Name: _____

Section: _____

Date: _____

INDEPENDENT STUDY OF WATER IN THE LOCAL ENVIRONMENT

Water and the Cloud Forest

Directions: Write down facts and information you have learned about water and the tropical montane cloud forest ecosystem. Reflect on the different pieces of *Canopy In The Clouds* media you have viewed over the last several lessons to help you. Record your facts below and then answer the question given.

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-
-
-
-
-

Why is water important in the cloud forest ecosystem?

Explain the focus of ECOHYDROLOGY:

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INDEPENDENT STUDY OF WATER IN THE LOCAL ENVIRONMENT
Ecohydrology Brainstorming

Directions: Write down questions that you have regarding the role of water in your local ecosystem.

-
-
-
-

Now, spend some time thinking about an experiment you would like to perform, based on the questions above. For each scientific question you asked, write a proposal that includes:

- The scientific question that will be addressed.
- An explanation of how the experiment will be performed.
- A notation of first, second, or third choice.

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INDEPENDENT STUDY OF WATER IN THE LOCAL ENVIRONMENT
Ecohydrology Independent Study Introduction

Due Dates

- ☐ Introduction & Hypothesis (rough draft) → _____
- ☐ Materials & Procedure (rough draft) → _____
- ☐ Data & Graphs (rough draft) → _____
- ☐ Conclusion & Abstract (rough draft) → _____
- ☐ Final Ecohydrology Independent Study paper → _____

Introduction & Hypothesis

This section must be at least 3 paragraphs long and include the following:

- Why ecohydrology is important
- Background research and information on the topic
- Research that other scientists have performed/learned about the topic
- At least three citations from outside sources
- A hypothesis written in "I predict….because…." format

Materials & Procedure

- List all of the materials needed to perform the experiment, as well as amounts or quantities
- Write the steps of the experiment in sentence & paragraph form. NO numbered lists.
- Someone else must be able to read your procedure and perform the same experiment again, without asking questions. BE DETAILED!

Data & Graphs

Massive amounts of raw data are not to be turned in. You need to analyze and organize your data into charts or graphs and turn those in.

- There must be at least 2 tables or graphs
- Each table or graph must have a label (Figure 1, Graph 2, Table 4) to help refer to the data later
- Each table or graph must have a one sentence caption written directly below

Conclusion & Abstract

The conclusion section must be at least 3 paragraphs long and include a comparison of the ecohydrology of the cloud forest of Monteverde, Costa Rica and the ecohydrology of our local ecosystem. The conclusion also needs to indicate whether your hypothesis was supported or not supported using findings from your data, discuss possibilities for error within the experiment, and summarize what was learned from completing the project.

The abstract is a short summary of the entire project written in paragraph form. Summarize each section into one or two sentences and place them all in a paragraph together.

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Bibliography

Any information you use that belongs to others must be cited in your writing and included in the bibliography.

Final Paper

You must make any corrections or changes indicated on your rough drafts and turn in a final paper in this order:

- Title Page (must include title, your name, grade, and school name)
- Scientific Question (using this as the title is appropriate if you wish)
- Abstract
- Introduction
- Hypothesis
- Materials
- Procedure
- Data & Graphs
- Conclusion
- Bibliography

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Name: _____

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INDEPENDENT STUDY OF WATER IN THE LOCAL ENVIRONMENT
Abstract Help

Directions: This worksheet is designed to help you create an excellent scientific abstract. Use one or two concise sentences to summarize the most important aspects of your project for each section listed below. Leave out unimportant details. As a first draft (using this worksheet), write one or two sentences that *summarize* each section. For your final draft, make sure the abstract "flows" logically. Give it to a friend to read. Ask them to tell you what they think you actually did and what you found. **Revise** as necessary.

Introduction *(What is this project about? Why is this project interesting or important?)*

Hypothesis *(What did you think you would find? Why?)*

Procedure *(Briefly explain your procedure. Do not include materials used.)*

Data *(What did you find when you performed your experiment?)*

Conclusion *(Are your results consistent with your initial hypothesis? Why or why not? What is your interpretation of what these results mean? Why should anyone become excited about or interested in your findings?)*

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INDEPENDENT STUDY OF WATER IN THE LOCAL ENVIRONMENT

Ecohydrology Independent Study Rubric

Name: _____ Topic/Question: _____

Points Earned

Title Page *(5 points)*

Are the student's full name, school, grade, and project title included? _____

Scientific Question *(5 points)*

Is the scientific question easy to understand and measurable? _____

Abstract *(15 points)*

Are each of the following sections included in the abstract: intro, hypothesis, procedure, data & conclusion?
Is the abstract written correctly and cohesively? _____

Introduction *(15 points)*

Is the intro section 3 paragraphs long? Is the scientific question included?
Does it mention the importance of ecohydrology and additional research?
Are there correctly formatted citations from at least 3 different sources?
Is the introduction written correctly and cohesively? _____

Hypothesis *(10 points)*

Does the hypothesis state a predicted answer to the scientific question as well as a reason why?
Is the hypothesis written using the format: I predict….because…. _____

Materials & Procedure *(10 points)*

Are the quantities of each material listed in bullet form? Is the procedure written in direction form and easy to follow? Are all steps included? _____

Data *(15 points)*

Are there at least 2 data pieces that each have a correct label and caption?
Are the graphs correctly constructed and easy to understand? _____

Conclusion *(15 points)*

Are the criteria for conclusions met? Is the conclusion written correctly and cohesively? _____

Name: _____

Section: _____

Date: _____

Bibliography *(5 points)*

Is the bibliography written in the correct form and include all citation sources? _____

Overall *(5 points)*

Is the project typed, double spaced and presented professionally? Has the paper been proof-read with attention to spelling and grammar? Have the requirements of the project been met? _____

Total Score _____/100

Additional Comments: