

Unit 01: Introduction to Biology and Evolution

Content Area: **Template**
Course(s):
Time Period: **Full Year**
Length: **FY**
Status: **Published**

Standards Alignment

New Jersey Student Learning Standards

LS4: Biological Evolution: Unity and Diversity

LS4.A: Evidence of Common Ancestry and Diversity

The collection of fossils and their placement in chronological order (e.g., through the location of the sedimentary layers in which they are found or through radioactive dating) is known as the fossil record. It documents the existence, diversity, extinction, and change of many life forms throughout the history of life on Earth. (MS-LS4-1)

Anatomical similarities and differences between various organisms living today and between them and organisms in the fossil record, enable the reconstruction of evolutionary history and the inference of lines of evolutionary descent. (MS-LS4-2)

Comparison of the embryological development of different species also reveals similarities that show relationships not evident in the fully-formed anatomy. (MS-LS4-3)

LS4.B: Natural Selection

Natural selection leads to the predominance of certain traits in a population, and the suppression of others. (MS-LS4-4)

In artificial selection, humans have the capacity to influence certain characteristics of organisms by selective breeding. One can choose desired parental traits determined by genes, which are then passed on to offspring. (MS-LS4-5)

LS4.C: Adaptation

Adaptation by natural selection acting over generations is one important process by which species change over time in response to changes in environmental conditions. Traits that support successful survival and reproduction in the new environment become more common; those that do not become less common. Thus, the distribution of traits in a population changes. (MS-LS4-6)

LS4: Biological Evolution: Unity and Diversity

LS4.A: Evidence of Common Ancestry and Diversity

Genetic information provides evidence of evolution. DNA sequences vary among species, but there are many overlaps; in fact, the ongoing branching that produces multiple lines of descent can be inferred by comparing the DNA sequences of different organisms. Such information is also derivable from the similarities and differences in amino acid sequences and from anatomical and embryological evidence. (HS-LS4-1)

LS4.B: Natural Selection

Natural selection occurs only if there is both (1) variation in the genetic information between organisms in a population and (2) variation in the expression of that genetic information—that is, trait variation—that leads to differences in performance among individuals. (HS-LS4-2), (HS-LS4-3)

The traits that positively affect survival are more likely to be reproduced, and thus are more common in the population. (HS-LS4-3)

LS4.C: Adaptation

Evolution is a consequence of the interaction of four factors: (1) the potential for a species to increase in number, (2) the

genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for an environment's limited supply of the resources that individuals need in order to survive and reproduce, and (4) the ensuing proliferation of those organisms that are better able to survive and reproduce in that environment. (HS-LS4-2)

Natural selection leads to adaptation, that is, to a population dominated by organisms that are anatomically, behaviorally, and physiologically well suited to survive and reproduce in a specific environment. That is, the differential survival and reproduction of organisms in a population that have an advantageous heritable trait leads to an increase in the proportion of individuals in future generations that have the trait and to a decrease in the proportion of individuals that do not. (HS-LS4-3), (HS-LS4-4)

Adaptation also means that the distribution of traits in a population can change when conditions change. (HS-LS4-3)

Changes in the physical environment, whether naturally occurring or human induced, have thus contributed to the expansion of some species, the emergence of new distinct species as populations diverge under different conditions, and the decline—and sometimes the extinction—of some species. (HS-LS4-5), (HS-LS4-6)

Species become extinct because they can no longer survive and reproduce in their altered environment. If members cannot adjust to change that is too fast or drastic, the opportunity for the species' evolution is lost. (HS-LS4-5)

ESS2: Earth's Systems

ESS2.E: Biogeology

The many dynamic and delicate feedbacks between the biosphere and other Earth systems cause a continual co-evolution of Earth's surface and the life that exists on it. (HS-ESS2-7)

SCI.3-LS4	Biological Evolution: Unity and Diversity
SCI.3.LS4.A	Evidence of Common Ancestry and Diversity
SCI.3.LS4.B	Natural Selection
SCI.3.LS4.C	Adaptation
SCI.4.ESS2.E	Biogeology
2-ESS2	Earth's Systems

Integration of Career Readiness, Life Literacies and Key Skills

CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP3	Attend to personal health and financial well-being.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP5	Consider the environmental, social and economic impacts of decisions.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP7	Employ valid and reliable research strategies.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP9	Model integrity, ethical leadership and effective management.
CRP.K-12.CRP10	Plan education and career paths aligned to personal goals.
CRP.K-12.CRP11	Use technology to enhance productivity.
CRP.K-12.CRP12	Work productively in teams while using cultural global competence.

