

Subject Area: Enrichment/GT
Grade Levels: Elementary 3-4;
Middle School 5-7

Unit 1: Independent Research Unit

Adapted from IIM - Independent Investigation Method: Teaching Research Skills in Grades K-12
by C. Nottage & V. Morse

Dates: September - June

Time Frame: 30 to 35 Weeks
1 session per week

Overview

Students will learn seven sequential steps in the research process, engage in an extended independent research project of personal choice and interest that follows the seven research steps, create a product that best communicates their research findings and share their product with an interested audience.

Enduring Understandings

- Research skills are essential to the education of all students
- Research skills are critical for acquiring, extending and sharing knowledge
- Research is used to answer questions across all disciplines
- Research is a sequential process
- Researchers choose a topic of great interest or concern
- Research requires goal setting and planning
- There are many and varied sources for information
- Researchers acquire and share information ethically and without plagiarism
- Researchers cite their sources using a standard format and include a bibliography
- Researchers evaluate whether or not they achieved their goals and adjust their plans
- Information gathered must be organized and shared in a final product
- The ability to conduct and share research independently, accurately and effectively plays a fundamental role in academic and workplace success.

Skill and Knowledge Objectives

SWBAT:

- Learn 7 sequential steps in the research process
- Individually and sequentially apply all 7 research steps
- Generate questions around possible research topics
- Select a topic of interest that's neither too broad nor too narrow
- Select a topic that provides opportunity for in depth research
- Establish measurable goals for research
- Develop a research plan of action
- Select multiple, varied and reliable sources of information
- Conduct extensive and extended research by taking notes and avoiding plagiarism
- Create a research glossary and bibliography

- Evaluate if research goals were met
- Create a research product that best represents their interests and style
- Share research product with an interested audience

Assessments

Pre-Assessment

- Pre-assess background knowledge of sequential steps in the research process

Formative Assessment

- Think-Pair-Share partner and group discussions
- Teacher observation of student discussions
- Google Jamboards
- Graphic organizers
- Concept maps
- Who, What, When, Where, Why and How questioning that encourages depth and complexity
- Brainstorming [IDEO Brainstorming Process](#)
- Notefacts pages and other Student Booklet pages

Self-Reflection/Self-Assessment

- Individual student conferences
- Evaluating Research Goals - self evaluation Workpage 64

Summative Assessment

- Research product and presentation
- [Independent Research Rubric A](#) or [Independent Research Rubric B](#)

Resources

SEL Resources:

- Aiming for Blazing Class Chart
- [Aiming for Blazing Tracking Chart](#)
- Feelings Wheel - See visual below
- [Peaks & Pits Jamboard Blank](#)
- [Short Yoga for Kids Videos](#)
- Short meditation videos such as [5 Minute Meditation for Kids](#)
- [30 Days of Mindfulness in the Classroom from Calm.com](#) - see PDF
- Text - *The Big Orange Splot* by Daniel Manus Pinkwater
- *The Big Orange Splot* [House Project Directions](#)
- *The Big Orange Splot* [House Model & Template](#)

Independent Research Unit Resources:

- Text: IIM Independent Investigative Method: *Teaching Research Skills in Grades K -12* by Cindy Nottage and Virginia Morse
- IIM Independent Investigative Method Student Booklet reproducible pages from Text
 - Elementary Basic Level - Beginning pg. 37
 - Middle School Proficient Level - Beginning pg. 133
- IIM Independent Investigative Method Student Workpages in PDF format
 - <https://www.routledge.com/IIM-Teaching-Research-Skills-in-Grades-K-12/author/p/book/9781576520598>
- [Independent Research Unit Slides - Elementary](#)
- [Independent Research Unit Slides - Middle School](#)

- ¼” to ½” 3 ring research binders for Student Booklet pages and blank lined paper
- Brainstorming guidelines [IDEO Brainstorming Technique](#)
- Google applications including Slides, Docs and Jamboard
- School library with abundant informational texts
- Sample nonfiction texts with glossaries and bibliographies
- Sticky notes and anchor chart paper

Online & Media Resources:

- Discovery Education Video
 - [What Makes NASA Astronaut Ricky Arnold Curious?](#)
- [5 Tips for Avoiding Plagiarism](#)
- Electronic bibliography source such as www.citefast.com
- List of recommended, research websites
- Computers with internet access

Standards

NJ English Language Arts Anchor Standards

Reading

- NJSLSA.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.
- NJSLSA.R2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
- NJSLSA.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.
- NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
- NJSLSA.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.
- NJSLSA.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.
- NJSLSA.R10. Read and comprehend complex literary and informational texts independently and proficiently with scaffolding as needed.

