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DLM
Essential Elements
Supporting the
Illinois Learning
Standards

GRADES
NINTH – TWELFTH

CONDENSED LIST OF ESSENTIAL ELEMENTS FOR ELA, MATH AND SCIENCE

WITHOUT STANDARDS ATTACHED

ENGLISH LANGUAGE ARTS – 9TH – 10TH GRADES
READING STANDARDS FOR LITERATURE

Key Ideas and Details

EE.RL.9-10.1 Determine which citations demonstrate what the text says explicitly as well as inferences drawn from the text.

EE.RL.9-10.2 Recount events related to the theme or central idea, including details about character and setting.

EE.RL.9-10.3 Determine how characters change or develop over the course of a text.

Craft and Structure

EE.RL.9-10.4 Determine the meaning of words and phrases as they are used in a text, including idioms, analogies, and figures of speech.

EE.RL.9-10.5 Identify where a text deviates from a chronological presentation of events.

EE.RL.9-10.6 Determine a point of view or cultural experience in a work of literature from outside the United States and compare it with own point of view or experience.

Integration of Knowledge and Ideas

EE.RL.9-10.7 Compare the representation of a subject or topic in two different artistic mediums (e.g., poetry and illustration).

EE.RL.9-10.9 Identify when an author draws upon or references a different text.

Range of Reading and Level of Text Complexity

EE.RL.9-10.10 Demonstrate understanding of a text while actively engaged in reading or listening to stories, dramas, or poems.

READING STANDARDS FOR INFORMATIONAL TEXT

Key Ideas and Details

EE.RI.9-10.1 Determine which citations demonstrate what the text says explicitly as well as inferentially.

EE.RI.9-10.2 Determine the central idea of the text and select details to support it.

EE.RI.9-10.3 Determine logical connections between individuals, ideas, or events in a text.

Craft and Structure

EE.RI.9-10.4 Determine the meaning of words and phrases as they are used in text, including common idioms, analogies, and figures of speech.

EE.RI.9-10.5 Locate sentences that support an author's central idea or claim.

EE.RI.9-10.6 Determine author's point of view and compare with own point of view.

Integration and Knowledge and Ideas

EE.RI.9-10.7 Analyze two accounts of a subject told in different mediums to determine how they are the same and different.

EE.RI.9-10.8 Determine how the specific claims support the argument made in an informational text.

EE.RI.9-10.9 Make connections between texts with related themes and concepts.

Range of Reading and Level of Text Complexity

EE.RI.9-10.10 Demonstrate understanding while actively engaged in reading or listening to literary nonfiction.

WRITING STANDARDS

Text Types and Purposes

EE.W.9-10.1 Write claims about topics or texts.

    EE.W.9-10.1.a Introduce a topic or text and write one claim and one counterclaim about it.

EE.W.9-10.2 Write to share information supported by details.

    EE.W.9-10.2.a Introduce a topic clearly and use a clear organization to write about it including visual, tactual, or multimedia information as appropriate.

    EE.W.9-10.2.b Develop the topic with facts or details.

    EE.W.9-10.2.c Use complete, simple sentences as appropriate.

    EE.W.9-10.2.d Use domain specific vocabulary when writing claims related to a topic of study or text.

    EE.W.9-10.2.f Providing a closing or concluding statement.

EE.W.9-10.3 Write about events or personal experiences.

    EE.W.9-10.3.a Write a narrative about a problem, situation, or observation including at least one character, details, and clearly sequenced events.

    EE.W.9-10.3.c Organize the events in the narrative using temporal words to signal order as appropriate.

    EE.W.9-10.3.d Use descriptive words and phrases to convey a vivid picture of experiences, events, setting, or characters.

    EE.W.9-10.3.e Provide a closing.

Production and Distribution of Writing

EE.W.9-10.4 Produce writing that is appropriate for the task, purpose, and audience.

EE.W.9-10.5 Develop writing by planning and revising own writing.

EE.W.9-10.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products.

Research to Build and Present Knowledge

EE.W.9-10.7 Conduct research projects to answer questions posed by self and others using multiple sources of information.

EE.W.9-10.8 Write answers to research questions by selecting relevant information from multiple resources.

EE.W.9-10.9 Use information from literary and informational text to support writing.

    EE.W.9-10.9.a Apply Essential Elements of Grade 9-10 Reading Standards to literature (e.g., "Identify when an author has drawn upon or included references to another text.").

    EE.W.9-10.9.b Apply Essential Elements of Grade 9-10 Reading Standards to informational texts (e.g., "Use sound reasons for supporting the claims and argument.").

EE.W.9-10.10   Write routinely over time for a range of tasks, purposes, and audiences.

SPEAKING AND LISTENING STANDARDS

Comprehension and Collaboration

EE.SL.9-10.1   Engage in collaborative discussions.

