



## Eighth Grade Curriculum Packet (Indiana)

### NHA Curriculum

NHA has invested significant resources studying state and national standards, and learning about organizations such as ACT to determine what students need to understand in order to be on the track for college before they enter high school. Our custom-built curriculum has been designed backward from eighth grade to kindergarten to ensure that each child learns the concepts, strategies, and skills necessary to be on track for college, starting with their first year of school.

### How Does It Work?

Teachers plan each lesson around specific objectives from the NHA Curriculum and help students understand what those objectives mean. Lessons are planned with very specific goals in mind, goals which are made clear to students. Knowing the end goal helps teachers plan carefully, which, in turn, helps students effectively connect with their learning.

### How Will We Know They Have Learned?

Teachers use the information-gathering process known as formative assessment to determine what adjustments need to be made in the learning process in order to challenge each child to achieve. The formative assessment process gives teachers the detailed information they need to understand where each student is in their level of understanding, which is most critical factor for their continued learning. Students need regular feedback to know how they are performing and what they can do to reach their goals.

### Monitoring Student Progress

The way we assess and report your child's progress is as unique as the curriculum we teach them. It is a fundamental shift from traditional percentages and overall letter grades of the past. Through the NHA Scoring Scales, teachers can determine with greater accuracy how your child is doing towards mastering grade-level material and adjust their instruction to better help your child learn and grow.

### The NHA Scoring Scales

The NHA Scoring Scales provide detailed information about what the teacher is looking for while assessing an objective on a scale of 0-4.0. This is where the real difference lies. You may remember from past school experiences that a 4.0 meant an "A". In the NHA Scoring Scales, a 4.0 does not equal an "A" but is defined as going beyond what was taught in class. By our definition, the 3.0 level means that your child is achieving at grade-level and mastering expectations. The NHA Scoring Scales take the guesswork out of where the students are and need to be and provide the essential information teachers need to create lessons, assignments, and assessments that reflect true grade-level objectives. The teacher can use that information to plan future instruction; the student can use that information to understand and adjust her learning; and parents can use that information to get an overall picture of their student's progress towards the learning goals. Having a specific target and being able to show a student's progress toward that target is what makes the NHA Curriculum and Scoring Scales a powerful tool for teachers, students, parents, and caregivers.

### Report Cards

Report cards will look very different this year. They begin with a one-page summary of student performance in each content area. They also contain several pages of details about each target learning area (called Measurement Topics) and personalized graphs that give a visual representation of each student's academic growth for every Measurement Topic studied in that quarter. Personalized notes for each Measurement Topic will give parents more useful information than ever before.

## NHA ELA Exemplar: Reading Grade Eight

### **Measurement Topic: Fluency and Vocabulary Development**

**The student will apply reading skills and strategies to recognize and comprehend individual words, phrases, sentences, and to read texts fluently**

- Describe how historical events contribute to the evolution of the English Language (e.g., raccoon, opossum, canoe, barbeque {Native American}; bread basket, greenbacks {Civil War}; mustang, canyon, ranch {Spanish}; fax, modem, computer {technology}; vaccine, airplane, telephone {Industrial Revolution})
- Decode words, phrases and statements
- Use reference materials to determine word meaning (dictionaries, thesauruses, glossaries, foreign language dictionaries)
- Read eighth grade-level texts fluently, with appropriate pacing, voice, inflection, and intonation
- Analyze idioms, analogies, metaphors, and similes to infer literal and figurative meaning of phrases
- Extend vocabulary through reading and explicit instruction, including words from different content areas

### **Measurement Topic: Comprehension**

**The student will apply a range of reading and comprehension skills and strategies to construct meaning from a variety of texts, both fiction and nonfiction**

- Apply comprehension strategies before, during, and after reading
- Identify the author's purpose, (e.g., to persuade, to inform, to entertain, to describe, or to evaluate), viewpoint, and intended audience and match it to personal reading purpose
- Determine how a work of literature reflects the attitudes or beliefs of its author