Writing

- 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.
- NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- NJSLSA.W5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- NJSLSA.W6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.
- NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.

- 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.
- NJSLSA.W9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Speaking and Listening

- NJSLSA.SL2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
- 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.
- NJSLSA.SL5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
- NJSLSA.SL6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Language

- NJSLSA.L1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- NJSLSA.L2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- NJSLSA.L3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
- NJSLSA.L4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
- NJSLSA.L5. Demonstrate understanding of word relationships and nuances in word meanings.
- NJSLSA.L6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

NJSLS: Technology

- 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
- 8.1.5.A.2 Format a document using a word processing application to enhance text and include graphics, symbols and/ or pictures.
- 8.1.5.A.3 Use a graphic organizer to organize information about a problem or issue.
- 8.1.8.A.1 Demonstrate knowledge of a real world problem using digital tools.
- 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.

NJSLS: 21st Century Life and Careers Standards

- 9.1.4.F.1 Demonstrate an understanding of individual financial obligations and community financial obligations.
- 9.1.4.F.2 Explain the roles of philanthropy, volunteer service, and charitable contributions, and analyze their impact on community development and quality of living.
- 9.1.8.F.1 Explain how the economic system of production and consumption may be a means to achieve significant societal goals.
- 9.1.8.F.2 Examine the implications of legal and ethical behaviors when making financial decisions.

- 9.1.8.F.3 Relate the impact of business, government, and consumer fiscal responsibility to the economy and to personal finance.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

CASEL (Collaborative for Academic, Social, and Emotional Learning) Core Competencies

- Self Awareness - Accurately recognize one’s own feelings and thoughts and their influence on behaviors
- Self Management - Regulate one’s emotions, cognitions and behaviors
- Social Awareness - Take the perspective of and empathize with others
- Relationship Skills - Establish and maintain healthy and rewarding relationships
- Responsible Decision Making - Make constructive choices

National Association for Gifted Children (NAGC) Pre-K - Grade 12 Gifted Programming Standards

- <https://www.nagc.org/resources-publications/resources/national-standards-gifted-and-talented-education/pre-k-grade-12>

**Unit 1: Independent Research Unit
Pacing Guide - SEL Activities**

<p>SEL Competencies - Self Management Gen. Teaching Practice YEAR LONG - Aiming for Blazing</p> <p>Essential Questions: How can I monitor and regulate my emotions effectively, motivate myself, exercise self control and delay gratification?</p> <p>Materials:</p> <ul style="list-style-type: none"> ● Aiming for Blazing class chart with Check In, Bright, Brighter, Brightest and Blazing.- See SEL Resources ● Class Check In Clip ● Aiming for Blazing Tracking Chart <p>Activities: Reward class during each lesson for regulating behavior, following class procedures, demonstrating knowledge learned and working together etc. Reward class by moving class clip up chart. If class reaches Blazing during lesson, then they earn a class star. Once the class collects 10 stars, they earn a class prize.</p>	<p>SEL Competencies - Self Awareness and Social Awareness Gen. Teaching Practice MARKING PERIOD 1 Peaks & Pits</p> <p>Essential Questions: How can I correctly label my own emotions, understand that they are temporary, that they affect my behavior and recognize how others might be feeling differently?</p> <p>Materials:</p> <ul style="list-style-type: none"> ● Feelings Wheel - See SEL resources ● Peaks/Pits Anchor Chart and Sticky Notes OR ● Peaks & Pits Jamboard <p>Activities: Introduce students to the Feelings Wheel. At the beginning of each class, students will silently reflect on how they are feeling, choose a feeling word from the Feelings Wheel & record it on either a sticky note or on the Jamboard. Allow one student to share feelings & reason during each class period.</p>	<p>SEL Competencies - Self Management Gen. Teaching Practice MARKING PERIOD 2 & 3 Yoga or Meditation</p> <p>Essential Questions: How can I monitor and regulate my emotions effectively and cope with stress and anxiety?</p> <p>Materials:</p> <ul style="list-style-type: none"> ● 5 minute yoga videos such as Free Kids Yoga & Meditations from ALO Gives Short Yoga for Kids Videos ● 5 Minute Meditation for Kids <p>Activities: Start every class period with a short (approximately 5 minute) peaceful, relaxing self management activity such as yoga or meditation. Vary the activities by marking period so students become competent and confident in each type of self management activity.</p>	<p>SEL Competencies - Self Management Gen. Teaching Practice MARKING PERIOD 4 Mindfulness Activities</p> <p>Essential Question: How can I monitor and regulate my emotions effectively and cope with stress and anxiety?</p> <p>Materials:</p> <ul style="list-style-type: none"> ● 30 Days of Mindfulness in the Classroom from Calm.com <p>Activities: Start every class period with a short (approximately 5 minute) peaceful, relaxing, self management activity such as a mindfulness exercise from Calm.com. Vary activities by marking period so students become competent and confident in each type of self management activity.</p>	<p>SEL Competencies - Self Awareness - Identify and value personal interests, strengths, values and dreams. DAY 1 - DAY 3</p> <p>Essential Questions: What are my personal interests, strengths, values and dreams? How do I share them with others?</p> <p>Materials:</p> <ul style="list-style-type: none"> ● Text - <i>The Big Orange Splot</i> by Daniel Manus Pinkwater ● The Big Orange Splot House Project Directions ● House Model & Template <p>Activities: Read aloud <i>The Big Orange Splot</i> Engage students in questioning and determine the main idea/message of the book. Individually brainstorm personal interests, strengths, values and dreams. Using Google slides house template, create a house that represents personal interests, strengths, values and dreams. Share with class, post and display in prominent space.</p>
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Unit 1: Independent Research Unit Pacing Guide