    EE.SL.9-10.1.a   Prepare for discussions by collecting information on the topic.

    EE.SL.9-10.1.b   Work with adults and peers to set rules for discussions.

    EE.SL.9-10.1.c   Relate the topic of discussion to broader themes or ideas.

    EE.SL.9-10.1.d   Indicate agreement or disagreement with others during discussions.

EE.SL.9-10.2   Determine the credibility of information presented in diverse media or formats.

EE.SL.9-10.3   Determine the speaker's point of view on a topic.

Presentation of Knowledge and Ideas

EE.SL.9-10.4   Present an argument on a topic with logically organized claims, reasons, and evidence.

EE.SL.9-10.5   Use digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to support understanding.

EE.SL.9-10.6   Adapt communication to a variety of contexts and tasks using complete sentences when indicated or appropriate.

LANGUAGE STANDARDS

Conventions of Standard English

EE.L.9-10.1   Demonstrate standard English grammar and usage when communicating.

    EE.L.9-10.1.b   Use a variety of parts of speech (nouns, verbs, pronouns, adjectives, and prepositions) in writing or communication to convey information.

EE.L.9-10.2   Demonstrate understanding of conventions of standard English.

    EE.L.9-10.2.a   Use a comma and conjunction to combine two simple sentences.

    EE.L.9-10.2.c   Spell most single-syllable words correctly and apply knowledge of word chunks in spelling longer words.

Knowledge of Language

EE.L.9-10.3   Use language to achieve desired outcomes when communicating.

    EE.L.9-10.3.a   Vary syntax when writing and communicating.

Vocabulary Acquisition And Use

EE.L.9-10.4   Demonstrate knowledge of word meanings.

    EE.L.9-10.4.a   Use context to determine the meaning of unknown

    EE.L.9-10.4.b   Identify and use root words and the words that result when affixes are added or removed.

    EE.L.9-10.4.c   Consult reference materials (dictionaries, online vocabulary supports) to clarify the meaning of unfamiliar words encountered when reading.

EE.L.9-10.5   Demonstrate understanding of word relationships and use.

    EE.L.9-10.5.a   Interpret common figures of speech.

    EE.L.9-10.5.b   Determine the intended meaning of multiple meaning words.

EE.L.9-10.6   Use general academic and domain-specific words and phrases across contexts.

ENGLISH LANGUAGE ARTS – 11ᵀᴴ – 12ᵀᴴ GRADE

READING STANDARDS FOR LITERATURE

Key Ideas and Details

EE.RL.11-12.1   Analyze a text to determine its meaning and cite textual evidence to support explicit and implicit understandings.
EE.RL.11-12.2   Recount the main events of the text which are related to the theme or central idea.
EE.RL.11-12.3   Determine how characters, the setting or events change over the course of the story or drama.

Craft and Structure

EE.RL.11-12.4   Determine how words or phrases in a text, including words with multiple meanings and figurative language, impact the meaning.
EE.RL.11-12.5   Determine how the author's choice of where to end the story contributes to the meaning.
EE.RL.11-12.6   Determine the point of view when there is a difference between the author's actual language and intended meaning.

Integration of Knowledge and Ideas

EE.RL.11-12.7   Compare two or more interpretations (e.g., recorded or live production of a play or recorded novel or poetry) of a story, drama, or poem.
EE.RL.11-12.9   Demonstrate explicit understanding of recounted versions of foundational works of American literature.

Range of Reading and Level of Text Complexity

EE.RL.11-12.10   Demonstrate understanding while actively engaged in reading or listening to stories, dramas, and poems.

READING STANDARDS FOR INFORMATIONAL TEXT

Key Ideas and Details

EE.RI.11-12.1   Analyze a text to determine its meaning and cite textual evidence to support explicit and implicit understanding.
EE.RI.11-12.2   Determine the central idea of a text; recount the text.
EE.RI.11-12.3   Determine how individuals, ideas, or events change over the course of the text.

Craft and Structure

EE.RI.11-12.4   Determine how words or phrases in a text, including words with multiple meanings and figurative language, impacts the meaning of the text.
EE.RI.11-12.5   Determine whether the structure of a text enhances an author's claim.
EE.RI.11-12.6   Determine author's point of view and compare and contrast it with own point of view.

Integration and Knowledge and Ideas

EE.RI.11-12.7   Analyze information presented in different media on related topics to answer questions or solve problems.
EE.RI.11-12.8   Determine whether the claims and reasoning enhance the author's argument in an informational text.
EE.RI.11-12.9   Compare and contrast arguments made by two different texts on the same topic.

Range of Reading and Level of Text Complexity

EE.RI.11-12.10   Demonstrate understanding while actively engaged in reading or listening to literary non-fiction.