Technology / Integration of Computer Science and Design Thinking

TECH.8.1.8	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.8.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.8.A.1	Demonstrate knowledge of a real world problem using digital tools.
TECH.8.1.8.A.2	Create a document (e.g., newsletter, reports, personalized learning plan, business letters or flyers) using one or more digital applications to be critiqued by professionals for usability.
TECH.8.1.8.A.4	Graph and calculate data within a spreadsheet and present a summary of the results.
TECH.8.1.8.B	Creativity and Innovation: Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.
TECH.8.1.8.B.1	Synthesize and publish information about a local or global issue or event (ex. telecollaborative project, blog, school web).
TECH.8.1.8.C	Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
TECH.8.1.8.C.1	Collaborate to develop and publish work that provides perspectives on a global problem for discussions with learners from other countries.
TECH.8.1.8.D	Digital Citizenship: Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
TECH.8.1.8.D.1	Understand and model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics including appropriate use of social media.
TECH.8.1.8.D.2	Demonstrate the application of appropriate citations to digital content.
TECH.8.1.8.D.3	Demonstrate an understanding of fair use and Creative Commons to intellectual property.
TECH.8.1.8.D.4	Assess the credibility and accuracy of digital content.
TECH.8.1.8.D.5	Understand appropriate uses for social media and the negative consequences of misuse.
TECH.8.1.8.E	Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.
TECH.8.1.8.E.1	Effectively use a variety of search tools and filters in professional public databases to find information to solve a real world problem.
TECH.8.1.8.F	Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
TECH.8.1.8.F.1	Explore a local issue, by using digital tools to collect and analyze data to identify a solution and make an informed decision.
TECH.8.2.8	Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
TECH.8.2.8.A	The Nature of Technology: Creativity and Innovation: Technology systems impact every aspect of the world in which we live.
TECH.8.2.8.A.1	Research a product that was designed for a specific demand and identify how the product has changed to meet new demands (i.e., telephone for communication - smart phone for mobility needs).
TECH.8.2.8.C	Design: The design process is a systematic approach to solving problems.

TECH.8.2.8.C.4	Identify the steps in the design process that would be used to solve a designated problem.
TECH.8.2.8.C.5a	Explain the interdependence of a subsystem that operates as part of a system.
TECH.8.2.8.C.5b	Create a technical sketch of a product with materials and measurements labeled.

Interdisciplinary Connections: NJSLs for ELA, Social Studies, Science and/or Math Section

LA.K-12.NJLSA.R	Reading Key Ideas and Details
LA.K-12.NJLSA.R1	Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
LA.RL.8.1	Cite the textual evidence and make relevant connections that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
LA.K-12.NJLSA.R2	Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
LA.RL.8.2	Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.
LA.RL.8.3	Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.
LA.K-12.NJLSA.R3	Analyze how and why individuals, events, and ideas develop and interact over the course of a text.
LA.K-12.NJLSA.R4	Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
LA.RL.8.4	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
LA.K-12.NJLSA.R5	Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
LA.RL.8.7	Evaluate the choices made by the directors or actors by analyzing the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script.
LA.K-12.NJLSA.R7	Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
LA.RL.8.8	(Not applicable to literature)
LA.K-12.NJLSA.R8	Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
LA.K-12.NJLSA.R9	Analyze and reflect on how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.
LA.RL.8.9	Analyze and reflect on (e.g., practical knowledge, historical/cultural context, and background knowledge) how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.
LA.K-12.NJLSA.R10	Read and comprehend complex literary and informational texts independently and

