

# Curriculum Guide For Fourth Grade

NORTHBROOK  
**DISTRICT**

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Teaching Learning Caring



Northbrook School District 28  
2016-2017

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Dear Parents,

We hope you find this Curriculum Guide helpful! Over the past few years, members of the Northbrook District 28 Curriculum Council have designed these guides for you. The guides will give you an overview of what your child will be learning at a grade level. Hopefully, this overview will assist you when you have conversations about classroom work with your child's teacher and as you reinforce learning concepts at home with your child(ren).

We welcome your feedback as you use these Parent Curriculum Guides throughout this year. Your feedback helps us improve our design. The Northbrook District 28 faculty, assistants, and administrators appreciate your working with us as we work on behalf of all children in this district. We thank you.

Best wishes for a successful school year.

Yours truly,

Northbrook School District 28 Faculty, Staff and Administrators

District 28 Curriculum Guides are available on the district website:

**[www.northbrook28.net](http://www.northbrook28.net)**

# LITERACY

The skills and knowledge of the language arts are essential for student success in virtually every area of the curriculum. They are also essential for the development of clear expression and critical thinking. District 28 has adopted a comprehensive language arts philosophy which integrates language, reading, writing, speaking and listening.

**By the end of Fourth Grade, we expect students to be able to...**

## READING

### Reading Comprehension

- make connections using schema.
- visualize and use sensory images to understand text.
- ask questions while reading.
- determine important ideas and themes in text.
- make inferences.
- synthesize.
- self- monitor while reading.
- read fluently
- identify plot, themes, settings, character traits and solutions.
- read multiple genres.
- engage in independent reading.

## WRITING

- engage in the writing process (pre-writing, revising, editing, and publishing) to compose persuasive, narrative and expository essays.
- write using organization and elaboration.
- edit for complete and grammatically correct sentences as well as proper capitalization and punctuation.
- identify spelling patterns and apply spelling strategies to written work.

## SPEAKING/LISTENING

- listen effectively in formal and informal situations.
- plan and deliver, formal and informal, oral presentation using appropriate eye contact, volume, clarity and rate.
- follow oral directions.
- summarize written and oral information.



## REFERENCE STUDY SKILLS

- use primary source information.
- Identify and evaluate information from various sources.
- use contemporary technology and updated information.

# MATHEMATICS

The purpose of mathematics is to provide essential problem-solving tools applicable to a range of scientific disciplines, business practices, and everyday situations. The District 28 mathematics curriculum promotes opportunities for students to develop and apply basic mathematical skills and solve problems confidently using a wide variety of strategies. The program encourages students to become independent thinkers, share responsibility for their own learning, and appreciate the value of working together to solve difficult problems. Instruction fosters skillful reasoning in diverse situations and effective communication of both solutions and methods.

**By the end of Fourth Grade, we expect students to be able to...**

## NUMERICAL CONCEPTS AND OPERATIONS

### Concepts and Computation

- understand place value through hundred thousands
- read, write, compare, and order whole numbers and money amounts to 100,000.
- develop the facility to add, subtract, multiply and divide whole numbers.
- estimate using rounding and convenient numbers.
- estimate to check the reasonableness of computations.
- identify and represent fractional parts.
- recognize and write equivalent fractions.
- order and compare fractions.
- add and subtract fractions with like and unlike denominators.
- solve problems involving fractions.

### Decimals

- read, write, compare, and order decimals to the hundredths.
- add and subtract decimals.
- link common fractions and decimals.
- link decimals to the concepts of common fractions.
- identify, read, write and count decimals in the hundredths place.

## ALGEBRA

- recognize and extend patterns.
- recognize prime and composite numbers.
- use variables and formulas.

## GEOMETRY

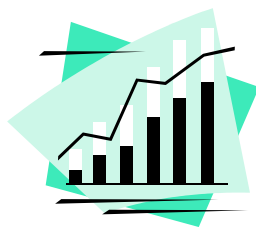
- identify polygons.
- identify types of angles such as acute, right, obtuse, and straight.
- estimate and measure angle sizes.
- identify lines, line segments, rays and points.
- identify turn and line symmetry.
- investigate parallel and perpendicular lines.
- explore two- and three-dimensional shapes.