### **Measurement Topic: Expository/Informational Text**

**The student will apply a range of reading skills to read and comprehend informational text**

- Analyze common textual features
- Analyze informational text
- Compare and contrast informational text
- Process information in text
- Identify and analyze a Moral Focus theme in a text and relate it to personal and societal issues

### **Measurement Topic: Literary Response and Analysis**

**The student will apply a range of reading skills and strategies to read from a wide variety of literary genres to make text-to-text, text-to-self, and text-to-world connections**

- Analyze characteristics of literary forms and genres
- Analyze characteristics of major and minor elements of fiction
- Analyze characteristics of major and minor elements at work in poetry
- Identify and analyze central ideas and recurring themes within and across texts and relate them to personal and societal issues

## NHA Exemplar: Writing

### Measurement Topic: Audience and Purpose

The student will demonstrate an understanding of audience and purpose in writing

- Maintain a varied portfolio
- Discriminate among possible purposes and combining purposes if necessary or effective (e.g., writing an composition that both inspires and entertains)
- Discriminate among multiple possible audiences and select the most useful (e.g., an essay about the environment aimed at young parents concerned about their child's future)

### Measurement Topic: Drafting and Revising

The student will draft, revise, edit, and publish writing using the writing process

- Apply prewriting strategies
- Review and revise writing
- Use available technology to write, edit, and revise compositions (e.g., produce final drafts that meet established criteria for class assignments, i.e., margins, font size, sentence spacing in paragraphs)

### Measurement Topic: Writing Applications

The student will use different types of writing to communicate ideas, concepts, emotions, and descriptions

- Write biographical and autobiographical sketches
- Write narratives
- Write responses to literature
- Write expository/persuasive compositions
- Write personal and business correspondence and technical documents
- Write narrative (personal or literary), expository, or persuasive compositions that incorporate a Moral Focus theme, following all the conventions of the selected formats

### Measurement Topic: Research and Information Organization

The student will employ appropriate methods and resources to research and report on an inquiry topic

- Collect, analyze, and represent data from surveys
- Form and defend a hypothesis about a research topic
- Use interviewing techniques (thought-provoking questions, flexible questions) to gather information
- Write a research paper about a notable person of history or science, making connections to one or more of the Moral Focus themes (See Science and Social Studies Objectives for list)

## NHA Exemplar: Language Usage

### Measurement Topic: Spelling and Language Mechanics

The student will apply the conventions of spelling, punctuation, and capitalization in their own writing

- Spell grade-appropriate words
- Use punctuation

### Measurement Topic: Language Conventions

The student will apply the conventions of grammar in their own writing and while speaking

- Analyze and evaluate different parts of speech
- Exemplify effective use of voice
- Demonstrate use of all tense forms
- Vary sentence forms in writing
- Identify and use infinitives, gerunds, participles, and modifiers
- Use parallelism (consistent elements of grammar when compiling a list) in all writing to present items in a series and items juxtaposed for emphasis

## NHA Exemplar: Speaking, Listening, and Viewing

### Measurement Topic: Speaking Applications

The student will speak clearly and concisely for a variety of purposes and audiences, using appropriate eye contact, volume, gestures, and pacing

- Participate and contribute in discussions (e.g., whole-class seminars, literature circles, work groups, panel discussions, mock trials)
- Create and deliver oral presentations:
- Recite poems (four to six stanzas), sections of published speeches, and dramatic soliloquies using voice modulation, tone, and gestures expressively
- Employ appropriate verbal and non-verbal techniques for oral presentations
- Modify oral presentations based on verbal and non-verbal feedback from the audience (e.g., pacing, tone of voice, details, regaining interest by using humor)

### Measurement Topic: Listening Comprehension

The student will apply critical listening and responding skills in order to evaluate, summarize, draw conclusions, make inferences, and gain information