WRITING STANDARDS

Text Types and Purposes

EE.W.11-12.1   Write arguments to support claims.
  EE.W.11-12.1.a   Write an argument to support a claim that results from studying a topic or reading a text.
  EE.W.11-12.1.b   Support claims with reasons and evidence drawn from text.
EE.W.11-12.2   Write to share information supported by details.
  EE.W.11-12.2.a   Introduce a topic clearly and write an informative or explanatory text that conveys ideas, concepts, and information including visual, tactual, or multimedia information as appropriate.
  EE.W.11-12.2.b   Develop the topic with relevant facts, details, or quotes.
  EE.W.11-12.2.c   Use complete, simple sentences, as well as compound and other complex sentences as appropriate.
  EE.W.11-12.2.d   Use domain specific vocabulary when writing claims related to a topic of study or text.
  EE.W.11-12.2.f   Provide a closing or concluding statement.
EE.W.11-12.3   Write about events or personal experiences.
  EE.W.11-12.3.a   Write a narrative about a problem, situation, or observation including at least one character, details, and clearly sequenced events.
  EE.W.11-12.3.c   Organize the events in the narrative using temporal words to signal order and add cohesion.
  EE.W.11-12.3.d   Use descriptive words and phrases to convey a vivid picture of experiences, events, setting, or characters.
  EE.W.11-12.3.e   Provide a closing.

Production and Distribution of Writing

EE.W.11-12.4   Produce writing that is appropriate to a particular task, purpose, and audience.
EE.W.11-12.5   Develop and strengthen writing as needed by planning, revising, editing, and rewriting.
EE.W.11-12.6   Use technology, including the Internet, to produce, publish and update an individual or shared writing project.

Research to Build and Present Knowledge	

EE.W.11-12.7   Conduct research projects to answer questions posed by self and others using multiple sources of information.

E.W.11-12.8   **E** Write answers to research questions by selecting relevant information from multiple resources.

EE.W.11-12.9   Cite evidence from literary or informational texts.

    EE.W.11-12.9.a   Apply Grades 11-12 Essential Elements for Reading Standards to literature (e.g., "Compare and contrast elements of American literature to other literary works, self, or one's world. [Compare themes, topics, locations, context, and point of view].").

    EE.W.11-12.9.b   Apply Grades 11-12 Essential Elements for Reading Standards to informational texts (eg., "Compare and contrast reasoning and arguments used in one's work with those used in seminal U.S. texts.").

Range of Writing

EE.W.11-12.10   Write routinely over extended time frames (time for research, reflection, and revision) for a range of tasks, purposes, and audiences.

SPEAKING AND LISTENING STANDARDS

Comprehension and Collaboration

EE.SL.11-12.1   Engage in collaborative discussions.

    EE.SL.11-12.1.a   Prepare for discussions by collecting information on the topic.

    EE.SL.11-12.1.b   Work with peers to set rules and goals for discussions.

    EE.SL.11-12.1.c   Ask and answer questions to verify or clarify own ideas and understandings during a discussion.

    EE.SL.11-12.1.d   Respond to agreements and disagreements in a discussion.

EE.SL.11-12.2   Determine the credibility and accuracy of information presented across diverse media or formats.

EE.SL.11-12.3   Determine whether the claims and reasoning enhance the speaker's argument on a topic.

Presentation of Knowledge and Ideas

EE.SL.11-12.4   Present an argument on a topic using an organization appropriate to the purpose, audience, and task.

EE.SL.11-12.5   Use digital media strategically (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to support understanding and add interest.

EE.SL.11-12.6   Adapt communication to a variety of contexts and tasks using complete sentences when indicated or appropriate.

LANGUAGE STANDARDS

Conventions of Standard English

EE.L.11-12.1   Demonstrate standard English grammar and usage when communicating.

    EE.L.11-12.1.a   Use conventions of standard English when needed.

    EE.L.11-12.1.b   Use digital, electronic, and other resources and tools to improve uses of language as needed.

EE.L.11-12.2   Demonstrate understanding of conventions of standard English.

    EE.L.11-12.2.a   Demonstrate conventions of standard English including capitalization, ending punctuation, and spelling when writing.

    EE.L.11-12.2.b   Spell most single-syllable words correctly and apply knowledge of word chunks in spelling longer words.

Knowledge of Language

EE.L.11-12.3   Use language to achieve desired outcomes when communicating.

    EE.L.11-12.3.a   Vary sentence structure using a variety of simple and compound sentence structures.

Vocabulary Acquisition And Use

EE.L.11-12.4   Demonstrate knowledge of word meanings.

    EE.L.11-12.4.a   Use context to determine the meaning of unknown words.

    EE.L.11-12.4.b   Identify and use root words and the words that result when affixes are added or removed.

