V02 Identifies a source of Kinetic energy.
- L2 M71.10 V03 Identifies the transitional states of water.
- L2 M71.10 V03 Examines the basic properties of electrical charges.
- L2 M71.10 V03 Identifies characteristics of the environment.
- L2 M71.20 V02 Identifies the types of forces operating in structures.
- L2 M71.20 V02 Examines material properties.
- L2 M71.20 V02 Relates structural shape and strength.
- L2 M71.20 V02 Identifies forces applied to bridge construction.
- L2 M71.40 V03 States the features of static electricity.
- L2 M71.40 V03 Identifies that charges can be positive and negative.

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- L2 M71.70 V04 Compares the sizes of dust particles able to pass through a filter element.
- L2 M71.00 V02 Defines alternative energy.
- L2 M71.50 V01 Uses computer simulation to compare the density of metals and plastics.
- L2 M71.80 V03 Compares the compression of gases and liquids.
- L2 M71.80 V03 Identifies compression of gases, liquids and solids using the molecular structure model.
- L2 M71.90 V03 Investigates the relationship between force and motion.

## Energy

**Standard 1: Student recognizes that energy may be changed in form with varying Efficiency.**

**Standard 2: Student understands the interaction of matter and energy.**

- |               |  |
|---------------|--|
| L2 M71.00 V02 | Indicates that the use of fossil fuels harms the environment.            |
| L2 M71.00 V02 | Defines alternative energy.  |
| L2 M71.00 V02 | States the function of components in a model rocket.                     |
| L2 M71.00 V02 | States that energy can be transformed.                                   |
| L2 M71.00 V02 | Builds and tests a model car powered by solar energy.                    |
| L2 M71.00 V02 | Identifies two transducers used in the solar powered car.                |
| L2 M71.00 V02 | Identifies the device used to convert wind energy to electrical energy.  |
| L2 M71.00 V02 | States that wind energy can be used to generate electricity.             |
| L2 M71.00 V02 | State the purpose of the sub-systems within a hydroelectric power plant. |
| L2 M71.00 V02 | States that water can be used to generate electricity.                   |
| L2 M71.00 V02 | Identifies the possible dangers of using nuclear energy.                 |
| L2 M71.00 V02 | Investigates the greenhouse effect using experimental models.            |
| L2 M71.00 V02 | Identifies substances, which will allow light to pass through.           |
| L2 M71.00 V02 | Identifies factors affecting the price of electricity.                   |
| L2 M71.00 V02 | Identifies jobs provided by the alternative energy industries.           |
| L2 M71.00 V03 | Recognizes the frequency, wavelength and amplitude of waves.             |
| L2 M71.10 V03 | Defines characteristics of the atmosphere.                               |
| L2 M71.10 V03 | Identifies the transitional states of water.                             |
| L2 M71.10 V03 | Describes how thunder and lightning are formed.                          |
| L2 M71.10 V03 | Examines the basic properties of electrical charges.                     |
| L2 M71.60 V03 | Investigates the requirements for a balanced diet.                       |
| L2 M71.60 V03 | Defines the elements of a balanced diet.                                 |
| L2 M71.90 V03 | Examines propulsion systems used with space technology.                  |

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## Force and Motion

**Standard 1: Students understand that types of motion may be described, measured, And predicted.**

**Standard 2: Students understand that the types of forces that act on an object and the effect of that force can be described, measured, and predicted.**

- L2 M71.20 V02 Identifies the types of forces operating in structures.
- L2 M71.20 V02 Calculates a load on a bridge.
- L2 M71.20 V02 Identifies the importance of shape in structures.
- L2 M71.20 V02 Examines material properties.
- L2 M71.20 V02 Uses test equipment to analyze deflection.
- L2 M71.20 V02 Relates structural shape and strength.
- L2 M71.20 V02 Identifies the effect of earthquakes on skyscrapers.
- L2 M71.20 V02 Defines torsion.
- L2 M71.20 V02 Identifies forces applied to bridge construction.
- L2 M71.20 V02 Identifies compression.
- L2 M71.20 V02 Identifies tension.
- L2 M71.40 V03 Identifies the magnitude and direction of the current flow.
- L2 M71.40 V03 States the principle of the electro-magnetic relay.
- L2 M71.50 V02 States the basic principles of magnetic levitation.
- L2 M71.80 V02 Measures lift force created by a flat wing section.
- L2 M71.80 V02 Describes the nature of drag.
- L2 M71.80 V02 Uses the wind tunnel to measure drag.
- L2 M71.80 V02 Describes the effect of down force.
- L2 M71.90 V03 Examines propulsion systems used with space technology.
- L2 M71.90 V03 Examines the forces produced by rocket motors.
- L2 M71.90 V03 Investigates the effect of gravity on mechanical devices.
- L2 M71.90 V03 Examines the influence of gravity on people.
- L2 M71.90 V03 Performs experiments to demonstrate the effects of gravity.
- L2 M71.00 V03 Identifies different types of waves.
- L2 M71.00 V03 Recognizes the frequency, wavelength and amplitude of waves.
- L2 M71.00 V03 Demonstrates the penetration properties of microwaves.
- L2 M71.10 V04 Identifies the characteristics of a high volume low pitch sound.
- L2 M71.60 V03 Identifies speed changes in moving gear trains.
- L2 M71.60 V03 Performs gear ratio calculations.
- L2 M71.60 V03 Assembles and uses a stepped pulley and belt system.
- L2 M71.60 V03 Interprets force diagrams.

