



## **LEVEL THREE**

Discovery Charter School - Teachers, Students, Families, and Community in a Learning Partnership

Family Guide To Total Learning Objectives: Creating Knowledge Through Questions, Projects, Experiences and Problem Solving

## **WELCOME TO LITERACY**

*“Open up the treasure chest  
To see what you will find  
Answers for your questions  
And a fortune for your mind”*

## **METHODOLOGY**

All instruction at the Discovery Charter School focuses on total learning. We feature a blended teaching method that engages students in acquiring knowledge and skills through an extended inquiry and experience based process. Learning is structured around authentic questions, carefully designed projects and targeted learning experiences. Teachers, students and families are fully involved in planning and implementing learning experiences and projects. Our instruction blends the processes of thinking, developing skills and gaining knowledge allowing students to “understand”, “know” and “do”. We support students in learning and practicing skills in problem solving, communication, and self-management. We integrate curriculum areas, thematic instruction, and community issues. Assessment of performance is on content and skills using criteria similar to those in the work world, thus encouraging accountability, goal setting, and improved performance. We focus on meeting the needs of learners with varying skill levels and learning styles and we target individual interests to engage and motivate bored or indifferent students. We highlight the Learning Team Concept focusing on the synergistic power of teachers, students and families working together. We develop Individualized Learning Plans closely aligned with curriculum guidelines, benchmarks, and standards.

## **LOVE OF LEARNING**

- \_\_\_\_\_ understands that each human brain is a powerful learning tool
- \_\_\_\_\_ believes in their ability to learn and expresses excitement about learning
- \_\_\_\_\_ applies the process of asking questions and sharing previous gained information
- \_\_\_\_\_ responds to questions posed by family, teachers, peers and other adults
- \_\_\_\_\_ generates new questions, new problems, new experiences and new projects
- \_\_\_\_\_ identifies areas of interest and curiosity to assist in selecting learning projects.
- \_\_\_\_\_ organizes, records, and shares information using objects, pictures, demonstrations, technology and verbal responses
- \_\_\_\_\_ values personal knowledge skills in light of rapid growth of information base due to technology
- \_\_\_\_\_ understands that their brain is constantly growing and collecting information from all activities and experiences

- \_\_\_\_\_ understands that there are many ways to learn and that different people learn in different ways
- \_\_\_\_\_ identifies personal learning styles, strengths, and preferences
- \_\_\_\_\_ emphasizes expansion of personal learning styles and strengths

### **SOLVING PROBLEMS**

- \_\_\_\_\_ strengthens understandings by reviewing and expanding previous knowledge through research and discussions.
- \_\_\_\_\_ applies previous experience and knowledge to problem solving experiences
- \_\_\_\_\_ explains and verifies results of problem solving experiences through project presentations
- \_\_\_\_\_ continues to apply a variety of strategies when the first strategy proves to be unproductive
- \_\_\_\_\_ identifies a variety of resources and experiences to support the learning and problem solving experiences
- \_\_\_\_\_ develops confidence in the use of technology to assist in solving problems and supporting project presentations
- \_\_\_\_\_ reviews problem solutions, and uses questions to identify new problems and experiences
- \_\_\_\_\_ takes pride in problem solutions and transfers knowledge gained to improve the world around them

---

## ENGLISH - LANGUAGE ARTS - READING

Level three students independently apply their basic literacy skills. Students read, write, and speak, with increasing fluency and accuracy. They combine these skills with effective listening tools to identify learning projects, experiences, community involvement and problem solving applications to make a positive difference in the world around them.

### WORD ANALYSIS

- \_\_\_\_\_ use knowledge of syllables, r-controlled vowels, base words, prefixes, suffixes, compound words, and irregular spelling patterns to determine meaning
- \_\_\_\_\_ use knowledge of phonics and structural elements to read fluently, determine the meaning of unfamiliar words in context, and build comprehension
- \_\_\_\_\_ use knowledge of multiple meaning words, compound words, synonyms, antonyms, and content area words to expand vocabulary
- \_\_\_\_\_ read aloud with a focus on accuracy, expression, and reading rate
- \_\_\_\_\_ apply knowledge of high frequency words to build fluency and comprehension (e.g. beautiful, people)
- \_\_\_\_\_ use dictionaries and glossaries to determine the meanings and other features of unknown words
- \_\_\_\_\_ use patterns and rules to spell correctly
- \_\_\_\_\_ apply alphabetic order to locate words

### READING STRATEGIES

- \_\_\_\_\_ use before-reading strategies appropriate to text and purpose to improve comprehension: preview text, access prior knowledge, build background knowledge, make predictions, determine reading rate
- \_\_\_\_\_ adjust reading rate to suit difficulty and type of text
- \_\_\_\_\_ use self-correcting strategies during reading to gain meaning from text
- \_\_\_\_\_ recall essential points in text while reading
- \_\_\_\_\_ make and revise predictions about text
- \_\_\_\_\_ restate main ideas and recall details in text to organize ideas and information after reading
- \_\_\_\_\_ use after-reading strategies appropriate to text and purpose to record information, synthesize text, and evaluate text
- \_\_\_\_\_ use during-reading strategies to identify ideas and supporting details
- \_\_\_\_\_ use test taking strategies

### LITERARY TEXT

- \_\_\_\_\_ identify how one event may cause another event
- \_\_\_\_\_ describe, make inferences, and draw conclusions about setting, and sequence of events
- \_\_\_\_\_ describe a character's physical and personality traits, and the motivation for their actions
- \_\_\_\_\_ identify and explain the main idea supported by evidence identify lessons learned in reading selections identify simile, metaphor, personification
- \_\_\_\_\_ compare text from different cultures and times

- \_\_\_\_\_ make and revise predictions about a text based on evidence
- \_\_\_\_\_ make connections to self, other text, and/or the world use information from literary text to answer specific questions
- \_\_\_\_\_ read a variety of stories, plays, poetry, and non-fiction selections to demonstrate an active interest in reading
- \_\_\_\_\_ identify words and phrases that reveal tone
- \_\_\_\_\_ identify sound devices in text (e.g. repetition, rhythm, alliteration, and rhyme)

**EXPOSITORY TEXT**

- \_\_\_\_\_ explain the purpose and use of text features (e.g. headings, glossaries, numbers, and text boxes) to aid comprehension
- \_\_\_\_\_ identify and explain the use of bold faced, underlined, italicized, and highlighted words
- \_\_\_\_\_ identify idioms, similes, and personification
- \_\_\_\_\_ describe sequential and/or chronological order
- \_\_\_\_\_ identify a cause and its effect on events and/or relationships
- \_\_\_\_\_ identify a problem and its solution
- \_\_\_\_\_ identify main idea and supporting details in text
- \_\_\_\_\_ compare text from different cultures and time periods
- \_\_\_\_\_ make connections to self, other texts, and/or the world
- \_\_\_\_\_ make and revise predictions
- \_\_\_\_\_ read and follow multi-step directions to complete tasks
- \_\_\_\_\_ distinguish between fact and opinion
- \_\_\_\_\_ identify sound devices in text (e.g. repetition, rhythm, alliteration, rhyme)

**EFFECTIVE WRITING**

- \_\_\_\_\_ use prewriting strategies such as brainstorming and discussion to generate and organize ideas for future writing
- \_\_\_\_\_ draft a variety of compositions with introductions, supporting details and a conclusion that address audience and purpose
- \_\_\_\_\_ revise drafts for audience, purpose, sentence variety, focused ideas, organization, relevant details, voice, and word choice
- \_\_\_\_\_ edit drafts for correct spelling, capitalization, punctuation, and grammar
- \_\_\_\_\_ edit drafts for correct word usage: nouns, pronouns, verbs, and adjectives
- \_\_\_\_\_ edit complete sentences with a focus on subject/verb agreement
- \_\_\_\_\_ prepare a legible draft to share with others
- \_\_\_\_\_ organize ideas for writing through activities such as sequencing, classifying, and outlining

