

Unit 3: Lab Reports (Weeks 13-19)

Content Area: **Template**
Course(s):
Time Period: **Full Year**
Length: **9 Weeks**
Status: **Published**

Unit 3: Lab Reports

Unit Rationale

The purpose of this unit is for students to learn how to write like a scientist, by cycling through a scientific process while completing experiments on a classroom science topic. (Note: teachers may use their own discretion when determining which science topic, materials, and experiment they would like to use during this unit.) Throughout the unit, students will conduct a science experiment following the scientific process. They will first learn to form and write a hypothesis based on their thinking about a scientific topic. Next, they will learn to make and write a detailed plan for the materials needed and procedures of their experiment. Then, while conducting the experiment, students will learn to collect data, recording their observations and results of the experiment. Finally, students will learn to write a conclusion. In addition, students will utilize a writing checklist and learn to use domain-specific vocabulary in their writing. This unit sets students up for success with future informational writing projects in second grade and beyond, while also supporting them in their growth and development through scientific learning.

21st Century Life and Career

CRP.K-12.CRP1.1	Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.
CRP.K-12.CRP2.1	Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.
CRP.K-12.CRP4.1	Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.
CRP.K-12.CRP8.1	Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They

carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

CRP.K-12.CRP9

Model integrity, ethical leadership and effective management.

Essential Questions

1. How do writers of lab reports pose questions and record hypotheses?
2. What processes should writers of lab reports follow before drawing conclusions?
3. How can writers of lab reports use domain-specific vocabulary to elaborate?
4. How can writers of lab reports use text features to highlight information?

Pre-Assessments

[Informational On Demand Performance Assessment Prompt](#)

[Rubric for Informational Writing](#)

Instructional Plan

[Unit 3: Lab Reports](#)

Please see the attached GoogleDoc for suggested Suggested Minilessons, Instructional Strategies and Activities, Formative Assessments, Instructional Materials and Resources, Reflections and Suggested Modifications.

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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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.

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

See Crosswalk

New Jersey Student Learning Standards: Content Area

ELA.L.WF.2.1	Demonstrate command of the conventions of writing.
ELA.L.WF.2.1.A	Write legibly and with sufficient fluency to support composition.
ELA.L.WF.2.1.B	Write the most common graphemes (letters or letter groups) for each phoneme, for example:
ELA.L.WF.2.2	Demonstrate command of the conventions of encoding and spelling.
ELA.L.WF.2.3	Demonstrate command and use of the conventions of writing including those listed under grade one foundational skills.
ELA.L.KL.2.1	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
ELA.W.AW.2.1	With prompts and support, write opinion pieces to present an idea with reasons or information.
ELA.W.IW.2.2	Write informative/explanatory texts to examine a topic and convey ideas and information.
ELA.W.IW.2.2.A	Introduce a topic clearly.
ELA.W.IW.2.2.B	Develop a topic with facts definitions, concrete details, text evidence, or other information and examples related to the topic.
ELA.W.IW.2.2.C	Provide a conclusion.
ELA.W.WP.2.4	With guidance and support from adults and peers, develop and strengthen writing as needed by planning, revising and editing.
ELA.W.WP.2.4.A	Identify audience and purpose before writing.
ELA.W.WP.2.4.B	Participate in self-evaluation of written work.
ELA.W.WP.2.4.C	With feedback and digital or print tools such as a primary dictionary, find and correct errors.
ELA.W.WR.2.5	Generate questions about a topic and locate related information from a reference source to obtain information on that topic through shared and independent research.
ELA.W.RW.2.7	Engage in both collaborative and independent writing tasks regularly, including extended and shorter time frames.
ELA.SL.PE.2.1.A	Follow agreed-upon norms for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).

ELA.SL.PE.2.1.B	Build on others' talk in conversations by linking their explicit comments to the remarks of others.
ELA.SL.PE.2.1.C	Ask for clarification and further explanation as needed about the topics and texts under discussion.

Integration of Career Readiness, Life Literacies and Key Skills

TECH.9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
TECH.9.4.2.CI.2	Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
TECH.9.4.2.CT.1	Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem (e.g., K-2-ETS1-1, 6.3.2.GeoGI.2).
TECH.9.4.2.CT.2	Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).
TECH.9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

Integration of Computer Science and Design Thinking

CS.K-2.8.1.2.AP.1	Model daily processes by creating and following algorithms to complete tasks.
CS.K-2.8.1.2.AP.4	Break down a task into a sequence of steps.

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

Note: Science standards will vary, depending on which second grade scientific topic the classroom teacher chooses to focus on for this unit.

SOC.6.1.2.CivicsPD.1	Engage in discussions effectively by asking questions, considering facts, listening to the ideas of others, and sharing opinions.
SOC.6.1.2.CivicsPD.2	Establish a process for how individuals can effectively work together to make decisions.
SOC.6.1.2.CivicsPR.2	Cite evidence that explains why rules and laws are necessary at home, in schools, and in communities.
SOC.6.1.2.CivicsPR.3	Analyze classroom rules and routines and describe how they are designed to benefit the common good.

SEL Competencies

SEL.PK-12.1	Self-Awareness
SEL.PK-12.1.1	Recognize one's feelings and thoughts
SEL.PK-12.1.2	Recognize the impact of one's feelings and thoughts on one's own behavior
SEL.PK-12.1.3	Recognize one's personal traits, strengths, and limitations
SEL.PK-12.1.4	Recognize the importance of self-confidence in handling daily tasks and challenges
SEL.PK-12.2	Self-Management
SEL.PK-12.2.1	Understand and practice strategies for managing one's own emotions, thoughts, and

behaviors

- SEL.PK-12.2.2 Recognize the skills needed to establish and achieve personal and educational goals
- SEL.PK-12.2.3 Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals
- SEL.PK-12.3 Social Awareness
- SEL.PK-12.3.1 Recognize and identify the thoughts, feelings, and perspectives of others
- SEL.PK-12.3.2 Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- SEL.PK-12.3.3 Demonstrate an understanding of the need for mutual respect when viewpoints differ
- SEL.PK-12.3.4 Demonstrate an awareness of the expectations for social interactions in a variety of settings
- SEL.PK-12.4 Responsible Decision-Making
- SEL.PK-12.4.1 Develop, implement and model effective problem-solving, and critical thinking skills
- SEL.PK-12.4.2 Identify the consequences associated with one's actions in order to make constructive choices
- SEL.PK-12.4.3 Evaluate personal, ethical, safety, and civic impact of decisions
- SEL.PK-12.5 Relationship Skills
- SEL.PK-12.5.1 Establish and maintain healthy relationships
- SEL.PK-12.5.2 Utilize positive communication and social skills to interact effectively with others
- SEL.PK-12.5.3 Identify ways to resist inappropriate social pressure
- SEL.PK-12.5.4 Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways
- SEL.PK-12.5.5 Identify who, when, where, or how to seek help for oneself or others when needed