	proficiently with scaffolding as needed.
LA.RI.8.1	Cite the textual evidence and make relevant connections that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
LA.RI.8.2	Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.
LA.K-12.NJSLSA.W	Writing Text Types and Purposes
LA.K-12.NJSLSA.W1	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
LA.K-12.NJSLSA.W2	Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
LA.RI.8.5	Analyze the structure an author uses to organize a specific paragraph in a text, including the role of particular sentences, to develop and to refine a key concept.
LA.K-12.NJSLSA.W3	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
LA.K-12.NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
LA.RI.8.7	Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.
LA.K-12.NJSLSA.W6	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.
LA.RI.8.8	Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.
LA.K-12.NJSLSA.W8	Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
LA.RI.8.10	By the end of the year read and comprehend literary nonfiction at grade level text-complexity or above, with scaffolding as needed.
LA.K-12.NJSLSA.W9	Draw evidence from literary or informational texts to support analysis, reflection, and research.
LA.W.8.1	Write arguments to support claims with clear reasons and relevant evidence.
LA.K-12.NJSLSA.W10	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
LA.W.8.1.A	Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.
LA.W.8.1.B	Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
LA.W.8.1.C	Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.
LA.K-12.NJSLSA.SL	Speaking and Listening Comprehension and Collaboration
LA.W.8.1.D	Establish and maintain a formal style.
LA.W.8.1.E	Provide a concluding statement or section that follows from and supports the argument presented.

LA.K-12.NJSLSA.SL1	Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
LA.W.8.2	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
LA.K-12.NJSLSA.SL2	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
LA.W.8.2.A	Introduce a topic and organize ideas, concepts, and information, using text structures (e.g., definition, classification, comparison/contrast, cause/effect, etc.) and text features (e.g., headings, graphics, and multimedia).
LA.W.8.2.B	Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
LA.K-12.NJSLSA.SL4	Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
LA.W.8.2.C	Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
LA.W.8.2.D	Use precise language and domain-specific vocabulary to inform about or explain the topic.
LA.K-12.NJSLSA.SL5	Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
LA.K-12.NJSLSA.SL6	Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.
LA.W.8.2.E	Establish and maintain a formal style/academic style, approach, and form.
LA.W.8.3	Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
LA.K-12.NJSLSA.L	Language
LA.W.8.3.B	Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters.
	Conventions of Standard English
LA.W.8.3.D	Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.
LA.K-12.NJSLSA.L1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
LA.W.8.3.E	Provide a conclusion that follows from and reflects on the narrated experiences or events.
LA.W.8.4	Produce clear and coherent writing in which the development, organization, voice and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
LA.W.8.6	Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.
LA.W.8.8	Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
LA.W.8.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

LA.W.8.10	Write routinely over extended time frames (time for research, reflection, metacognition/self correction, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
LA.SL.8	Speaking and Listening Comprehension and Collaboration
LA.SL.8.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.
LA.SL.8.1.A	Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
LA.SL.8.1.B	Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.
LA.SL.8.1.C	Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.
LA.SL.8.1.D	Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.
LA.SL.8.2	Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.
LA.SL.8.4	Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.
LA.SL.8.5	Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.
LA.SL.8.6	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.
LA.L.8.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
LA.L.6.2.A	Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.
LA.L.7.3.A	Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.
LA.L.6.3.B	Maintain consistency in style and tone.
LA.L.4.1.G	Correctly use frequently confused words (e.g., to, too, two; there, their).
LA.L.3.3.A	Choose words and phrases for effect.

Integration of Diversity, Equity and Inclusion; Climate Change; Informational and Media Literacy

see Crosswalks

Stage I: Desired Results

Transfer/Overview/Rationale

Transfer / Overview / Rationale

Unit Rationale

The purpose of this unit...

The purpose of this unit is to introduce students to the field of Biology, the methods and careers within the field of Biology, and that adaptations are the driving force of evolution. Understanding that multiple topics within the field of Biology will transform the students view of the complexity of ecological systems, and their characteristics which keep them in balance.

Meaning

Essential Questions

Essential Questions

- Why is important to study living organisms?
- How do Biologists study and organize life?
- What is the mechanism that propels evolution and how does it relate to behavior?
- What evidence is used to support the theory of evolution?