    EE.L.11-12.4.d   Consult reference materials (dictionaries, online vocabulary supports) to clarify the meaning of unfamiliar words encountered when reading.

EE.L.11-12.5   Demonstrate understanding of word relationships and use.

    EE.L.11-12.5.a   Interpret simple figures of speech encountered while reading or listening.

EE.L.11-12.6   Use general academic and domain-specific words and phrases across contexts.

STANDARDS FOR MATHEMATICAL PRACTICE	MP
MP.1	Make sense of problems and persevere in solving them.
MP.2	Reason abstractly and quantitatively.
MP.3	Construct viable arguments and critique the reasoning of others.
MP.4	Model with mathematics.
MP.5	Use appropriate tools strategically.
MP.6	Attend to precision.
MP.7	Look for and make use of structure.
MP.8	Look for and express regularity in repeated reasoning.

MATHEMATICS – HIGH SCHOOL

ALGEBRA I

QUANTITIES — Q

Reason quantitatively and use units to solve problems.

EE.N-Q.1–3.	Express quantities to the appropriate precision of measurement.

SEEING STRUCTURE IN EXPRESSIONS — SSE

Interpret the structure of expressions

EE.A-SSE.1.	Identify an algebraic expression involving one arithmetic operation to represent a real-world problem.

Write expressions in equivalent forms to solve problems

EE.A-SSE.3.	Solve simple algebraic equations with one variable using multiplication and division.

CREATING EQUATIONS — CED

Create equations that describe numbers or relationships

EE.A-CED.1.	Create an equation involving one operation with one variable, and use it to solve a real-world problem.
EE.A-CED.2–4.	Solve one-step inequalities.

REASONING WITH EQUATIONS AND INEQUALITIES — REI

Represent and solve equations and inequalities graphically

EE.A-REI.10–12.	Interpret the meaning of a point on the graph of a line. For example, on a graph of pizza purchases, trace the graph to a point and tell the number of pizzas purchased and the total cost of the pizzas.

INTERPRETING FUNCTIONS — IF

Understand the concept of a function and use function notation

EE.F-IF.1–3.	Use the concept of function to solve problems.

Interpret functions that arise in applications in terms of the context

EE.F-IF.4–6.	Construct graphs that represent linear functions with different rates of change and interpret which is faster/slower, higher/lower, etc.

BUILDING FUNCTIONS — BF

Build a function that models a relationship between two quantities

EE.F-BF.1.	Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.

LINEAR, QUADRATIC, AND EXPONENTIAL MODELS — LE

Construct and compare linear, quadratic, and exponential models and solve problems

EE.F-LE.1–3.	Model a simple linear function such as $y = mx$ to show that these functions increase by equal amounts over equal intervals.

INTERPRETING CATEGORICAL AND QUANTITATIVE DATA — ID

Summarize, represent, and interpret data on a single count or measurement variable

EE.S-ID.1–2.	Given data, construct a simple graph (line, pie, bar, or picture) or table, and interpret the data.
EE.S-ID.3.	Interpret general trends on a graph or chart.

GEOMETRY
CONGRUENCE — CO

Experiment with transformations in the plane

EE.G-CO.1.   Know the attributes of perpendicular lines, parallel lines, and line segments; angles; and circles.
EE.G-CO.4–5.   Given a geometric figure and a rotation, reflection, or translation of that figure, identify the components of the two figures that are congruent.

Understand congruence in terms of rigid motions

EE.G-CO.6–8.   Identify corresponding congruent and similar parts of shapes.

EXPRESSING GEOMETRIC PROPERTIES WITH EQUATIONS — GPE

Use coordinates to prove simple geometric theorems algebraically

EE.G-GPE.7.   Find perimeters and areas of squares and rectangles to solve real-world problems.

GEOMETRIC MEASUREMENT AND DIMENSION — GMD

Explain volume formulas and use them to solve problems

EE.G-GMD.1–3. Make a prediction about the volume of a container, the area of a figure, and the perimeter of a figure, and then test the prediction using formulas or models.

Visualize relationships between two-dimensional and three-dimensional objects

EE.G-GMD.4.   Identify the shapes of two-dimensional cross-sections of three-dimensional objects.

MODELING WITH GEOMETRY — MG

Apply geometric concepts in modeling situations

EE.G-MG.1–3.   Use properties of geometric shapes to describe real-life objects.

ALGEBRA II
THE REAL NUMBER SYSTEM — RN

Extend the properties of exponents to rational exponents.

EE.N-RN.1.   Determine the value of a quantity that is squared or cubed.

QUANTITIES — Q

Reason quantitatively and use units to solve problems.

EE.N-Q.1–3.   Express quantities to the appropriate precision of measurement.

THE COMPLEX NUMBER SYSTEM — CN

Perform arithmetic operations with complex numbers.

