NDMA 3rd GRADE CURRICULUM

Last reviewed in October, 2013

The six Transdisciplinary Themes explored throughout the Third Grade year include:

WHO WE ARE

WHERE WE ARE IN PLACE AND TIME

HOW WE EXPRESS OURSELVES

HOW THE WORLD WORKS

HOW WE ORGANIZE OURSELVES

SHARING THE PLANET

**See the Programme of Inquiry (POI) for unit specifics.*

Disciplines and IB Strands Include:

Math Strands

- Data Handling
- Measurement
- Shape and Space
- Pattern and Function
- Number

Science Strands

- Living Things
- Earth and Space
- Materials and Matter
- Forces and Energy

Social Studies Strands

- Human Systems and Economic Activities
- Social Organization and Culture
- Continuity and Change Through Time
- Human and Natural Environments
- Resources and Environments

Language Strands

- Oral Language
  - Listening
  - Speaking
- Visual Language
  - Viewing
  - Presenting
- Written Language
  - Reading
  - Writing

Religion

Math

Math Strands

- Data Handling
- Measurement
- Shape and Space
- Pattern and Function
- Number

IB Strand	Objectives
Data Handling	• Conduct a survey and record the results • Use models to find the range, median, mode and mean of a set of numbers • Read and make line plots • Read a table to solve a problem • Make a bar graph to represent data • Use ordered pairs to locate points on a grid
Measurement	<u>Time</u> • Tell time to the hour, half hour, and quarter hour • Tell time to five minutes • Tell the number of minutes after the hour and before the hour • Use a clock to tell how long an activity will last • Reading a calendar <u>Temperature</u> • Tell temperature in degrees Fahrenheit and degrees Celsius <u>Customary Measurement</u> • Measure length to the nearest inch, and half inch • Measure and compare the amount a container can hold in customary units by cup, pint, and gallon • Measure and compare weights of objects in customary units by pound and ounce <u>Metric Measurement</u> • Measure length in centimeters, meters, kilometers, liter and milliliter
Shape and Space	<u>Plane and Solid Figures</u> ○ Identify and compare lines, line segments, rays, and angles ○ Identify, describe, and classify different triangles

IB Strand	Objectives
Pattern and Function	<u>Addition</u> ○ Addition properties ○ Addition while re-grouping ○ Column Addition ○ Estimate <u>Subtraction</u> ○ Subtracting while re-grouping ○ Estimate <u>Multiplication</u> ○ Learn multiplication facts from 0-12 ○ Use arrays to relate addition and multiplication ○ Read a multiplication chart ○ Solve word problems involving multiplication ○ Learn set patterns of multiplication ○ Multiply two-digit by one-digit numbers ○ Multiply three-digit by one-digit numbers ○ Multiply four-digit by one-digit numbers ○ Multiply Double digit by double digit numbers <u>Division</u> ○ Use arrays to relate multiplication and division ○ Use different ways to divide ○ Write a number sentence to solve a problem ○ Use special rules when dividing 0 and 1 ○ Divide with remainders
Number	<u>Place Value</u> ○ Use numbers in different ways ○ Identify place value through hundred thousands <u>Compare, Order, and Rounding</u> ○ Compare numbers by greater than, less than an equal in value ○ Order numbers from greatest to least and least to greatest ○ Round two-digit, three-digit and four digit numbers <u>Money</u> ○ Understand the value of coins and bills ○ Name and count coins and bills ○ Make change from a given amount ○ Compare amounts of money ○ Round money <u>Fractions</u> ○ Compare and order fractions ○ Add and subtract fractions