## MEASUREMENT

- estimate and measure length and volume using metric and standard units.
- find perimeter and area of geometric figures.
- measure temperature in degrees Fahrenheit.

## DATA ANALYSIS AND PROBABILITY

- collect, organize, graph and analyze data.
- explore measures of central tendency: median, mean, and mode.
- identify categorical and numerical variables.
- extrapolate and interpolate data.
- find the median of three numbers.
- determine the median from collected data.



## 8 MATHEMATICAL PRACTICES

- make sense of problems and persevere in solving them.
- reason abstractly and quantitatively.
- construct viable arguments and critique the reasoning of others.
- model with mathematics.
- use appropriate tools strategically.
- attend to precision.
- look for and make use of structure.
- look for and express regularity in repeated reasoning.

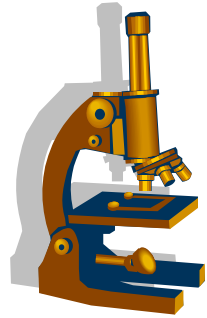
# SCIENCE

The biological, physical and earth sciences are studied in kindergarten through fifth grade. The opportunity to use the scientific method of questioning, experimentation and drawing conclusions is provided throughout the grade levels. A science teacher/consultant provides student instruction on a regular basis in our well-equipped science labs.

**By the end of Fourth Grade, we expect students to be able to...**

## SCIENCE AND ENGINEERING PRACTICES

- ask questions and define problems.
- plan and carry out observations.
- construct explanations and design solutions.
- develop and use models.
- engage in argument from evidence.
- analyze and interpret data.
- obtain, evaluate and communicate information.



## LAB PROCEDURES

- learn correct handling of lab equipment and proper lab procedures.
- demonstrate basic safety rules and procedures for science activities.

## CONSERVATION AND INFORMATION TRANSFER OF ENERGY

- know the types of energy.
- understand the law of conservation of energy.
- understand how energy can be transferred.
- understand how humans use natural resources as energy.
- understand how waves cause objects to move.
- understand that information is transferred through waves.

## **PLANTS AND ANIMALS: STRUCTURES, FUNCTIONS, AND PROCESSES OF LIVING THINGS**

- identify internal and external structures of plants and animals.
- explain how structures of plants and animals support their survival, behavior, growth, and reproduction.
- understand that animals use their senses to process and react to information.

## **PROCESSES THAT SHAPE THE EARTH**

- explain the theory of plate tectonics.
- identify patterns in rock formations that support an explanation that the Earth has changed over time.
- identify evidence from fossils that support an explanation that the Earth has changed over time.
- identify and describe weathering and erosion and classify weathering forces.
- make observations to provide evidence for how wind, slope, amount of vegetation, and speed of water flow affect the rate of erosion.
- analyze and interpret patterns of the Earth's features from maps.
- generate and compare solutions to reduce the impacts of natural processes on humans.





# SOCIAL STUDIES

Social Studies for kindergarten through fifth grade focuses on home, school, community, Chicago, Illinois, regions of our nation, and the United States. Students learn map skills, geography, and cultural awareness.

## **By the end of Fourth Grade, we expect students to be able to...**

### **Physical Geography**

- explain how people in the United States are affected by its physical geography.
- explain how our location in the world affects our lives (politics, geography, economics, and environment).
- research, discuss and present the natural features and climate of each region of the United States.

### **Economics**

- define economics.
- identify the natural resources of the United States.
- explain how people use resources (human, natural, and capital) to meet their needs.

### **Colonies**

- identify what groups of people settled in the New World and why.
- identify the similarities and differences of the three colonial regions (New England, Middle, and Southern Colonies).
- explore what life was like for the colonists.
- research how the colonies were governed.

### **Immigration**

- identify why people did and still do immigrate to the United States.
- explore significant historical events and current issues facing immigration.
- explain how immigration impacts cultures and societies.

# SPANISH

All students in grades one through five will study Spanish for 30 minutes daily. Students focus on basic language acquisition and cultural awareness in a learning environment in which students are immersed in the target language.