EE.N-CN.2.a.   Use the commutative, associative, and distributive properties to add, subtract, and multiply whole numbers.
EE.N-CN.2.b.   Solve real-world problems involving addition and subtraction of decimals, using models when needed.
EE.N-CN.2.c.   Solve real-world problems involving multiplication of decimals and whole numbers, using models when needed.

SEEING STRUCTURE IN EXPRESSIONS — SSE

Write expressions in equivalent forms to solve problems

EE.A-SSE.3.   Solve simple algebraic equations with one variable using multiplication and division.
EE.A-SSE.4.   Determine the successive term in a geometric sequence given the common ratio.

CREATING EQUATIONS — CED

Create equations that describe numbers or relationships

EE.A-CED.1.   Create an equation involving one operation with one variable, and use it to solve a real-world problem.

REASONING WITH EQUATIONS AND INEQUALITIES — REI

Represent and solve equations and inequalities graphically

EE.A-REI.10–12. Interpret the meaning of a point on the graph of a line. For example, on a graph of pizza purchases, trace the graph to a point and tell the number of pizzas purchased and the total cost of the pizzas.

INTERPRETING FUNCTIONS — IF

Understand the concept of a function and use function notation

EE.F-IF.1–3.   Use the concept of function to solve problems.

Interpret functions that arise in applications in terms of the context

EE.F-IF.4–6.   Construct graphs that represent linear functions with different rates of change and interpret which is faster/slower, higher/lower, etc.

BUILDING FUNCTIONS — BF

Build a function that models a relationship between two quantities

EE.F-BF.1.   Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.
EE.F-BF.2.   Determine an arithmetic sequence with whole numbers when provided a recursive rule.

LINEAR, QUADRATIC, AND EXPONENTIAL MODELS — LE

Construct and compare linear, quadratic, and exponential models and solve problems

EE.F-LE.1–3.   Model a simple linear function such as $y = mx$ to show that these functions increase by equal amounts over equal intervals.

INTERPRETING CATEGORICAL AND QUANTITATIVE DATA	ID

Summarize, represent, and interpret data on a single count or measurement variable

EE.S-ID.4. Calculate the mean of a given data set (limit the number of data points to fewer than five).

MAKING INFERENCES AND JUSTIFYING CONCLUSIONS	IC

Understand and evaluate random processes underlying statistical experiments

EE.S-IC.1–2. Determine the likelihood of an event occurring when the outcomes are equally likely to occur.

CONDITIONAL PROBABILITY AND THE RULES OF PROBABILITY	CP

Understand independence and conditional probability and use them to interpret data

EE.S-CP.1–5. Identify when events are independent or dependent.

INTEGRATED PATHWAY MATH 1

QUANTITIES	Q

Reason quantitatively and use units to solve problems.

EE.N-Q.1–3. Express quantities to the appropriate precision of measurement.

SEEING STRUCTURE IN EXPRESSIONS	SSE

Interpret the structure of expressions

EE.A-SSE.1. Identify an algebraic expression involving one arithmetic operation to represent a real-world problem.

Write expressions in equivalent forms to solve problems

EE.A-SSE.3. Solve simple algebraic equations with one variable using multiplication and division.

CREATING EQUATIONS	CE

Create equations that describe numbers or relationships

EE.A-CED.1. Create an equation involving one operation with one variable, and use it to solve a real-world problem.

EE.A-CED.2–4. Solve one-step inequalities.

REASONING WITH EQUATIONS AND INEQUALITIES	REI

Represent and solve equations and inequalities graphically

EE.A-REI.10–12. Interpret the meaning of a point on the graph of a line. For example, on a graph of pizza purchases, trace the graph to a point and tell the number of pizzas purchased and the total cost of the pizzas.

INTERPRETING FUNCTIONS	IF

Understand the concept of a function and use function notation

EE.F-IF.1–3. Use the concept of function to solve problems.

Interpret functions that arise in applications in terms of the context

EE.F-IF.4–6. Construct graphs that represent linear functions with different rates of change and interpret which is faster/slower, higher/lower, etc.

BUILDING FUNCTIONS	BF

Build a function that models a relationship between two quantities

EE.F-BF.1. Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.

EE.F-BF.2. Determine an arithmetic sequence with whole numbers when provided a recursive rule.

LINEAR, QUADRATIC, AND EXPONENTIAL MODELS	LE

Construct and compare linear, quadratic, and exponential models and solve problems

EE.F-LE.1–3. Model a simple linear function such as $y = mx$ to show that these functions increase by equal amounts over equal intervals.

CONGRUENCE	CO

Experiment with transformations in the plane

EE.G-CO.1. Know the attributes of perpendicular lines, parallel lines, and line segments; angles; and circles.