## **Report Profile Report**

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### **Sunshine State 6-8 Math-science**

- L2 M71.60 V03 Measures force.
- L2 M71.60 V03 Measures forces on an inclined plane.
- L2 M71.60 V03 Examines force of friction when rolling and sliding loads.
- L2 M71.70 V04 Performs force-pressure-area evaluation on cylinder applications.
- L2 M71.90 V03 Investigates the relationship between force and motion.

### **Processes that shape the earth**

**Standard 1: student recognized that processes in the lithosphere, atmosphere, Hydrosphere, and biosphere interact to shape the earth.**

**Standard 2: Student understand the need for protection of the Natural systems on earth.**

- L2 M71.10 V03 Defines characteristics of the atmosphere.
- L2 M71.10 V03 Investigates the components and links in the water cycle.

### **Earth and Space**

**Standard 1: Student understands the interaction and organization in the solar system And the universe and how it affects life on earth.**

**Standard 2: Student recognizes the vastness of the universe And earths place in it.**

- L2 M71.10 V03 Describes how satellites are used to monitor the weather.
- L2 M71.10 V03 Tracks polar and geostationary satellites.
- L2 M71.10 V03 Identifies a polar orbiting satellite.
- L2 M71.10 V03 Outlines how satellite technology is used to gather weather data.
- L2 M71.70 V01 Uses a multimedia Atlas to identify a global position.
- L2 M71.70 V01 Identifies from text an application and the meaning of GPS.

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## Processes of life

**Standard 1: student describes patterns of structures and function in living things.**

**Standard 2: Student understands the process and importance of genetic diversity**

- L2 M77.20 V01 Identifies the characteristics of living things.
- L2 M77.20 V01 Identifies the factors, which control seed germination.
- L2 M77.20 V01 Explores various methods used to promote plant growth.
- L2 M71.70 V02 Plots weight and age data for infants on a growth chart.
- L2 M71.70 V02 Interprets data from growth charts.
- L2 M71.70 V02 Uses data to create a growth chart.
- L2 M71.70 V02 Calculates the percentage loss in body weight of an infant.
- L2 M71.70 V02 Compares healthy and diseased cells using microscopic examination.
- L2 M71.70 V02 Describes the structure of a cell.
- L2 M71.70 V02 Selects parts from a diagram of a cell.
- L2 M71.70 V02 Describes the structure of a human cell.
- L2 M77.20 V01 Identifies the parts of a plant and their function.
- L2 M77.20 V01 Identifies stages in the life cycle of a plant.
- L2 M77.20 V01 Explores the process of photosynthesis in plants.
- L2 M77.20 V01 Classifies living things.

## How living thing interact with their environment

**Standard 1: Student understands the competitive, independent, cyclic nature of living Things in the environment.**

**Standard 2: Student understands the consequences of using limited natural resources.**

- L2 M71.70 V02 Compares healthy and diseased cells using microscopic examination.
- L2 M77.20 V01 Identifies the characteristics of living things.
- L2 M77.20 V01 Identifies that objects can be classified into groups.
- L2 M77.20 V01 Classifies living things.
- L2 M77.20 V01 Identifies environments and habitats.
- L2 M77.20 V01 Recognizes how living things can be classified into kingdoms.
- L2 M71.00 V02 Indicates that the use of fossil fuels harms the environment.
- L2 M71.00 V02 Defines alternative energy.
- L2 M71.00 V02 Identifies a major cause of acid rain.
- L2 M71.00 V02 Identifies the problems associated with non-renewable energy resources.

## **Report Profile Report**

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**Sunshine State 6-8 Math-science**

### **The Nature of science**

**Standard 1: Student uses the scientific process and habits of the mind to solve Problems.**

**Standard 2: Students understand that most natural events occur in comprehensible, Consistent patterns.**

**Standard 3: Student understand that science, technology, and society are interwoven And interdependent.**

- L2 M71.00 V02 Maintains and organizes a record of work.
- L2 M71.80 V02 Describes the theory behind wing design.
- L2 M71.90 V03 States scientific principles of importance to space technology.
- L2 M71.00 V02 Compares results in a table and identifies the highest wind speeds.
- L2 M71.10 V03 Defines characteristics of the atmosphere.
- L2 M71.10 V03 Identifies characteristics of the environment.
- L2 M71.10 V03 Predicts weather conditions for cities in the path of a hurricane.
- L2 M71.70 V02 Identifies the properties of the materials used for making denture casts.
- L2 M71.70 V02 Evaluates the importance of different properties of alginate to dentists.
- L2 M71.50 V01 Compares the hardness of materials to find appropriate solutions for product designs.
- L2 M71.50 V01 Selects different woods in a set of sample materials from given descriptions.
- L2 M71.50 V01 Selects different composite materials in a set of sample materials from given descriptions.