- Critique a speaker's presentation
- Analyze the techniques speakers use to communicate a message (e.g., persuasive techniques, effect of word choice, use of slanted or biased material, emotional appeals)
- Recognize the way in which language differs across a variety of social situations (e.g., formal and informal speeches, use of jargon by sports or political commentators, use of slang among peers)

### Measurement Topic: Analysis and Evaluation of Media

The student will apply critical skills in order to evaluate and analyze media

- Analyze and evaluate the persuasive techniques used in presentations and media (e.g., bandwagon, glittering generalities, emotional word repetition, bait and switch, testimonial, images, music)
- Analyze and evaluate communication in media
- Interpret how the type of media affects the coverage of events or issues (e.g., how same event is covered by radio, television, and newspaper; how each medium shapes a point of view; how the limitations and advantages of medium affect coverage)
- Analyze basic influences on media messages and images (e.g., historical events, place in which they were made, laws that govern mass media, target audience, financial sponsorship, cause and effect between media and public opinion)

## NHA Math Exemplar: Number Sense and Operations Grade Eight

### Measurement Topic: Number Sense and Number Systems

The student will build an understanding of the representations, models, and connections between real numbers

- Read, write, compare, order, and plot real numbers:
- Classify numbers within the real number system (e.g., natural number, whole number, integer, rational number, irrational number)

### Measurement Topic: Operations, Computation, and Estimation

The student will understand the properties and characteristics of real numbers and their application to computation. Students become fluent in applied computations and will build flexibility by utilizing a variety of computational methods, including mental calculations, estimation, and paper-and-pencil calculations

- Calculate and estimate the square root of whole numbers (e.g.,  $\sqrt{152}$  is between 12 and 13)
- Apply the algebraic order of operations and properties of real numbers (Identity, Inverse, Zero, Commutative, Associative, Distributive) to simplify expressions and perform computations
- Perform computations involving integer exponents, radicals, percents, and weighted averages
- Use estimation strategies and evaluate their usefulness
- Use mental arithmetic to compute with common fractions, decimals, powers, and percents
- Add, subtract, multiply, and divide numbers written in scientific notation

## NHA Math Exemplar: Algebra and Functions

### Measurement Topic: Functions and Equations

The student will understand and use variables and algebraic expressions. They will write and solve equations and functions, and use formulas to solve problems and describe patterns

- Write, simplify, and evaluate algebraic expressions, linear equations, and inequalities
- Solve problems involving monomials, binomials, and polynomials
- Analyze and use methods to solve quadratic equations
- Analyze types of changes in mathematical relationships (linear vs. nonlinear, continuous vs. discrete, direct vs. inverse variation)
- Analyze functions and patterns
- Recognize and apply special binomial products:  $(a + b)^2 = a^2 + 2ab + b^2$ ;  $(a - b)^2 = a^2 - 2ab + b^2$ ;  $(a + b)(a - b) = a^2 - b^2$

### Measurement Topic: Algebraic Representations and Mathematical Models

The student will write equations and functions, represent them on the coordinate plane, and describe the characteristics of the graphs

- Graph linear functions:
- Graph nonlinear functions:
- Graph quadratic functions and use the graph to locate the roots (solutions)
- Graph and solve linear systems and inequalities

## NHA Math Exemplar: Geometry

### Measurement Topic: Lines, Angles, and Geometric Objects

The student will analyze characteristics and properties of two- and three-dimensional shapes and develop mathematical arguments about geometric relationships

- Use the Pythagorean Theorem and its converse in a variety of contexts (to find missing lengths, distances between points in the coordinate plane, solve perimeter area, volume and surface area problems)
- Sketch two-dimensional representations of three-dimensional objects (orthogonal views (top, front, side), picture views (projective, isometric), nets)

### Measurement Topic: Transformations, Congruency, and Similarity

The student will apply transformations, use symmetry to analyze mathematical situations, and use visualization, spatial reasoning, and geometric modeling to solve problems

- Draw a variety of transformations of figures (dilation, translations, reflection, rotation) and determine the properties that remain fixed