EE.G-CO.4–5. Given a geometric figure and a rotation, reflection, or translation of that figure, identify the components of the two figures that are congruent.

Understand congruence in terms of rigid motions

EE.G-CO.6–8. Identify corresponding congruent and similar parts of shapes.

INTERPRETING CATEGORICAL AND QUANTITATIVE DATA	ID

Summarize, represent, and interpret data on a single count or measurement variable

EE.S-ID.1–2. Given data, construct a simple graph (line, pie, bar, or picture) or table, and interpret the data.

EE.S-ID.3. Interpret general trends on a graph or chart.

INTEGRATED PATHWAY MATH 2

THE REAL NUMBER SYSTEM	**RN**

Extend the properties of exponents to rational exponents.

EE.N-RN.1.   Determine the value of a quantity that is squared or cubed.

QUANTITIES	**Q**

Reason quantitatively and use units to solve problems.

EE.N-Q.1–3.   Express quantities to the appropriate precision of measurement.

THE COMPLEX NUMBER SYSTEM	**CN**

Perform arithmetic operations with complex numbers.

EE.N-CN.2.a.   Use the commutative, associative, and distributive properties to add, subtract, and multiply whole numbers.
EE.N-CN.2.b.   Solve real-world problems involving addition and subtraction of decimals, using models when needed.
EE.N-CN.2.c.   Solve real-world problems involving multiplication of decimals and whole numbers, using models when needed.

SEEING STRUCTURE IN EXPRESSIONS	**SSE**

Interpret the structure of expressions

EE.A-SSE.1.   Identify an algebraic expression involving one arithmetic operation to represent a real-world problem.

Write expressions in equivalent forms to solve problems

EE.A-SSE.3.   Solve simple algebraic equations with one variable using multiplication and division.

CREATING EQUATIONS	**CED**

Create equations that describe numbers or relationships

EE.A-CED.1.   Create an equation involving one operation with one variable, and use it to solve a real-world problem.
EE.A-CED.2–4.   Solve one-step inequalities.

INTERPRETING FUNCTIONS	**IF**

Interpret functions that arise in applications in terms of the context

EE.F-IF.4–6.   Construct graphs that represent linear functions with different rates of change and interpret which is faster/slower, higher/lower, etc.

BUILDING FUNCTIONS	**BF**

Build a function that models a relationship between two quantities

EE.F-BF.1.   Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.

GEOMETRIC MEASUREMENT AND DIMENSION	**GMD**

Explain volume formulas and use them to solve problems

EE.G-GMD.1–3.   Make a prediction about the volume of a container, the area of a figure, and the perimeter of a figure, and then test the prediction using formulas or models.

CONDITIONAL PROBABILITY AND THE RULES OF PROBABILITY	**CP**

Understand independence and conditional probability and use them to interpret data

EE.S-CP.1–5.   Identify when events are independent or dependent.

INTEGRATED PATHWAY MATH 3

QUANTITIES	**Q**

Reason quantitatively and use units to solve problems.

EE.N-Q.1–3.   Express quantities to the appropriate precision of measurement.

SEEING STRUCTURE IN EXPRESSIONS	**SSE**

Write expressions in equivalent forms to solve problems

EE.A-SSE.4.   Determine the successive term in a geometric sequence given the common ratio.

CREATING EQUATIONS	**CF**

Create equations that describe numbers or relationships

EE.A-CED.1.   Create an equation involving one operation with one variable, and use it to solve a real-world problem.
EE.A-CED.2–4.   Solve one-step inequalities.

REASONING WITH EQUATIONS AND INEQUALITIES	**REI**

Represent and solve equations and inequalities graphically

EE.A-REI.10–12.   Interpret the meaning of a point on the graph of a line. For example, on a graph of pizza purchases, trace the graph to a point and tell the number of pizzas purchased and the total cost of the pizzas.

INTERPRETING FUNCTIONS	**IF**

Interpret functions that arise in applications in terms of the context

EE.F-IF.4–6.   Construct graphs that represent linear functions with different rates of change and interpret which is faster/slower, higher/lower, etc.

EXPRESSING GEOMETRIC PROPERTIES WITH EQUATIONS	**GPE**

Use coordinates to prove simple geometric theorems algebraically

EE.G-GPE.7.   Find perimeters and areas of squares and rectangles to solve real-world problems.

GEOMETRIC MEASUREMENT AND DIMENSION	**GMD**

Visualize relationships between two-dimensional and three-dimensional objects

EE.G-GMD.4.   Identify the shapes of two-dimensional cross-sections of three-dimensional objects.

MODELING WITH GEOMETRY	MG
Apply geometric concepts in modeling situations	
EE.G-MG.1–3. Use properties of geometric shapes to describe real-life objects.	