## **By the end of Fourth Grade, we expect students to be able to...**

### **LISTENING COMPREHENSION**

- understand simple descriptions, stories, and conversations directly related to the curriculum.
- follow simple directions given in the target language.



### **SPEAKING**

- mimic correct Spanish pronunciations.
- speak about known topics in familiar conversations, as appropriate to grade level.
- use the target language in spontaneous and meaningful ways.

### **READING**

- recognize the alphabet, sound/letter correspondence and target vocabulary words in Spanish.
- read simple descriptions, stories and conversations directly related to the curriculum, as appropriate to grade level.

### **WRITING**

- write simple guided sentences and phrases directly related to the curriculum, as appropriate to grade level.

### **CULTURE**

- recognize common Hispanic holiday traditions and celebrations.
- recognize where Spanish is spoken in the US and worldwide.
- participate in children's songs and games from Spanish-speaking cultures.

### **THEMATIC UNITS**

- provide students with real-life connections and applications to their own lives as well as the Spanish-speaking world.



## **SOCIAL EMOTIONAL LEARNING**

Effective SEL programs begin at an early age and continue through high school. They work to develop students' key SEL skills. These include five core social and emotional competencies:

- **SELF-AWARENESS:** Knowing what we are feeling in the moment; having a realistic assessment of our own abilities and a well-grounded sense of self-confidence.
- **SOCIAL AWARENESS:** Sensing what others are feeling; being able to take their perspective; appreciating and interacting positively with diverse groups.
- **SELF-MANAGEMENT:** Handling our emotions so they facilitate rather than interfere with the task at hand; being conscientious and delaying gratification to pursue goals; persevering in the face of setbacks and frustrations.
- **RELATIONSHIP SKILLS:** Handling emotions in relationships effectively; establishing and maintaining healthy and rewarding relationships based on cooperation, resistance to inappropriate social pressure, negotiating solutions to conflict, and seeking help when needed.
- **RESPONSIBLE DECISION MAKING:** Accurately assessing risks, making decisions based on a consideration of all relevant factors and the likely consequences of alternative courses of actions, respecting others, and taking personal responsibility for one's decisions. (Excerpt from Safe & Sound, CASEL)

**By the end of Fourth Grade, we expect students to learn and apply the following skills:**

Active Listening

Accepting and enjoying differences

Get Calm/ Stay Calm (Relaxation)

Giving and receiving a compliment

Test taking strategies

Study skills (School Survival, materials, assignments, etc.)

Goal setting

Introduce and teach the 9 Step Problem Solving Model (conflict resolution)

1. Identify your feelings
2. Calm yourself
3. Identify the problem
4. Set a goal
5. Think of potential solution
6. Weigh the pros and cons
7. Pick a solution to try
8. Plan/scan the solution
9. Do it and review the results

# INTERNET SAFETY

The District 28 Internet safety curriculum teaches students not only how to navigate the Internet safely but also how to be good citizens while online. This curriculum meets the Illinois General Assembly requirement that schools provide Internet safety instruction for students in grades three through eight.

**By the end of Fourth Grade, we expect students to be able to demonstrate the internet safety skills they learned in 3rd grade and to ....**

- keep passwords private.
- create strong passwords .
- understand that the people they meet in cyberspace must be treated as strangers.
- understand that websites are designed as advertising environments to entertain visitors while promoting advertisers' brands and products.
- understand that advertisements may be designed to get information from students.
- understand that logging in as someone else or using someone else's account without their permission is illegal.



The entire Internet Safety Curriculum is available online at the District 28 website:

**[www.northbrook28.net](http://www.northbrook28.net)**

# MUSIC

The purpose of music education in District 28 is to cultivate thoughtful members of society that are tuneful, beatful, and artful. This is achieved by incorporating folk songs, multicultural music, and historical musical selections into the curriculum. A balanced mix of learning experiences utilizing creative movement, instruments, and singing are extended and further developed each year.