## NHA Math Exemplar: Measurement

### Measurement Topic: Measurement Systems

The student will apply appropriate techniques, tools, and formulas to estimate and measure

- Apply and use the concepts of indirect measurement (e.g., similarity, proportions, estimation)
- Create and interpret scale drawings
- Convert between and within measurement systems (e.g., miles per hour to feet per second, ton to kilogram)
- Select and apply appropriate units and tools to measure and estimate

### Measurement Topic: Perimeter, Area, and Volume

The student will apply appropriate techniques, tools, and formulas to estimate and measure perimeter, area, and volume

- Find the perimeter/circumference and area regular and irregular two-dimensional shapes
- Find the surface area and volume of three-dimensional figures
- Analyze the effect of scale factor  $k$  on the measurement of similar polygons (areas are related by a factor of  $k^2$ , surface areas are related by a factor of  $k^2$ , volume is related by a factor of  $k^3$ )

## NHA Math Exemplar: Data Analysis and Probability

### Measurement Topic: Data Organization and Interpretation

The student will formulate questions that can be addressed with data and collect, organize, display, and interpret relevant data to find answers. They will select and use appropriate statistical methods to analyze data, as well as develop and evaluate inferences and predictions that are based on data

- Organize, display, and interpret data using tables, graphs (line, circle, bar, histogram) and plots (stem-and-leaf, box-and-whisker, scatter)
- Compare two sets of data using measures of central tendency (mean, median, mode) and measures of variation (range, quartile ranges)
- Approximate a line of best fit for linear data distributions
- Construct and communicate convincing arguments based on analysis of data and interpretation of graphs

**Measurement Topic: Probability****The student will understand and apply basic concepts of probability**

- Determine the probability of complementary events
- Determine the probability of independent and dependent events
- Use the Basic Counting Principle to find the number of possible arrangements of several objects

**NHA Math Exemplar: Problem Solving****Measurement Topic: Strategies and Reasoning****The students will apply the problem solving process by understanding problems, choosing and employing strategies to solve problems, monitoring and reflecting on the process of mathematical problem solving, justifying solutions, and extending the problem**

- Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns
- Select and apply appropriate strategies to solve problems individually or as a group (e.g., modeling with pictures or manipulatives, breaking into simpler parts, solving a simpler problem, work backwards, trial and error, counterexamples, proportionality)
- Express solutions clearly and logically and determine whether an approximate or exact answer is appropriate:
- Analyze different problem solving methods:
- Make and test mathematical conjectures using inductive and deductive reasoning

**Measurement Topic: Validity of Results****The students will calculate and verify solutions, and justify the process used to solve the problem**

- Make precise calculations and evaluate the reasonableness of the solution in the context of the problem
- Explain the reasoning used to solve a problem (what you did and why you chose to do it that way)
- Use estimation to verify the reasonableness of calculated results

# Indiana Science Grade Eight

## Introduction to Science

### **The Nature of Science: Scientific Knowledge**

- Analyze similar investigations that yield different results to determine the cause of the difference and develop a plan to eliminate the variables
- Trace the development of an idea to a scientific theory

### **The Nature of Science: Scientific Inquiry- The Scientific Method**

- Propose questions and hypotheses that can be studied through scientific investigations and distinguish them from questions and hypothesis that cannot be examined scientifically
- Explain why only one variable (e.g., independent, dependent, control) can be manipulated at a time
- Describe why questioning, response to criticism, replication, accurate record keeping, and open communication are integral to the process of science

### **The Nature of Science: Scientific Inquiry- Data Collection and Analysis**

- Use appropriate tools, technologies and metric measurements to gather, analyze, and interpret data and report results
- Organize, display, and interpret scientific data in tables, graphs (e.g. line, circle, bar, histogram) and plots (e.g. stem-and-leaf, box-and-whisker, scatter)
- Interpret and evaluate tables, charts, and graphs produced by others
- Cite evidence from tables, charts, and/or graphs in making arguments and claims in oral and written reports
- Describe basic safety procedures in science such as recognizing potential hazards, cautiously manipulating materials and equipment and conducting appropriate procedures

### **The Nature of Science: Scientific Enterprise- Science and Society**

- Describe the diverse nature of science and scientists past and present
- Describe ways in which science and society influence one another

### **The Nature of Science: Common Themes in Science**

- Analyze the parts, subsystems and interactions of a system
- Measure and graph change over time and analyze the results to determine patterns and trends or predict events
- Compare and contrast the properties of objects as they change in scale

## Heredity

### **The Living Environment: Genetics and Heredity**

- Describe the relationship between genes, proteins, chromosomes, genomes, and DNA and explain their role in the process of heredity
- Compare how genetic material is transferred to offspring in sexual and asexual reproduction
- Use models such as Punnett squares or pedigree charts help determine the probability of traits being expressed

### **The Nature of Science: Scientific Enterprise- Science and Society**

- Describe the diverse nature of science and scientists past and present
- Describe ways in which science and society influence one another

## Species Over Time

### **The Living Environment: Plant and Animal Adaptations**

- Analyze the inherited and learned structures, behavior and physiology of organisms that contribute to survival in their particular environment

### **The Living Environment: Genetics and Heredity**

- Explain the impact of both sexual and asexual reproduction on the spread of traits that are detrimental or beneficial for the survival of an organism
- Analyze the process of natural selection and evaluate evidence of it as a mechanism that leads to diversity of species over time

### **The Living Environment: Fossils and Extinction**

- Describe how fossils provide evidence of the appearance, diversification, and extinction of organisms from the past

### **The Nature of Science: Scientific Knowledge**

- Trace the development of an idea to a scientific theory

### **The Nature of Science: Scientific Enterprise- Science and Society**

- Describe the diverse nature of science and scientists past and present

### **The Nature of Science: Common Themes in Science**

- Measure and graph change over time and analyze the results to determine patterns and trends or predict events

## Chemistry

### **Physical Science: Properties of Materials**

- Describe physical and chemical properties of a variety of substances
- Describe the function of the periodic table in describing and grouping common earth elements by their basic properties (e.g., symbol, reactivity, metal, non-metal or metalloid, natural state, what products contain them)

### **Physical Science: Physical States and Changes**

- Explain the physical properties of solids, liquids, gases and their changes (contraction & expansion) using the particulate nature of matter model
- Describe phases of matter and changes in phases in terms of particle kinetic energy and energy transfer

### **Physical Science: Forms of Energy and Their Interactions**

- Explain heat, heat energy transfer and temperature in terms of particle kinetic energy
- Compare and contrast conduction, convection, and radiation as methods of heat energy transfer

### **Physical Science: Mixtures and Solutions**

- Describe characteristics of a solution at the particle level, including the process of dissolving, saturation, and concentration

### **Physical Science: Atoms and Molecules**

- Explain how chemical reactions form new substances with new properties from the rearrangement and conservation of atoms

### **The Nature of Science: Scientific Knowledge**

- Trace the development of an idea to a scientific theory

### **The Nature of Science: Scientific Enterprise- Science and Society**

- Describe the diverse nature of science and scientists past and present

## Electricity and Magnetism

**Physical Science: Electricity**

- Construct complex circuits and describe the interaction of the circuit components to produce heat, light, sound, and magnetic effects
- Analyze changing current flow in given circuits
- Describe the relationship between electric current and magnetism
- Analyze and describe the process for generating electrical energy from a variety of energy sources (e.g. sun, wind and coal)

**The Nature of Science: Scientific Inquiry- The Scientific Method**

- Propose questions and hypotheses that can be studied through scientific investigations and distinguish them from questions and hypothesis that cannot be examined scientifically
- Explain why only one variable (e.g., independent, dependent, control) can be manipulated at a time
- Describe why questioning, response to criticism, replication, accurate record keeping, and open communication are integral to the process of science