INTERPRETING CATEGORICAL AND QUANTITATIVE DATA	ID
Summarize, represent, and interpret data on a single count or measurement variable	
EE.S-ID.4. Calculate the mean of a given data set (limit the number of data points to fewer than five).	

MAKING INFERENCES AND JUSTIFYING CONCLUSIONS	IC
Understand and evaluate random processes underlying statistical experiments	
EE.S-IC.1–2. Determine the likelihood of an event occurring when the outcomes are equally likely to occur.	

SCIENCE (NGSS) – HIGH SCHOOL

PHYSICAL SCIENCE

MATTER AND ITS INTERACTIONS
"STUDENTS WHO DEMONSTRATE UNDERSTANDING CAN...."

EE.HS-PS1-2   **Target Level:** Make a claim supported by evidence to explain patterns of chemical properties that occur in a substance during a common chemical reaction (e.g., baking soda and vinegar).
Precursor Level: Identify the changes that have occurred during a chemical reaction (e.g., metal-rust, paper-burn).
Initial Level: Recognize that a change has occurred during a chemical reaction.

MOTION AND STABILITY: FORCES AND INTERACTIONS

EE.HS-PS2-3   **Target Level:** Evaluate the effectiveness of safety devices and design a solution that could minimize the force of a collision.
Precursor Level: Use data to compare the effectiveness of safety devices to determine which best minimizes the force of a collision.
Initial Level: Identify safety equipment devices that minimize force of a collision (e.g., floor mats, helmets, or steel-toed boots).

ENERGY

EE.HS-PS3-4   Target Level: Investigate and predict the temperatures of two liquids before and after combining to show uniform energy distribution.
Precursor Level: Compare the temperatures of two liquids of different temperatures before and after combining.
Initial Level: Compare relative difference in temperature (warmth, coldness) of two liquids.

WAVES AND THEIR APPLICATIONS IN TECHNOLOGIES FOR INFORMATION TRANSFER

EE.HS-PS4-5   **Target Level**: Make a claim supported by evidence that shows how some devices use light and sound waves to transmit and capture information.
Precursor Level: Identify common devices which use light or sound waves to transmit information.
Initial Level: Identify how common technological devices are used for different purposes.

LIFE SCIENCE

FROM MOLECULES TO ORGANISMS: STRUCTURES AND PROCESSES

EE.HS-LS1-2   **Target Level:** Use a model to illustrate the organization and interaction of major organs into systems (e.g., circulatory, respiratory, digestive, sensory) in the body to provide specific functions.
Precursor Level: Identify which organs work for a specific function.
Initial Level: Recognize that different organs have different functions.

EE.HS-LS1-4   Target Level: Use a model to illustrate how growth occurs when cells multiply.
Precursor Level: Use a model to relate the number of cells to the size of a body.
Initial Level: Recognize that organisms are composed of cells.

ECOSYSTEMS: INTERACTIONS, ENERGY, AND DYNAMICS

EE.HS-LS2-2   Target Level: Use a graphical representation to explain the dependence of an animal population on other organisms for food and their environment for shelter.
Precursor Level: Recognize the relationship between population size and available resources for food and shelter from a graphical representation.
Initial Level: Identify food and shelter needs for familiar wildlife.

HEREDITY: INHERITANCE AND VARIATION OF TRAITS

EE.HS-LS3-2   **Target Level:** Defend why reproduction may or may not result in offspring with different traits.
Precursor Level: Make a claim supported by evidence that parents and offspring may have different traits.
Initial Level: Compare traits of parents and offspring.

BIOLOGICAL EVOLUTION: UNITY AND DIVERSITY

EE.HS-LS4-2   Target Level: Explain how the traits of particular species that allow them to survive in their specific environments.
Precursor Level: Identify factors in an environment that require special traits to survive.
Initial Level: Match particular species to their various environments.

	EARTH and SPACE

EARTH'S PLACE IN THE UNIVERSE

EE.HS-ESS1-4	**Target Level**: Use a model of Earth and the Sun to show how Earth's tilt and orbit around the Sun cause changes in seasons.
	Precursor Level: Use a model of Earth and sun to show how Earth's positions in its orbit around the Sun correspond with the four seasons.
	Initial Level: Identify characteristics of the seasons.

EARTH'S SYSTEMS

EE.HS-ESS2-1	**Target Level:** Use a model to show how constructive forces (e.g., volcanoes) and destructive mechanisms (e.g., weathering, coastal erosions) change Earth's surface.
	Precursor Level: Recognize if processes that change Earth's surface are constructive or destructive.
	Initial Level: Recognize changes (e.g., mountain formation, erosion, and glacial changes) that occurred on Earth's surface.
EE.HS-ESS2-4	**Target Level:** Using a model, recognize how the effects of changes in climate can impact human lives.
	Precursor Level: Recognize climate changes have occurred (e.g., a change in average temperature, precipitation patterns, glacial ice volumes, sea levels).
	Initial Level: Recognize the differences between geographical climates (e.g., Minnesota versus Florida, desert versus rainforest).