<p>Lesson 1: Pre Assessment DAY 1</p> <p>Essential Question: What do I already know about the research process?</p> <p>Materials: <u>Elementary</u></p> <ul style="list-style-type: none"> • Independent Research Unit Slides - Elementary - Slides 2 & 3 • Synopsis Steps Text p.14 <p><u>Middle School</u></p> <ul style="list-style-type: none"> • Independent Research Unit Slides - Middle School - Slides 2 & 3 • Synopsis Steps Text p. 112 <p>Activities: Introduce Independent Research Unit and conduct pre assessment. Ask students to independently write down what they know about steps in the research process. Use Think-Pair-Share to compare/contrast responses. Using Text synopsis of steps, create a class anchor chart of 7 sequential research steps and post steps prominently for regular reference.</p>	<p>Lesson 2: Immersion Activity DAY 1 - DAY 2</p> <p>Essential Question: What am I curious about?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Discovery Education Video What Makes NASA Astronaut Ricky Arnold Curious? • Independent Research Unit Slides 4 & 5 • What are you curious about? Model • What are you curious about? Assignment <p>Activities: Create and complete a Google Jamboard - What is Curiosity? Share.& discuss. Watch Discovery Education Video <i>What Makes NASA Astronaut Ricky Arnold Curious?</i> Individually brainstorm up to 10 topics about which the student is curious.</p>	<p>Lesson 3: Topic Selection DAY 1 - DAY 3</p> <p>Essential Question: How do I choose a research topic that interests and engages me?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Independent Research Unit Slides 6,7 & 8 • Teacher model What are you curious about? • What are you curious about? Assignment • Concept Map Samples • Concept Map Assignment • Student Workpages 39 & 40 <p>Activities: Review teacher model of What are you curious about? Using topic criteria, cross out topics that are “too big” or “too small.” Select and highlight the “just right” topics. Students then do the same. Model how to complete a concept map asking Who, What, When, Where, Why and How questions. Students will then complete 1 or 2 concept maps and select their final topic.</p>	<p>Lesson 4: Goal Setting DAY 1</p> <p>Essential Question: How do I make a plan for my research?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Independent Research Unit Slide 9 • Goal Setting Worksheet model OR • Student Workpages pgs. 41 & 42 <p>Activities: Starting with the end in mind (approximate Presentation date), use Think-Pair-Share to estimate how many weeks each research step will take. Discuss and agree as a group. Use Steps to Follow Workpages 41 & 42 or Goal Setting Worksheet model to establish due dates for each research step.</p>	<p>Lesson 5: Goal Setting Cont. DAY 1</p> <p>Essential Question: How do I establish specific goals for my research?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Independent Research Unit Slide 9 OR • Setting Research Goals pg. 46 <p>Activities: Define essential terms on Setting Research Goals sheet. Propose grade level benchmarks for resource, note taking, and glossary goals (both number and variety). Restate and transfer guiding Who, What, When, Where, Why and How questions to goals sheet. Share model of completed sheet. Individually complete Setting Research Goals page 46.</p>
<p>Lesson 6: Research - Choosing Multiple, Varied and Reliable Sources DAY 1</p> <p>Essential Questions: Why is it important that sources be multiple, varied and reliable?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Independent Research Unit Slide 10 • Jamboard OR • Sticky notes • IDEO Brainstorming Technique • Anchor chart paper <p>Activities: Discuss the importance of varied and reliable sources. Brainstorm possible sources by type and create a class anchor chart of a wide variety of sources for reference.</p>	<p>Lesson 7: Research - Choosing Multiple, Varied and Reliable Sources Cont DAY 1</p> <p>Essential Question: How do I select my sources?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Independent Research Unit Slides 11 & 12 • Model Sources of Information Doc • Sources of Information Assignment OR • Sources of Information Workpage 58 • List of recommended research websites. <p>Activities: Share model of Sources of Information list. Share list of recommended & reliable research websites. Individually start researching and creating Sources of Information Assignment.</p>	<p>Lesson 8: Organizing Notes DAY 1 - DAY 3</p> <p>Essential Question: How do I gather, organize and record my research notes?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Independent Research Unit Slides 13 & 14 • Steps to Taking Notefacts Text pg. 49 • Concept Maps • Model of Notes/Facts • Notes/Facts Assignment OR • Multiple copies of Notefacts Workpages 55 & 56 <p>Activities: Review Steps to Taking Notefacts. Share a model of how to organize Notefacts. Model how to take notes using several sample sources.</p>	<p>Lesson 9: Research - Avoiding Plagiarism DAY 1</p> <p>Essential Question: How do I gather, organize and record my research notes without plagiarizing?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Independent Research Unit Slides 15 • Avoiding plagiarism video such as 5 Tips for Avoiding Plagiarism <p>Activities: Play plagiarism video. Discuss the definition of plagiarism, importance of avoiding it and ways to avoid plagiarism. Address any questions or concerns.</p>	<p>Lesson 10: Research - Creating a Glossary DAY 1</p> <p>Essential Question: Why do I need a Glossary and how do I create one?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Independent Research Unit Slides 16 • Nonfiction text samples with glossaries • Glossary of Study Model • Glossary of Study Assignment OR • Workpage pg. 45 <p>Activities: Review sample nonfiction glossaries and discuss. Using the Glossary of Study page model how to complete. Make sure students are collecting new vocabulary to include in their glossary.</p>