**TYPES OF WRITING**

- \_\_\_\_\_ write expository paragraphs that include a topic sentence, supporting details, and a concluding statement
- \_\_\_\_\_ write narrative/descriptive paragraphs appropriate to audience that move through a logical sequence, characters, and setting
- \_\_\_\_\_ write responses to literary and expository texts
- \_\_\_\_\_ write an opinion statement
- \_\_\_\_\_ write friendly and formal letters following an established format that includes date, proper salutation, body, closing, and signature
- \_\_\_\_\_ locate and use at least three print or non-print sources to write an informative and/or research paper
- \_\_\_\_\_ formulate questions for research papers

**LISTENING**

- \_\_\_\_\_ listen for a variety of purposes: to gain information, to be entertained, to understand directions
- \_\_\_\_\_ listen attentively in discussions and respond appropriately
- \_\_\_\_\_ retell and explain what has been said by a speaker
- \_\_\_\_\_ listen to connect prior experiences, insights, and ideas to the message of a speaker
- \_\_\_\_\_ identify language and sayings that reflect regions and cultures
- \_\_\_\_\_ follow three- and four-step oral directions to complete a simple task

**SPEAKING**

- \_\_\_\_\_ use specific vocabulary and apply standard English to communicate ideas, observations, experiences, and feelings
- \_\_\_\_\_ communicate ideas and supporting details in a logical sequence with a beginning, middle, and ending
- \_\_\_\_\_ read aloud and recite prose and poetry with fluency, rhythm, pace, appropriate intonation, and vocal patterns
- \_\_\_\_\_ give clear three- and four-step directions to complete a simple task
- \_\_\_\_\_ ask pertinent questions; respond to questions with relevant details
- \_\_\_\_\_ share ideas and information to complete a task
- \_\_\_\_\_ distinguish between a speaker's opinion and verifiable facts
- \_\_\_\_\_ use appropriate public speaking techniques such as volume control and eye contact

---

## MATHEMATICS

Level Three students continue to develop their understanding of the number system and place value. They demonstrate immediate recall of addition, subtraction, and multiplication facts and identify, read, and write simple fractions. Students increase their proficiency in solving problems involving money and temperature and describe and compare plane figures. They plan and implement experienced based projects and community experiences involving the application of number skills.

### NUMBERS, NUMBER SENSE, AND COMPUTATION

- \_\_\_\_\_ identify, use, and model place value positions of 1's, 10's, 100's, and 1,000's
- \_\_\_\_\_ identify the value of a given digit in the 1's, 10's, 100's, and 1,000's place
- \_\_\_\_\_ identify and model the unit fractions  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{6}$ , and  $\frac{1}{8}$  as equal parts of a whole, or sets of objects
- \_\_\_\_\_ read and write unit fractions with numbers and words
- \_\_\_\_\_ read, write, compare, and order numbers from 0 - 9,999
- \_\_\_\_\_ read and write number words to 100
- \_\_\_\_\_ immediately recall and use addition and subtraction facts
- \_\_\_\_\_ immediately recall multiplication facts (products to 81)
- \_\_\_\_\_ add and subtract two- and three-digit numbers with and without regrouping
- \_\_\_\_\_ add and subtract decimals using money as a model
- \_\_\_\_\_ multiply a two- or three-digit number by a power of 10
- \_\_\_\_\_ generate and solve two-step addition and subtraction problems and one-step multiplication problems based on practical situations
- \_\_\_\_\_ model addition, subtraction, multiplication, and division in a variety of ways
- \_\_\_\_\_ use mathematical vocabulary and symbols to describe multiplication and division
- \_\_\_\_\_ use estimation and mental computation to solve problems

### PATTERNS, FUNCTIONS, AND ALGEBRA

- \_\_\_\_\_ recognize, describe, and create patterns using objects and numbers found in tables, number charts, and charts
- \_\_\_\_\_ record results of patterns created using manipulatives, pictures, and numeric representations and describe how they are extended
- \_\_\_\_\_ model, explain, and solve open number sentences involving addition, subtraction, and multiplication facts
- \_\_\_\_\_ use variables and open sentences to express relationships
- \_\_\_\_\_ complete number sentences with the appropriate words and symbols (+, -, >, <, =)