EARTH AND HUMAN ACTIVITY

EE.HS-ESS3-1	**Target Level**: Construct an explanation based on evidence for how natural hazards have influenced human activity.
	Precursor Level: Recognize how natural hazards (e.g., floods, earthquakes, tornadoes) influence human activity.
	Initial Level: Recognize characteristics of natural hazards (e.g., floods, earthquakes, tornadoes).
EE.HS-ESS3-2	**Target Level**: Construct an argument for a strategy to conserve, recycle, or reuse resources.
	Precursor Level: Describe the factors that would favor one strategy to conserve, recycle, or reuse resources over another.
	Initial Level: Recognize strategies to manage objects (e.g., dispose, repurpose, or recycle).
EE.HS-ESS3-3	**Target Level:** Analyze data to determine the effects of a conservation strategy on the level of a natural resource.
	Precursor Level: Organize data on the effects of conservation strategies (e.g., using less energy, using rechargeable batteries, recycling or repurposing materials).
	Initial Level: Gather data on the effects of a local (e.g., class or school-wide) conservation strategy.

	Biology High School

FROM MOLECULES TO ORGANISMS: STRUCTURES AND PROCESSES

EE.HS-LS1-1	**Target Level:** Explain how different organs of the body carry out essential functions of life.
	Precursor Level: Indicate the function of major organs of the body.
	Initial Level: Identify major organs of the body.
EE.HS-LS1-2	**Target Level:** Use a model to illustrate the organization and interaction of major organs into systems (e.g., circulatory, respiratory, digestive, sensory) in the body to provide specific functions.
	Precursor Level: Identify which organs work for a specific function.
	Initial Level: Recognize that different organs have different functions.
EE.HS-LS1-3	**Target Level:** Collect data from an investigation to show how different organisms react to changes (e.g., heart rate increases with exercise, pupils react to light).
	Precursor Level: Compare before and after data on changes that occur to an organism.
	Initial Level: Identify changes in the data display (e.g. objects, pictures, graphs, charts, etc.).
EE.HS-LS1-4	**Target Level:** Use a model to illustrate how growth occurs when cells multiply.
	Precursor Level: Use a model to relate the number of cells to the size of a body.
	Initial Level: Recognize that organisms are composed of cells.

ECOSYSTEMS: INTERACTIONS, ENERGY, AND DYNAMICS

EE.HS-LS2-1	**Target Level**: Use a graphical representation to explain changes over time in the population size of an animal species (e.g., currently on the endangered list).
	Precursor Level: Use a graphical representation to show changes in population size.
	Initial Level: Recognize that there was a change in the population size.
EE.HS-LS2-2	**Target Level:** Use a graphical representation to explain the dependence of an animal population on other organisms for food and their environment for shelter.
	Precursor Level: Recognize the relationship between population size and available resources for food and shelter from a graphical representation.
	Initial Level: Identify food and shelter needs for familiar wildlife.

HEREDITY: INHERITANCE AND VARIATION OF TRAITS

EE.HS-LS3-2	**Target Level**: Defend why reproduction may or may not result in offspring with different traits.
	Precursor Level: Make a claim supported by evidence that parents and offspring may have different traits.
	Initial Level: Compare traits of parents and offspring.

BIOLOGICAL EVOLUTION: UNITY AND DIVERSITY

EE.HS-LS4-2	**Target Level**: Explain how the traits of particular species that allow them to survive in their specific environments.
	Precursor Level: Identify factors in an environment that require special traits to survive.
	Initial Level: Match particular species to their various environments.

EE.HS-LS4-3	**Target Level:** Interpret data sets to identify an advantageous heritable trait.
	Precursor Level: Using data sets, identify organisms that would survive better in certain environment.
	Initial Level: Recognize that some organisms survive better in certain environments.
EE.HS-LS4-6	**Target Level:** Evaluate a strategy to protect a species.
	Precursor Level: Using a mathematical model, determine which human actions help or harm a species.
	Initial Level: Identify a human activity that has an effect on a species.

Resources

Dynamic Learning Maps: Illinois Page

This provides districts specific information with regards to the Dynamic Learning Maps-Alternate Assessment for Illinois

http://dynamiclearningmaps.org/illinois

Professional Development

This provides districts professional development for how to implement the Essential Elements within the classroom.

http://dlmpd.com/

Illinois Learning Standards Teacher Resources

Illinois Classrooms in Action – Your first stop for K-12 resources! All of these books can be downloaded from this website under the "Standards Books" page. (www.ilclassroomsinaction.org/standardsbooks.html)

www.ilclassroomsinaction.org