**The Nature of Science: Scientific Knowledge**

- Analyze similar investigations that yield different results to determine the cause of the difference and develop a plan to eliminate the variables

**The Nature of Science: Scientific Inquiry- Data Collection and Analysis**

- Organize, display, and interpret scientific data in tables, graphs (e.g. line, circle, bar, histogram) and plots (e.g. stem-and-leaf, box-and-whisker, scatter)
- Interpret and evaluate tables, charts, and graphs produced by others
- Cite evidence from tables, charts, and/or graphs in making arguments and claims in oral and written reports

**Earth Systems****Earth and Space Science: Earth Systems**

- Compare the Earth system to other systems of parts that make up a whole
- Compare and contrast different types of systems and identify what makes Earth an open mechanistic system
- Analyze various events on Earth and describe the impact they have across multiple spheres of the Earth

**The Nature of Science: Scientific Knowledge**

- Analyze similar investigations that yield different results to determine the cause of the difference and develop a plan to eliminate the variables

**The Nature of Science: Scientific Inquiry- The Scientific Method**

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**The Nature of Science: Scientific Enterprise- Science and Society**

- Describe the diverse nature of science and scientists past and present
- Describe ways in which science and society influence one another

**The Nature of Science: Common Themes in Science**

- Measure and graph change over time and analyze the results to determine patterns and trends or predict events
- Compare and contrast the properties of objects as they change in scale

# Indiana Social Studies Grade Eight

## UNIT: Early America- An Overview

### US History: Significant Events, Individuals, & Contributions

- Analyze how early exploration and governmental policies affected Native Americans in the United States

### People, Culture, & Civilizations: Historical Societies & Lifestyles

- Explain how political beliefs and government policies influenced society in the United States
- Describe how geographic and economic conditions led to changes in society (colonization, immigration, slavery)

## UNIT: The American Revolutionary Era

### US History: Significant Events, Individuals, & Contributions

- Evaluate the impact of important individuals' contributions to United States history
- Evaluate how different attitudes, governmental policies, and individual opinions influenced the American Revolution
- Explain the impact of early governmental policies on modern society

### US History: Historical Conflict

- Explain causes and effects of the American Revolution and the impact of these events on United States history
- Evaluate how strengths and weaknesses of participants in conflict in United States history influence the outcome of the conflict
- Explain the impact of the outcome of conflict in United States history on modern society

## UNIT: The Constitutional Era

### Civics & Government: Government Systems

- Explain how the strengths and weaknesses of early forms of government and influential writings led to the formation of the current US Constitution
- Defend each side of the major debates proposed at the Constitutional Convention and in the process of ratifying the Constitution
- Determine current examples of the function of the federal government as outlined in the Constitution (real-life applications of the 3 Branches of Government and the Bill of Rights)

## UNIT: Life in the New Nation

### US History: Significant Events, Individuals, & Contributions

- Explain the impact of early governmental policies on modern society
- Compare and contrast the political process (elections, political parties) from the 1700 and 1800s to today

### US History: Historical Conflict

- Explain the impact of the outcome of conflict in United States history on modern society

### People, Culture, & Civilizations: Historical Societies & Lifestyles

- Explain how political beliefs and government policies influenced society in the United States

## UNIT: Westward Expansion

### US History: Significant Events, Individuals, & Contributions

- Explain the government's reasons for land acquisition in the 1800s
- Analyze how early exploration and governmental policies affected Native Americans in the United States
- Explain the impact of early governmental policies on modern society

### US History: Historical Conflict

- Explain the impact of the outcome of conflict in United States history on modern society
- Describe how land acquisition lead to conflict in United States history

## UNIT: 19<sup>th</sup> Century Culture & Reform

### People, Culture, & Civilizations: Historical Societies & Lifestyles

- Explain how political beliefs and government policies influenced society in the United States
- Evaluate the success of reform movements in regards to their impact on modern society

## UNIT: The Civil War

### US History: Significant Events, Individuals, & Contributions

- Evaluate the impact of important individuals' contributions to United States history
- Explain the impact of early governmental policies on modern society
- Evaluate how different attitudes, governmental policies, and individual opinions influenced the Civil War and African-American society in the United States

### US History: Historical Conflict

- Evaluate how strengths and weaknesses of participants in conflict in United States history influence the outcome of the conflict
- Explain the impact of the outcome of conflict in United States history on modern society

### People, Culture, & Civilizations: Historical Societies & Lifestyles

- Explain how political beliefs and government policies influenced society in the United States
- Describe how geographic and economic conditions led to changes in society (colonization, immigration, slavery)

## UNIT: Late 19<sup>th</sup> Century to Early 20<sup>th</sup> Century

### US History: Significant Events, Individuals, & Contributions

- Compare and contrast industrial development in the late-1800s/early-1900s to modern technological advancement

### US History: Historical Conflict

- Explain the impact of the outcome of conflict in United States history on modern society
- Describe how land acquisition lead to conflict in United States history

### Civics & Government: Citizenship-Awareness, Rights, & Responsibilities

- Determining current examples of obtaining citizenship (real-life applications of the citizenship process)
- Evaluate the importance of knowing one's civil and legal responsibilities when entering a new country

### People, Culture, & Civilizations: Historical Societies & Lifestyles

- Describe how the growth of technology changed life in the United States in the 19<sup>th</sup> century
- Describe how geographic and economic conditions led to changes in society (colonization, immigration, slavery)

## NHA Visual Arts Exemplar: Art Expression

The student will develop and expand their knowledge/skills in the visual arts through the use of media, techniques, and processes to express their own ideas creatively in artwork. The student will analyze, assess, judge merit and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities.

### *Grade Eight*

#### **NHA Objectives**

##### **Measurement Topic: Art Creation**

- Create artwork by selecting media, techniques, and processes to produce desired effects (see Appendix)
- Use art materials safely and appropriately; follow procedures to set up and clean up
- Demonstrate quality craftsmanship
- Use problem solving to produce desired visual effects in artwork
- Use subjects, themes, images, symbols, and art elements and principles to express meaning in artwork

##### **Measurement Topic: Elements and Principles of Art and Design**

- Create artwork using multiple-point perspective to give the illusion of depth
- Use organizational structures as a way to communicate ideas and express meaning
- Create multiple types of 3-D art using various media and processes
- Demonstrate form, shape, line, and proportion when creating natural forms (human, animal, plant, etc.)
- Use techniques such as distortion, exaggeration, and optical illusion
- Identify and use all the elements of art and principles of design (focus on unity, space, repetition, proportion, variety)

##### **Measurement Topic: Critical Analysis**

- Analyze artworks for elements of art and design principles, art techniques, and media and describe using appropriate vocabulary
- Analyze media, techniques, and processes to determine what makes them effective or ineffective
- Interpret meanings derived from the images, symbols, techniques, art elements, or design principles used in artwork
- Generate questions about artwork; provide opinions, personal responses, and possible answers to questions about artwork
- Evaluate their own artwork and the artwork of others for elements of art, principles of design, expressive qualities, quality of techniques, and aesthetics

## NHA Visual Arts Exemplar: Art Connections

The student will demonstrate knowledge of artists, art history, and world cultures by investigating works of art from different times and places. The student will apply their knowledge of visual arts to other disciplines and everyday life

*Grade Eight*

### NHA Objectives

#### **Measurement Topic: History, Culture, and Society**

- Identify individual artist's style, including materials, design, methods, and subject matter
- Explain how political, social, geographical, and cultural factors influence how and what artists create
- Compare characteristics of artwork within a particular historical period or style with ideas, issues, or themes of the times
- Demonstrate knowledge of art history by placing artists, famous artworks, and art movements in chronological order

#### **Measurement Topic: Real World Connections**

- Identify examples of visual art as a part of own culture (advertising, political cartoons, product design, graphic novels, comic books, video games)
- Recognize and describe occupations associated with art (art therapist, video game designer, computer art and design, illustrator, set designer )
- Describe the types of skills and education required for art-related careers

#### **Measurement Topic: Connections to Other Disciplines**

- **Identify art concepts in other subject areas (observation and contour drawing in social studies and science; rhythm and pattern in math, music, movement, and language arts; multiple 2-D views of 3-D object, nets of 3-D objects, transformations, scale drawings, use of measurement tools math; engineering design, light, and motion in science; and graphic display images of data in science and math; use visual media to enhance communication in other content areas; connections to literature in ELA)**

**Grade Eight Social Studies Topics:** Early America, American Revolution, Westward Expansion, 19<sup>th</sup> Century America, Civil War, Late 19<sup>th</sup> to Early 20<sup>th</sup> Century America

## NHA Music Exemplar: Music Expression

The student will develop knowledge and a variety of skills in order to perform, create, read, and describe musical pieces through knowledge of basic musical concepts. Students will engage in both group and individual music-related tasks. They will use this knowledge to analyze, assess, judge merit and determine meaning from music, including their own.

### *Grade Eight*

#### **NHA Objectives**

##### **Measurement Topic: Music Composition and Performance**

- Sing or play a musical piece using expression
- Sing or play a musical piece from memory
- Identify I, IV, and V chord patterns

##### **Measurement Topic: Music Theory**

- Identify and apply 2/4, 3/4, 4/4, 6/8, and alla breve meters
- Apply musical terms for dynamics, tempo, and articulation

##### **Measurement Topic: Analysis of Music**

- Identify characteristics of effective performance
- Define characteristics of effective musical works

## NHA Music Exemplar: Music Awareness

The student will recognize the historical, cultural and social impact of music. They will be able to critically analyze and critique a variety of music from different eras, genres, and sources. Student will be exposed to a variety of music and determine the impact it had both locally and globally.

### *Grade Eight*

#### **NHA Objectives**

##### **Measurement Topic: History, Culture, and Society**

- Identify musicians within American genres (e.g.; jazz, blues, hip hop, country, etc.)
- Identify the origins of American musical genres

##### **Measurement Topic: Real World Connections**

- Identify career opportunities in music within other cultures

##### **Measurement Topic: Integrated Studies**

- Compare the elements of music and art

# NHA Physical Education Exemplar: Movement and Concept Development

## Grade Eight

### NHA Objectives

#### Measurement Topic: Movement and Movement Patterns

- Combine and refine fundamental techniques in complex physical activities and games
- Create and perform rhythmic movement patterns that demonstrate steady beat, tempo and phrasing of music

#### Measurement Topic: Movement Concepts

- Correct unsafe situations related to participation in physical activities
- Demonstrate and describe variations of movement skills that occur in specific sports (locomotor, non-locomotor, manipulative)
- Describe basic physics principles that are utilized in specific sports (e.g., action-reaction, trajectory, linear velocity)

# NHA Physical Education Exemplar: Physical Fitness and Wellness

## Grade Eight

### NHA Objectives

#### Measurement Topic: Personal Fitness

- Assess personal fitness levels and develop a plan to maintain or improve all fitness components
- Evaluate progress on fitness components based on personal plan

#### Measurement Topic: Health Concepts for Life

- Evaluate personal diet choices and predict future health based on current practices (i.e. in relation to the food pyramid, recommended portions, and intake of essential nutrients)
- Evaluate personal water intake (i.e. in relation to symptoms of thirst, dehydration, and physical performance)
- Analyze the negative impact that alcohol, tobacco, and other drugs have on the user, friends, family members, and community members
- Evaluate a variety of stress management techniques for effectiveness

#### Measurement Topic: Teamwork and Sportsmanship

- Exhibit winning and losing gracefully in physical activity context
- Demonstrate respect for and encouragement of others while participating in physical activity context
- Analyze how “fair play” contributes to successful group and team experiences in physical activity context (regardless of winning or losing)