### MEASUREMENT

- \_\_\_\_\_ compare, order, and describe objects by various measurable attributes for area and volume/capacity
- \_\_\_\_\_ compare, order, and describe objects by various measurable attributes for area and volume/capacity
- \_\_\_\_\_ select and use appropriate units of measure
- \_\_\_\_\_ measure to a required degree of accuracy (to the nearest  $\frac{1}{2}$  unit)
- \_\_\_\_\_ determine possible combinations of coins and bills to equal given amounts

- \_\_\_\_\_ read, write, and use money notation
- \_\_\_\_\_ recognize equivalent relationships between and among bills and coins
- \_\_\_\_\_ tell time to the nearest minute, using analog and digital clocks
- \_\_\_\_\_ use elapsed time in half-hour increments, beginning on the hour or half-hour, to determine start, end, and elapsed time
- \_\_\_\_\_ recognize that there are 60 minutes in 1 hour

### **SPATIAL RELATIONSHIPS, GEOMETRY, AND LOGIC**

- \_\_\_\_\_ describe, sketch, compare, and contrast plane geometric figures
- \_\_\_\_\_ demonstrate and describe the transformational motions of geometric figures (translation/slide, reflection/flip, and rotation/turn)
- \_\_\_\_\_ create two-dimensional designs that contain a line of symmetry
- \_\_\_\_\_ compare, contrast, sketch, model, and build two- and three-dimensional geometric figures and objects
- \_\_\_\_\_ identify, draw, and describe horizontal, vertical, and oblique lines
- \_\_\_\_\_ use the quantifiers all, some, and none to describe the characteristics of a set

### **DATA ANALYSIS**

- \_\_\_\_\_ pose questions that can be used to guide data collection, organization, and representation
- \_\_\_\_\_ use graphical representations, including number lines, frequency tables, and pictographs to represent data
- \_\_\_\_\_ draw conclusions from charts, tables, and graphs to solve problems
- \_\_\_\_\_ use informal concepts of probability (certain, likely, unlikely, impossible) to make predictions about future events
- \_\_\_\_\_ conduct simple probability experiments using spinners, number cubes, and random drawings

### **PROBLEM SOLVING**

- \_\_\_\_\_ select, modify, develop, apply, and justify strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts
- \_\_\_\_\_ apply previous experience and strategies to new problem situations
- \_\_\_\_\_ determine an efficient strategy, verify, interpret, and evaluate results with respect to the original problem
- \_\_\_\_\_ try more than one strategy when the first strategy proves to be unproductive
- \_\_\_\_\_ generalize solutions and strategies to new problem situations
- \_\_\_\_\_ interpret and solve a variety of mathematical problems by paraphrasing, identifying necessary and extraneous information, and ensuring the answer is reasonable
- \_\_\_\_\_ use technology, including calculators, to investigate and describe relationships such as patterns and functions, to develop mathematical concepts and solve problems

**MATHEMATICAL COMMUNICATION**

- \_\_\_\_\_ discuss and exchange ideas about mathematics as a part of learning
- \_\_\_\_\_ use inquiry techniques (discussion, questioning, research, data gathering) to solve mathematical problems
- \_\_\_\_\_ identify and translate key words and phrases that imply mathematical operations
- \_\_\_\_\_ use a variety of methods (physical materials, diagrams, and tables) to represent and communicate mathematical ideas through oral, verbal, and written formats
- \_\_\_\_\_ use mathematical words, phrases, and symbols to communicate and explain mathematical situations

**MATHEMATICAL REASONING**

- \_\_\_\_\_ justify and explain the solutions to problems using manipulatives and physical models
- \_\_\_\_\_ use patterns and relationships to analyze mathematical situations and draw logical conclusions about mathematical problems
- \_\_\_\_\_ follow a logical argument and judge its validity
- \_\_\_\_\_ ask questions to reflect on, clarify, and extend thinking
- \_\_\_\_\_ review and refine the assumptions and steps used to derive conclusions in mathematical arguments
- \_\_\_\_\_ determine relevant, irrelevant, and/or sufficient information to solve mathematical problems