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Science

Science Strands

- Living Things
- Earth and Space
- Materials and Matter
- Forces and Energy

Units of Study	Objectives
Inquiry Process	• Make purposeful observations of the natural world using the appropriate senses • Generate questions based on observations • Plan and conduct simple and fair investigations • Manipulate simple tools – hand lens, balance, ruler, meter stick, measuring cup, thermometer, spring scale, stop watch/timer – that aid observation and data collection • Make accurate measurements with appropriate units – centimeters, meters, Celsius, grams, seconds, minutes – for the measurement tool • Construct simple charts and graphs from data and observations
Inquiry Analysis and Communication	• Summarize information from charts and graphs to answer scientific questions • Share ideas about science through purposeful conversation in collaborative groups • Communicate and present findings of observations and investigations • Develop research strategies and skills for information gathering and problem solving • Compare and contrast sets of data from multiple trials of a science investigation to explain reasons for differences
Reflection and Social Implications	• Demonstrate scientific concepts through various illustrations, performances, models, exhibits and activities • Use data/samples as evidence to separate fact from opinion • Use evidence when communicating scientific ideas • Identify technology used in everyday life • Identify current problems that may be solved through the use of technology • Describe the effect humans and other organisms have on the balance of the natural world • Describe how people have contributed to science throughout history and across cultures
Energy **IB Strand: Forces and Energy** ***connections made with Art/Music/P.E.**	• Identify forms of energy (heat, electricity, light, sound) • Learn properties of light and sound • Demonstrate that light travels in a straight path and that shadows are made by placing an object in a path of light • Observe what happens to light when it travels from air to water • Relate sounds to their sources of vibrations (ex: a musical note produced by a vibrating guitar string, the sounds of a drum made by the vibrating drum head) • Distinguish the effect of fast or slow vibrations as pitch
Simple Machines **IB Strands: Forces and Energy and Materials and Matter**	• Classify machines according to type • Make and use models of simple machines • Describe simple machines • Understand a simple machine can change the amount and direction of the force • Understand a compound machine is a machine made up of two or more simple machines • Draw the conclusion that a machine makes work easier

Units of Study	Objectives
Sun, Moon, and Earth **IB Strand: Earth's Space**	• Draw conclusions about the effects of a force on objects of different masses • Investigate the characteristics of the moon and sun, compare these two objects to Earth, and learn how humans have explored and been affected by these bodies • Compare and contrast the sizes and features of the moon and Earth • Infer how craters are made • Describe tools used by astronomers to study space • Explain the need for life-support equipment for survival on the moon • Describe characteristics of the sun • Differentiate among various solar features • Explain how Earth's rotation causes day and night and makes the sun and stars appear to move • Make and use models of the sun, moon and Earth to show their positions during eclipses • Understand how the sun's reflection off the moon causes light
Earth's Resources **IB Strand: Earth's Resources**	• Introduce and identify natural resources and their uses • Classify natural resources as renewable, non-renewable or inexhaustible • List possible causes of air pollution • Infer why water is important to living things • Make and use models of water filtration systems • Compare and contrast volcanoes and earthquakes and how they change the Earth's surface
Roles of Living Things **IB Strand: Living Things**	• Review living and non-living things • Identify the needs of living things (air, food, water) • Explain that living things must be able to get what they need to survive from their environment • Compare and contrast herbivores, carnivores and omnivores • Describe the interaction between plants and animals and the oxygen/carbon dioxide cycle
Life Cycles **IB Strand: Living Things**	**Life Cycles of Animals** • Understand living things go through predictable life cycles, which include growth, development, reproduction and death • Learn that life cycles differ from species to species • Learn the life cycle of an animal beginning with the egg, and how development of the egg can differ from one animal to another • Learn the similarities and differences of an animal's development within a species • Understand safety adaptations of different animals to ensure survival (from youth to adulthood) **Life Cycles of Plants** • Learn the life cycle of a seed plant, beginning with the seed • Learn properties, development and survival of a seed • Recognize similarities and differences between the life cycles of flowering and cone-bearing plants • Learn the growth and development processes of a plant • Learn how plants have adapted over time

Social Studies

Social Studies Strands

- Human Systems and Economic Activities
- Social Organization and Culture
- Continuity and Change Through Time
- Human and Natural Environments
- Resources and Environments

Unit of Study	Objective
History of Michigan (Through Statehood)	• Identify questions historians ask in examining the past in Michigan (e.g. What happened? How, when and why did it happen? Who was involved?) • Explain how historians use primary and secondary sources to answer questions about the past • Describe the causal relationships between three events in Michigan's past: Erie Canal, immigration, statehood • Draw upon traditional stories of American Indians (e.g. Anishinaabeg-Ojibway (Chippewa), Odawa (Ottawa), Potawatomi, Menominee, Huron) who lived in Michigan in order to make generalizations about their beliefs • Use informational text and visual data to compare how American Indians and settlers in the early history of Michigan adapted to, used and modified their environment • Use a variety of sources to describe interactions that occurred between American Indians and the first European explorers and settlers in Michigan • Use a variety of primary and secondary sources to construct a historical narrative about daily life in the early settlements of Michigan (pre-statehood) • Use case studies or stories to describe how the ideas or actions of individuals affected the history of Michigan • Describe how Michigan attained statehood • Create a timeline to sequence early Michigan history (American Indians, exploration, settlement, statehood)
Michigan Geography	**The World in Spatial Terms** • Use cardinal directions (north, south, east, west) to describe the relative location of significant places in the immediate environment • Use thematic maps to identify and describe the physical and human characteristics of Michigan **Places and Regions** • Use a variety of visual materials and data sources to describe ways in which Michigan can be divided into regions • Describe different regions to which Michigan belongs (e.g. Great Lakes Region, Midwest) **Human Systems** • Describe major kinds of economic activity in Michigan today, such as agriculture, manufacturing, services and tourism, and research and development, and explain the factors influencing the location of these economic activities • Describe diverse groups that have come into a region of Michigan and reasons why they came (push/pull factors) • Describe current movements of goods, people, jobs or information to, from or within Michigan and explain reasons for the movements • Use data and current information about the Anishinaabeg and other American Indians living in Michigan today to describe the cultural aspects of modern American Indian life; give an example of how another cultural group in Michigan today has preserved and built upon its cultural heritage **Environment and Society** • Locate natural resources in Michigan and explain the consequences of their use • Describe how people adapt to, use, and modify the natural resources of Michigan

Unit of Study	Objective
Civics And Government	**Purposes of Government** • Give an example of how Michigan state government fulfills one of the purposes of government (e.g. protecting individual rights, promoting the common good, ensuring equal treatment under the law) **Values and Principles of American Government** • Describe how Michigan state government reflects the principle of representative government **Structure and Functions of Government** • Distinguish between the roles of state and local government • Identify goods and services provided by the state government and describe how they are funded (e.g., taxes, fees, fines) • Identify the three branches of state government in Michigan and the powers of each • Explain how state courts function to resolve conflict • Describe the purpose of the Michigan Constitution **Roles of the Citizen in American Democracy** • Identify rights (e.g. freedom of speech, freedom of religion, right to own property) and responsibilities of citizenship (e.g. respecting the rights of others, voting, obeying laws)
Economics	**Market Economy** • Explain how scarcity, opportunity costs and choices affect what is produced and consumed in Michigan • Identify incentives (e.g. sales, tax breaks) that influence economic decisions people make in Michigan • Analyze how Michigan's location and natural resources influenced its economic development (e.g. how waterways and other natural resources have influenced economic activities such as mining, lumbering, automobile manufacturing, and furniture making) • Describe how entrepreneurs combine natural, human and capital resources to produce goods and services in Michigan • Explain the role of business development in Michigan's economic future **National Economy** • Using a Michigan example, describe how specialization leads to increased interdependence (cherries grown in Michigan are sold in Florida; oranges grown in Florida are sold in Michigan) **International Economy** • Identify products produced in other countries and consumed by people in Michigan
Public Discourse, Decision Making and Citizen Involvement	**Identifying and Analyzing Issues** • Identify public issues in Michigan that influence the daily lives of its citizens • Use graphic data and other sources to analyze information about a public issue in Michigan and evaluate alternative resolutions • Give examples of how conflicts over core democratic values lead people to differ on resolutions to a public policy issue in Michigan **Persuasive Communication about a Public Issue** • Compose a paragraph expressing a position on a public policy issue in Michigan and justify the position with a reasoned argument **Citizen Involvement** • Develop and implement an action plan and know how, when and where to address or inform others about a public issue • Participate in projects to help or inform others

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Reading

Language Strands

- Oral Language
  - Listening
  - Speaking
- Visual Language
  - Viewing
  - Presenting
- Written Language
  - Reading
  - Writing

Unit of Study	Objectives
Word Recognition and Word Study	• Automatically recognize frequently encountered words in print whether encountered in connected text or in isolation, with the number of words that can be read fluently increasing steadily across the school year • Use structural, syntactic and semantic cues including letter-sound, rimes, base words and affixes to automatically read frequently encountered words, decode unknown words and decide meanings • Know the meanings of words encountered frequently in grade-level reading and oral language contexts • Acquire and apply strategies to identify unknown words or word parts; self-monitor and construct meaning by predicting and self-correcting, applying knowledge of language, sound/symbol/structural relationships, and context
Fluency	• Apply aspects of fluency – pauses and emphasis, punctuation cues, intonation and automatic recognition – of identified grade-level specific words and sight words while reading aloud familiar grade-level text
Vocabulary	• In context, determine the meaning of words and phrases including synonyms, homonyms, multiple meaning words, content vocabulary and literary terms using strategies and resources including context clues, concept mapping and the dictionary
Narrative Text	• Explain how characters express attitudes about one another in familiar classic, multicultural and contemporary literature recognized for quality and literary merit • Identify and describe the basic elements and purpose of a variety of narrative genres, including folktales, fables and realistic fiction • Identify and describe characters' thoughts and motivations, story-level themes, main idea and lesson/moral • Explain how authors use literary devices, including prediction and point of view, to develop a story-level theme, depict the setting, and reveal how thoughts and actions convey important character traits
Informational Text	• Identify and describe the basic elements, features and purpose of a variety of informational genres, including textbooks, encyclopedias and magazines • Identify informational text patterns, including descriptive, sequential, enumerative, compare/contrast and problem/solution • Explain how authors use text features, including titles, headings and subheadings, timelines, prefaces, indices and table of contents, to enhance the understanding of key and supporting ideas
Comprehension	• Connect personal knowledge, experiences and understanding of the world to themes and perspectives in text through oral and written responses • Retell in sequence the story elements of grade-level narrative text and major ideas and relevant details of grade-level informational text • Compare and contrast relationships among characters, events and key ideas within and across texts to create a deeper understanding, including a narrative to an informational text, a literature selection to a subject area text, and an historical event to a current event • Apply significant knowledge from grade-level science, social studies and mathematics texts

Unit of Study	Objectives
Metacognition	• Self-monitor comprehension when reading or listening to texts by automatically applying strategies used by mature readers to increase comprehension including: predicting; constructing mental images; visually representing ideas in text; questioning; re-reading or listening again if uncertain about meaning; inferring; and summarizing • Plan, monitor, regulate, evaluate skills, strategies, and processes to construct and convey meaning (e.g. decoding unknown words), and use graphic organizers to deepen understanding of problem/solution and organizational patterns
Critical Standards	• Develop, discuss and apply individual and shared standards using student/class created rubrics and begin to assess the quality and accuracy of students' own writing and the writing of others

Writing

	Objective
Writing Genre	• Write a cohesive narrative piece such as realistic fiction using setting, actions and thoughts that reveal important character traits • Write poetry based on reading a wide variety of grade-appropriate poetry • Write an informational piece including a report that demonstrates the understanding of central ideas and supporting details using an effective organizational pattern (e.g. compare/contrast, cause/effect, problem/solution) with a title, heading and table of contents • Compose a paragraph expressing a position on a public policy issue in Michigan and justify the position with a reasoned argument • Use the writing process to produce and present a research project; initiate research questions from content area text from a teacher-selected topic; use a variety of resources to gather and organize information
Writing Process	• Set a purpose, consider audience, and replicate authors' styles and patterns when writing a narrative or informational piece • Apply a variety of pre-writing strategies for both narrative and informational writing (e.g. graphic organizers such as maps, webs, Venn diagrams) in order to generate sequence and structure ideas • Draft focused ideas in written compositions using multiple sentences and paragraphs to slow down or speed up reading, including varying patterns and/or organizational text structures • Revise drafts based on constructive and specific oral and written responses to writing by identifying sections of the piece to improve sequence and flow of ideas (e.g. arranging paragraphs, connecting main and supporting ideas, transitions) • Proofread and edit writing using appropriate resources (e.g. dictionary, spell check, writing references) and grade-level checklists, both individually and in groups
Grammar and Usage	• Use subjects and verbs that are in agreement • Identify and use irregular verb tenses • Identify and use singular and plural nouns and possessives • Identify and use comparative adjectives • Identify and use commas in a series • Identify and use quotation marks and capitalization in dialogue

Religion

Unit of Study	Objectives
The Church is One	• Experience sharing good news • Describe the unity of the Church • Understand Baptism and Confirmation • Identify ways we have been healed from others
The Church is Holy	• Understand that Jesus forgives us for our sins • Explore the meaning of “Catholic” • Describe ways to be compassionate and merciful
The Church is catholic	• Discuss the gift of water • Describe ways to be accepting of all people • Pray to the Holy Spirit for an attitude of openness
The Church Has a Mission to the World	• Learn about the kingdom of God • Relate concepts of justice to the kingdom • Pray to be signs of God’s kingdom
Prayers	• Prayer of Sorrow • Prayer to Jesus Christ in the Eucharist • Prayer to the Holy Spirit