**By the end of Fourth Grade, we expect students to be able to demonstrate...**

## MELODY

- match pitch in pentatonic scales, canons, part singing

## RHYTHM

- dotted rhythms,  $\frac{3}{4}$  meter

## EXPRESSION

- theme and variations, articulation (accent), movement composition

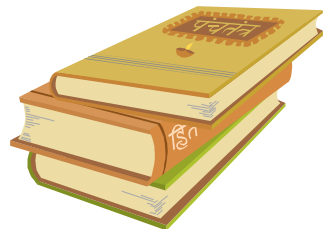


## LIBRARY

The library curriculum focuses heavily on literature appreciation and cultivating a lifelong love of reading through exposure to a wide variety of reading materials and constant access to a school library with trained library personnel. In addition, students learn information literacy skills as outlined below.

### **By the end of Fourth Grade we expect students to be able to.....**

- effectively use the library catalog system, Destiny.
- determine importance when researching information.
- understand and utilize the 5 A's of research:
  - Ask questions to guide/direct research
  - Access online resources such as World Book and Britannica
  - Analyze the information as it is gathered into note taking form
  - Apply Information to create a shared product
  - Assess the research process
- create accurate citations.
- use informational text features to locate information.
- choose appropriate materials independently from wide variety of texts, including award winning titles.
- paraphrase information gathered from a resource.
- evaluate text and web based information (bias, accuracy, purpose, author's intent).
- use primary sources to find information.
- interpret information from graphic aids.



# PHYSICAL EDUCATION

Northbrook School District 28 recognizes daily, elementary physical education as an integral part of every student's educational program. Growth in social, emotional, cognitive and motor skills is fostered through physical activity. In addition to the development of physical skills, we emphasize good sportsmanship and encourage healthful living. Cooperation and respect for each other helps provide a safe environment, both physically and emotionally.

Healthful, active life-styles are taught through developmentally appropriate physical activity. The goal of elementary physical education is to achieve and maintain a healthy level of physical fitness that begins at the earliest possible age and progresses sequentially.

## In grades 4-5, we expect students to gain knowledge and skills in the following four areas.....

### MOVEMENT SKILLS

- combination of locomotor movements (dance movements, tumbling)
- combinations of non-locomotor movements (push-ups, curl ups, etc.)
- combinations of locomotor and non-locomotor movements (running and throwing, running and kicking, running and bending, etc.)
- combinations of manipulative movements (lead up activities and sport variations)

### PHYSICAL FITNESS

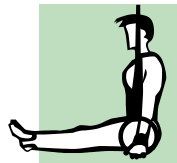
- components of physical fitness (cardiovascular endurance, flexibility, muscular endurance, agility and muscular strength)
- heart rate (resting heart rate, maximum heart rate, target heart rate, self monitor, etc.)
- goal (setting, self assessment, logging, etc.)
- body awareness (nutrition and long term effects of physical activity on the body)

### TEAM BUILDING

- individual responsibility during group activities (work independently on task until completed, following rules, settling disagreements, etc.)

### TEAM SPORTS

- strategies (offense, defense)
- general rules (sport specific game rules)
- sportsmanship (making good choices, appropriate communication skills, winning and losing)



# ART

**By the end of Fourth Grade, we expect students to be able to...**

## **DRAWING**

- understand and incorporate a horizon line and show knowledge of spatial relationships.
- show awareness of proportion in a variety of subject matter.
- continue developing skills in drawing media.

## **PAINTING**

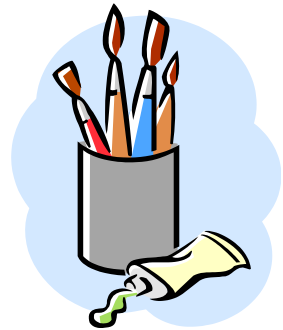
- use paint as a means to embellish sculpture.
- use the principles of design in a painting.

## **DESIGN**

- understand and demonstrate properties of color.
- learn and use elements of open and closed composition.

## **SCULPTURE**

- create a sculpture that is structurally sound and interesting from all sides.
- Use various methods to build and attach clay.



## **GRAPHICS**

- experience a more advanced printing technique, (e.g., gelatin, styrofoam, collagraph).

## **ART APPRECIATION**

- recognize and identify the work of at least one famous artist.
- become aware of various artistic styles.



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WE WELCOME YOUR COMMENTS