Enduring Understanding/Indicators of Understanding

Enduring Understanding/Indicators of Understanding

Students will understand that:

- **Multiple careers are involved in the field of Biology including Ecology, Paleontology, Entomology, Ichthyology, Botany, Herpetology, Ornithology, Mammalogy**

- **Living organisms are organized through the interpretation of cladograms.**

- **The Theory of Evolution is supported within the scientific community with evidence from comparative anatomy, molecular biology, fossils, biogeography, and direct observations.**

Acquisition (Student Learning Objectives)

Knowledge

Knowledge

Students will know...

- Charles Darwin's theory is accepted by the great majority of scientists as the explanation for change over time.

- Methods and topics of individual careers in Environmental Biology

- Skills and methods are similar and different among the fields of Biology.

- Cladograms model the evolutionary history life.

- Taxonomy is the organization of life by using binomial nomenclature

- Adaptations are supporting evidence for the theory of Evolution
- Natural Selection is what drives evolution.

Skills

Skills

Student will be skilled at ...

- **Organize "life" on a cladogram based on its evolutionary history.**
- **Explain how natural selection works.**
- **Summarize the methods that Biologists use when studying life.**
- **Research careers in biology and explain what they do and why they do it.**
- **Identify "key events" in the evolution of life on Earth.**
- **Explain how evolution is linked to how closely two species are related.**
- **Give examples of variations and explain their importance to natural selection.**
- **Compare and contrast the theories of Darwin and Lamarck and explain why Darwin's theories are still accepted today.**

- Explain why evolution will never become a scientific law. and why it is accepted as a theory.

Stage 3: Learning Plan

Resource and Mentor Texts

Resources and Mentor Texts

Holt-Biology

Powerpoint- Google Slides

Selected readings- Newsela, NatGeo, ScienceWorld

Ted-Ed

Formative Assessment Strategies

Formative Assessment Strategies

- Informal observation
- Daily Do Nows
- Exit slips
- Thumbs up/down
- Journal Entries
- Labs
- Interactive Notebook Check
- Current events, annotations, summaries, reflections
- Reflect using Google Forms/ Nearpod
- Verbal & Virtual questioning and responses
- Homework, classwork, and learning activities will be graded and used as formative assessments.
- Daily warm-ups\science starters

- Graphic Organizers

Learning Activities/Unit of Study

Learning Activities/Unit of Study

- Students will research given careers in Biology and present to the class.
- Lecture/ discussion
- Lab activities- Evidence of Evolution
 - Classification of living things
 - Taxonomy, Binomial Nomenclature Scavenger Hunt
 - Observation of Ecological Community of Collingswood
- KWL of ScreenCasts
- Do Nows
- Group & Partner work
- Interactive notes
- Journal
- Stations (short observations, online activity, research, skills practice, small group instruction & assistance)
- Webquests
- Ted-Ed - worksheet & video
- Flip Grid- student responses and questions
- Student led discussions and presentations

Modifications and/or Accommodations

Suggested Modifications (ELL, Sp. Ed, Gifted, At-risk of Failure)

English Language Learners

Native language support: The teacher provides auditory or written content to students in their native language.

Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly.

Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand.

Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students.

Special Education Students

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Oral Reading: The teacher will read work orally to students. Class work such as tests and literature circles may need to be read aloud to the student.

Timers: The teacher will use timers as an instructional tool. The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

Students with 504 Plans

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Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Gifted & Talented Strategies

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply

acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

Students at Risk of School Failure

Directions or Instructions: Make sure directions and/or instructions are given in limited numbers. Give directions/instructions verbally and in simple written format. Ask students to repeat the instructions or directions to ensure understanding occurs. Check back with the student to ensure he/she hasn't forgotten.

Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

Alternate or Modified Assignments: Always ask yourself, "How can I modify this assignment to ensure the students at risk are able to complete it?" Sometimes you'll simplify the task, reduce the length of the assignment or allow for a different mode of delivery. For instance, many students may hand something in, the at-risk student may jot notes and give you the information verbally. Or, it just may be that you will need to assign an alternate assignment.

Increase One to One Time: When other students are working, always touch base with your students at risk and find out if they're on track or needing some additional support. A few minutes here and there will go a long way to intervene as the need presents itself.

Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