<p>Lesson 11: Research Taking Notes DAY 1 - DAY 5</p> <p>Essential Question: How do I gather, organize and record my research notes without plagiarizing?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Notes/Facts Assignment, pages OR • Multiple copies of Notefacts pgs. 55 & 56 • Sources of Information • Computers with Internet • List of recommended research websites. • School library <p>Activities: Students will use personal computers and/or visit the school library to take research notes over several weeks. Monitor note taking and organizing process and address questions as needed. Make sure students answer all questions on concept maps. Repeat modeling as needed throughout Taking Notes days - in small groups or individually.</p>	<p>Lesson 12 Evaluating Goals DAY 1 - DAY 2</p> <p>Essential Question: Have I achieved my research goals?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Independent Research Unit Slides 17 & 18 • Evaluating Research Goals Workpage 64 • Completed Concept Maps, Notes/Facts pages, Sources of Information and Glossaries <p>Activities: Students will complete Evaluating Research Goals Workpage. 64 and identify if they are missing any information.. Meet individually with students to check binder including progress on Notefacts, organization, sources, and glossary,</p>	<p>Lesson 13 Creating a Product DAY 1 - DAY 5</p> <p>Essential Question: How do I choose a product that best represents my research, interests and learning style? How do I create that product?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Independent Research Unit Slides 19 to 22 • Choosing a Product Workpage 66 • Jamboard OR • IDEO Brainstorming Technique • Model of Product Plan • My Product Plan Assignment OR • My Product Plan Workpage. 67 • Collection of materials needed to create product from school and home. <p>Activities: Review Choosing a Product page 66 with class. Individually brainstorm product ideas. Think Pair Share product ideas. Share model of Product Plan. Complete My Product planning page. Over several weeks, students will create products that showcase their research.</p>	<p>Lesson 14: Creating a Bibliography and Citing Text. DAY 1 - DAY 2</p> <p>Essential Question: How do I create a bibliography and cite text?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Independent Research Unit Slides 23 & 24 • Sample nonfiction text with bibliography • Working Bibliography & Works Cited Workpages 50 & 51 • Electronic bibliography source such as www.citefast.com • Sources of Information list <p>Activities: Review sample bibliography and discuss Model how to complete using electronic bibliography source. Students will create their own bibliography.</p>	<p>Lesson 15 Product presentations DAY 1 - DAY 3</p> <p>Essential Question: How do I best communicate what I have learned to an interested audience?</p> <p>Materials:</p> <ul style="list-style-type: none"> • Completed product • Presentation notes • Ask Me These Questions - Optional Workpage 71 • Independent Research Rubric A • Independent Research Rubric B • Parent/audience invitation <p>Activities: Students will prepare presentation notes and Ask Me These Questions. They will practice their presentations for classmates. Students will present their research and answer questions for a parent audience.</p>
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Differentiate Instruction, depending on individual student need (Students with an IEP, 504, or Intervention Plan; ELL Students; At-Risk Students; Gifted Students) by:

Presentation Accommodations

- Listen to audio recordings instead of reading text
- Learn content from audio books, movies, videos and digital media instead of reading print versions
- Use alternate texts at lower or higher readability level
- Work with fewer items per page or line and/or materials in a larger print size
- Use magnification device, screen reader, or Braille / Nemeth Code
- Use audio amplification device (e.g., hearing aid(s), auditory trainer, sound-field system (which may require teacher use of microphone)
- Be given a written list of instructions
- Record a lesson, instead of taking notes
- Have another student share class notes
- Be given an outline of a lesson
- Be given a copy of teacher's lecture notes
- Be given a study guide to assist in preparing for assessments
- Use visual presentations of verbal material, such as word webs and visual organizers
- Use manipulatives to teach or demonstrate concepts
- Have curriculum materials translated into native language
- Display student-created anchor charts throughout unit for reference
- Pre-teach vocabulary and post around the room for reference

Response Accommodations

- Use sign language, a communication device, Braille, other technology, or native language other than English
- Dictate answers or notes to a scribe
- Capture responses or notes on an audio recorder or voice to text device
- Use a spelling dictionary or electronic spell-checker
- Use a word processor to type notes or give responses in class

Setting Accommodations

- Work or take a test in a different setting, such as a quiet room with few distractions
- Sit where she learns best (for example, near the teacher, away from distractions)
- Use special lighting or acoustics
- Take a test in small group setting
- Use sensory tools such as an exercise band that can be looped around a chair's legs (so fidgety kids can kick it and quietly get their energy out)
- Use noise buffers such as headphones, earphones, or earplugs
- Use soft background music as calming and focusing device

Timing Accommodations

- Take more time to complete a task or a test
- Have extra time to process oral information and directions
- Take frequent breaks, such as after completing a task

Scheduling Accommodations

- Take more time to complete a project
- Take a test in several timed sessions or over several days
- Take sections of a test in a different order
- Take a test at a specific time of day

Organization Skills Accommodations

- Use an alarm to help with time management
- Mark texts with a highlighter
- Use color coding to facilitate note organization
- Have help coordinating assignments in a book or planner
- Receive study skills instruction

Assignment Modifications

- Complete fewer or different homework problems than peers
- Write shorter papers or fewer notes
- Answer fewer or different test questions
- Create alternate projects or assignments

Curriculum Modifications

- Learn different material (such as continuing to work on multiplication while classmates move on to fractions, or moving ahead to an extension concept/skill while classmates continue to work on a core skill)
- Provide enrichment activities for advanced learners including more depth and complexity in questioning
- Get graded or assessed using a different standard than the one for classmates

Other Modifications

- Think-Pair-Share: Design partnerships so that more advanced students can guide struggling students
- Provide bookmarks/reminder cards for how to participate effectively in discussions ("Purposeful Talk," "Discussion Starters")
- Help students set individual goals that meet teacher expectations (classwork and project work differentiated according to goals/expectations)
- Conference with students in small groups and individually to review concepts, skills and goals attainment as often as needed