**MATHEMATICAL CONNECTIONS**

- \_\_\_\_\_ link new concepts to prior knowledge
- \_\_\_\_\_ use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics
- \_\_\_\_\_ use physical models to explain the relationship of concepts and procedures
- \_\_\_\_\_ apply mathematical thinking and modeling to solve problems that arise in other disciplines, such as rhythm in music and motion in science
- \_\_\_\_\_ approach problems with flexibility in a variety of ways within and beyond the field of mathematics
- \_\_\_\_\_ identify, explain, and use mathematics in everyday life

## SCIENCE

Level Three students observe and record the characteristics of rocks and minerals, sound, and ecosystems. They investigate the interactions among living things and between living and non-living things. The more they discover, the more questions they ask. Tools and technology are used to gather, record, share, and justify information and explanations. Evidence is used to make predictions and justify explanations. Students work collaboratively to develop questions and do science investigations. Nature and History of Science objectives are embedded throughout the year in the context of life, earth, and physical science. Students plan and implement projects, experiences, problem solving and community involvement activities to bring the world around them into their lives.

### NATURE OF SCIENCE

- \_\_\_\_\_ explain that scientific progress is made by conducting careful investigations, recording data, and communicating the results
- \_\_\_\_\_ draw conclusion from scientific evidence
- \_\_\_\_\_ identify, gather and safely use tools (tri-lens magnifier, pan balance, stethoscope, metric measurement tools) and materials needed in investigations
- \_\_\_\_\_ cooperate and contribute ideas within a group and describe benefits of working with a team
- \_\_\_\_\_ conduct investigations based on observations and questions raised about the world
- \_\_\_\_\_ use science notebook entries to develop, communicate, and justify descriptions, explanations, and predictions
- \_\_\_\_\_ make predictions from graphic representations of data
- \_\_\_\_\_ create and use labeled illustrations, graphs (number lines, pictographs, bar graphs, frequency tables), and charts to convey ideas and record observations
- \_\_\_\_\_ use observable patterns to organize items and ideas and to make predictions

### PHYSICAL SCIENCE

- \_\_\_\_\_ determine and explain that vibrations produce sound
- \_\_\_\_\_ compare and describe how sound travels through different materials
- \_\_\_\_\_ describe objects in terms of their observable properties (mass, color, temperature, texture)

### EARTH SCIENCE

- \_\_\_\_\_ explain that rocks are composed of different combinations of minerals
- \_\_\_\_\_ investigate and describe how the Earth is composed of different kinds of materials (rocks, soils, water, air)
- \_\_\_\_\_ compare, test, measure, record, and describe observable properties of rocks and minerals
- \_\_\_\_\_ determine and explain that soil varies from place to place and has biological and mineral components

### LIFE SCIENCE

- \_\_\_\_\_ investigate and describe ways that offspring may resemble parents and siblings may resemble each other
- \_\_\_\_\_ investigate, compare, and contrast the different life cycles of different living things
- \_\_\_\_\_ investigate and describe the interactions of organisms with each other and with non living parts of their ecosystem

- \_\_\_\_\_ describe the structures that enable plants and animals to grow and survive
- \_\_\_\_\_ investigate and describe how changes to an environment can be beneficial or harmful to plants and animals
- \_\_\_\_\_ investigate, compare, and contrast structures and characteristics of plants and animals that enable them to grow, reproduce, and survive
- \_\_\_\_\_ classify plants and animals according to their observable characteristics

---

## SOCIAL STUDIES

Level Three students study people who have leadership qualities and who contribute to making change in their community and the world. Students learn about the diversity of the world's people and cultures and how diversity is reflected. Students develop an understanding of income, savings, and interest. Students ask questions, design and implement projects, community experiences and problem solving activities focusing on leadership, change, diversity, and how resources affect the economy.

### HISTORY

- \_\_\_\_\_ learn about individuals in the community and discuss their contributions
- \_\_\_\_\_ investigate how individuals and families contributed to the founding and development of the local community using artifacts and primary sources
- \_\_\_\_\_ learn about individuals around the world and discuss their contributions
- \_\_\_\_\_ discuss how conflicts can be resolved through compromise
- \_\_\_\_\_ explain how memorials help us to honor and remember people
- \_\_\_\_\_ explain how the actions of heroes and heroines make a difference
- \_\_\_\_\_ determine what it means to be an American citizen
- \_\_\_\_\_ describe the achievements of famous and ordinary citizens
- \_\_\_\_\_ define ethnicity and explain that people who make contributions to their communities include those who have diverse ethnic origins, customs, and traditions
- \_\_\_\_\_ demonstrate respect for each other, the community, and the world
- \_\_\_\_\_ explain how technology at home and in school impacts their lives
- \_\_\_\_\_ discuss the effects of news events on people in the community

### GEOGRAPHY

- \_\_\_\_\_ identify and use cardinal directions on a compass rose to locate places on a map
- \_\_\_\_\_ differentiate between a city and a state using appropriate examples
- \_\_\_\_\_ compare uses of maps and globes
- \_\_\_\_\_ identify and explain simple spatial patterns on a map, i.e., population centers, farmland, mountains
- \_\_\_\_\_ construct a simple map including a title, symbols, and directions from a bird's eye view
- \_\_\_\_\_ recognize different types of special maps, i.e., neighborhood, school, and classroom
- \_\_\_\_\_ list careers requiring the use of geographic tools
- \_\_\_\_\_ distinguish between physical (natural) and human (man-made) features
- \_\_\_\_\_ identify characteristics of neighborhoods and communities, i.e., physical geographical differences, land use, population density
- \_\_\_\_\_ identify ways people express culture
- \_\_\_\_\_ list ways people view their own communities, i.e., a ranching community, a tourist destination
- \_\_\_\_\_ list ways people use technology for geographic purposes, i.e., weather forecasting, use of aerial photographs to measure population changes over time
- \_\_\_\_\_ locate and name the states surrounding Nevada

- 
- \_\_\_\_\_ identify latitude and longitude on a map or globe
  - \_\_\_\_\_ compare population distribution across regions using maps and mathematical representations, i.e., tables and graphs
  - \_\_\_\_\_ identify transportation and communication networks
  - \_\_\_\_\_ list reasons why people choose to live in urban or rural communities
  - \_\_\_\_\_ describe purposes for various organizations
  - \_\_\_\_\_ predict possible geographic changes that could take place in the neighborhood or community
  - \_\_\_\_\_ list tools, machines, or technologies that people have used to change the physical environment
  - \_\_\_\_\_ compare ways people modify the physical environment
  - \_\_\_\_\_ identify people, groups, and organizations that respond to natural hazards
  - \_\_\_\_\_ describe ways humans depend on and manage natural resources within their communities
  - \_\_\_\_\_ use a map to display information about an economic product

### **ECONOMICS**

- \_\_\_\_\_ identify needs as high priority wants, and wants as goods, services, or leisure activities
- \_\_\_\_\_ give examples of prices consumers have paid when buying goods and services
- \_\_\_\_\_ give examples of prices set by businesses for selling goods and services
- \_\_\_\_\_ demonstrate an understanding of income and give examples
- \_\_\_\_\_ identify forms of money used by people across time and place
- \_\_\_\_\_ define banking terms, including saving, interest, and borrowing
- \_\_\_\_\_ identify reasons people use banks
- \_\_\_\_\_ identify and explain what business owners do
- \_\_\_\_\_ identify classroom resources that are limited and must be shared
- \_\_\_\_\_ differentiate between barter and monetary trade

### **CIVICS**

- \_\_\_\_\_ identify and discuss examples of rules, laws, and authorities that keep people safe and property secure
- \_\_\_\_\_ discuss that democracy involves voting, majority rule, and setting rules
- \_\_\_\_\_ explain individual responsibilities in the classroom and the school
- \_\_\_\_\_ recognize the Pledge of Allegiance and discuss its purpose
- \_\_\_\_\_ explain why we have patriotic activities, holidays, and symbols
- \_\_\_\_\_ name the current President of the United States
- \_\_\_\_\_ name the current mayor
- \_\_\_\_\_ list the qualities of a leader
- \_\_\_\_\_ discuss why people form groups
- \_\_\_\_\_ introduce sources of information people use to form an opinion
- \_\_\_\_\_ identify their city, state, and country