# ALX Foundations: Milestone 3 Worksheet

# **Instructions:** Provide responses to all items in the orange boxes. The worksheet consists of Sections A-D. Work on this worksheet one section at a time throughout your week, and return to Canvas after each section for the next set of content and further instructions.

# SECTION A: Problem Statement

### **Step 1: Your GCGO**

Which Grand Challenge or Great Opportunity (GCGO) do you want to play a part in addressing? (Pick one.)

As a reminder, the GCGOs are:

* Urbanization
* Education
* Infrastructure
* Healthcare
* Climate change
* Governance
* Job creation
* Agriculture
* Natural resources
* Arts, culture, and design
* Tourism
* Empowerment of women
* Regional integration
* Wildlife conservation

| GCGO: |
| --- |

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### **Step 2: Describe Your Problem**

You are going to take a first pass at briefly describing your chosen problem. This can be any problem that speaks to you, as long as it is a real-life occurrence that is clearly linked to your chosen GCGO, that occurs in a certain place and for certain people (and/or animals), and that it can be clearly defined.

For example, if you chose wildlife conservation as your GCGO, you might first state your chosen problem as:

*There are very few white rhinos left in Kenya and they are in danger of going extinct.*

*Another example, if you choose infrastructure as your GCGO:*

*Residents of major cities in South Africa endure prolonged periods without electricity, significantly hampering their ability to generate income.*

Note that this is just your first attempt stating the problem, and you don’t need to quantify the problem yet. In order to get to your official problem statement (which does need to be quantifiable) first answer the following questions. The more specific your answers, the better. You may also ask Google, Wikipedia, , ChatGPT, and/or other reliable online sources to help you. Please be sure to cite (give credit to) any sources that you use.

Describe your problem using What/Who/When/Where/Why/How….

| 1. **What** is the problem? What is reality like because of this problem? What will reality be like if the problem continues? |
| --- |
| 1. **Who** does this problem impact, directly and indirectly? Who contributes to the problem? |
| 1. **When** did this problem begin? When does it occur? |
| 1. **Where** is this problem occurring? What is the context in which it occurs? |
| 1. **Why** is this a problem? What are the pain points or gaps? Why do you personally care about this problem? |
| 1. **How** would reality be different if this problem were solved? (This can be your opinion.) |

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### **Step 3: Understand and Quantify Your Problem**

Next, you will conduct some basic web research to better understand, define, and quantify your problem. You will do this through a combination of Google search, Wikipedia, credible web sources, ChatGPT or other AI research tool, and your own synthesis of information from these sources. Be sure to give credit to your sources, and paraphrase (use your own words) rather than quoting directly.

| 1. What is the historical context for this problem? What happened in the past that contributes to the problem now? |
| --- |
| 1. What are the possible economic (money-related) reasons why this problem exists and continues? |
| 1. What are the possible political reasons why this problem exists and continues? |
| 1. What cultural beliefs and/or social norms possibly contribute to this problem? |
| 1. Who are the people potentially responsible (directly or indirectly) for creating and/or maintaining this problem? |

Now that you have the preliminary information you need, you’ll continue your web research to find some numbers, or quantifiable information, to help describe your problem:

What numerical data can you find that is relevant to your problem? Be sure to use your own words and also cite (give credit to) your sources.

Example 1:

*According to Chat GPT, there are about 880 white rhinos currently living in Kenya. This population is very small, and they are critically endangered.*

Example 2:

*Johannesburg has approximately 5.8 million residents (per ChatGPT) and had approximately 4.7 million international overnight visitors in 2019 (according to the South African Tourism Annual Report for 2019/2020).*

| 1. Approximately how many people (and/or animals) are **directly** impacted by this problem? Explain. |
| --- |
| 1. Approximately how many people (and/or animals) are **indirectly** impacted by this problem? Explain. |
| 1. What other numerical data can you share that is relevant to your problem? What can you find out about its size and scope? What can be measured? (For example, the amount of trash produced in Nairobi each day, the number of people without access to clean water, etc.) |

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### **Step 4: Describe Your Solved State**

Without having to come up with *how* to solve the problem, describe what the desired, solved state looks like. Please use numbers wherever possible, and make your solved state specific and measurable.

Example 1:

*There would be a population of 10,000 healthy and protected white rhinos living in the wild in Kenya.*

Example 2:

*All 5.8 million residents of Johannesburg would have affordable and consistently available power from clean energy sources, 99.5% of the time.*

| 1. If the problem were addressed/solved, what would reality be like? |
| --- |
| 1. Are there other benefits that would come from your problem being solved? Name at least one. |

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### **Step 5: Clarify Your Problem Scope**

You are more effective at solving a problem when you know where its limits are. That is, when you know what is “in scope” and “out of scope.” For this reason, it is important to list what is out of scope, or NOT included as part of your problem definition.

Example 1:

*The scope of the problem does not cover any other animal species besides white rhinos. It does not include white rhinos outside of Kenya.*

Example 2:

*The scope of the problem does not include any businesses or people outside of the legally-defined Johannesburg city limits. It does not apply to tourists or visitors staying for less than 1 year in Johannesburg.*

| 1. What is NOT in scope for your problem? |
| --- |

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### **Step 6: Areas for Learning**

What do you not know or understand that you would like to know more about? This can be anything related directly or indirectly to your problem. Let your curiosity run wild!

Example 1:

*I’d like to know where most of the demand for rhino horn is coming from. I’d like to know who are the primary buyers and who is behind the trafficking of rhino horn. I’d like to know how long the average rhino’s lifespan is. I’d like to know how many babies a typical female rhino has, and how many babies typically survive into adulthood. I’d like to know more about what diseases impact rhinos. I’d like to know more about the kinds of habitats that rhinos thrive in. I’d like to understand what international organizations do the best job supporting wildlife conservation and what their practices are. I’d like to know what models of community involvement have been most successful in keeping wildlife safe and thriving. I’d like to understand how much land is available in Kenya for rhinos to roam.*

Example 2:

*I’d like to better understand the utility company Eskom and its history. I’d like to understand why Eksom has failed to plan properly to update its infrastructure. I’d like to understand the relationship between Eksom and the South African government. I’d like to know if there are private utility companies providing competition to Eksom. I’d like to know what the latest breakthroughs are in solar power. I’d like to know what other possible energy sources might be made available in Johannesburg. I’d like to know how much energy tourists and temporary visitors use. I’d like to better understand the process of how limited energy supply gets allocated to people and businesses. I’d like to better understand the economic impact to people and businesses of not having power.*

| 1. What else would you like to know or understand better? (It can be anything related to your problem.) List 5-10 things. |
| --- |

### **Step 7: Problem Statement**

This step is the culmination of all you have done in Part A. You will synthesize the work you have done above to create a problem statement of 150 - 250 words. This should be in narrative form, 2-4 paragraphs, and should NOT use bullet points.

Your problem statement should:

* Provide a succinct description of the problem **in the first sentence**.
* Indicate specific population affected
* Explain the impact (cost, time, environmental, personal) and why the problem matters.
* Explain what reality would look like if the problem were solved. The gap that exists between present reality and the desired outcome should be clear.

Please cite (give credit to) where your information came from directly in your statement. Avoid word-for-word quoting and instead paraphrase (use your own words), as modeled in the example. Also list your sources and their urls (web addresses) at the end.

Example :

*Kenya’s white rhinos are in critical danger of extinction. There are currently about 880 white rhinos in the country of Kenya, per Wikipedia. According to Chat GPT, Rhinos are considered a keystone species, meaning they have a disproportionately large impact on their ecosystem compared to their population size. Rhinos help shape their environment by influencing vegetation growth and acting as seed dispersers, which creates habitat for other species (per ChatGPT).*

*The extinction of white rhinos would have cascading effects on other plant and animal species in their habitat. According to the Kenya Wildlife Service, rhinos’ presence in reserves and parks bring millions of tourists each year, contributing to local economies and supporting conservation efforts. Once a species goes extinct, it is gone forever. The extinction of rhinos would represent the loss of millions of years of evolutionary history, and unique genetic diversity that science has yet to fully understand and benefit from (per ChatGPT).*

*My problem would be considered solved when the population of wild, white rhinos in Kenya reaches 10,000, and when all imminent threats to their population including poaching and habitat destruction are not present. If this were the reality, it would create ecosystem balance, create large revenues from ecotourism, preserve important cultural symbols, and allow for genetic diversity that could benefit humanity in ways we may not yet fully understand.*

*Sources:*

*Kenya Wildlife Services Annual Report 2017,* [*https://www.kws.go.ke/content/annual-reports*](https://www.kws.go.ke/content/annual-reports)

*ChatGPT,* [*https://chat.openai.com/*](https://chat.openai.com/)

*“White Rhinoceros”, Wikipedia,* [*https://en.wikipedia.org/wiki/White\_rhinoceros*](https://en.wikipedia.org/wiki/White_rhinoceros)

| 1. My problem is statement is: |
| --- |

| 1. Please list all sources that you used to form your problem statement: |
| --- |



**Please go back to Canvas and continue with your learning content. You will be prompted on when to return to complete Section B.**

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# SECTION B: Research Questions & Hypothesis

**IMPORTANT:** Complete this section AFTER completing the Canvas Modules *Asking Effective Questions* and *Web Research.*

### **Step 8: Research Questions**

Based on what you have learned so far and on ‘Step 6: Areas for Learning’ from this worksheet, come up with 3 research questions. **Research questions should be complex enough that they can’t be answered by a single Google search.** If appropriate, form a hypothesis that your research may confirm or reject. (As a reminder, a hypothesis is a prediction of how you think your research will answer your research question. It is your best guess. If you truly have absolutely no idea, state “not applicable.”)

Example Research Question #1:

*What are some ways can we increase rhino populations?*

Hypothesis*:*

*Rhino populations will be increased by creating more open spaces for them to roam, increasing their protection, increasing international interest in them, and other reasons I have yet to uncover.*

Example Research Question #2:

*Which organizations have been effective at wildlife conservation and what practices do they use?*

Hypothesis*:*

Not applicable; I don’t know.

Example Research Question #3:

*How many babies can a typical female white rhino have in her lifetime, and what are the reasons a female may not have high fertility?*

Hypothesis*:*

*A typical female white rhino can have 5 babies in her lifetime, and fertility may be affected by diet, amount of grazing territory, poaching, stress, mate availability, and other reasons I have yet ot uncover.*

| 1. Research question #1:   Hypothesis (if applicable): |
| --- |

| 1. Research question #2:   Hypothesis (if applicable): |
| --- |

| 1. Research question #3:   Hypothesis (if applicable): |
| --- |



**Please go back to Canvas and continue with your learning content. You will be prompted on when to return to complete Section C.**

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# PART C: Peer Activities Report

**IMPORTANT:**  Complete this section AFTER completing the Canvas Lessons “Peer Activity: Problem Statement” and “Peer Activity: Web Research.”

**Peer Activity #1: Problem Statement**

Please report on your process of getting peer feedback.

| 1. Who reviewed your problem statement (item #19)? (Give the first and last names of your 2 peers.) |
| --- |
| 1. In brief, what feedback did they give to you? |
| 1. Was their feedback useful to you? Did it feel kind? Why or why not? |
| 1. Who did you give feedback to? (Give the first and last names of 2 peers- they may be the same or different peers from above.) |
| 1. Do you feel that you gave useful and kind feedback to your peers? Why or why not? |

**Peer Activity #2: Web Research**

Please report on your process of getting peer feedback.

| 1. Who reviewed your executive summary (item #24)? (Give the first and last names of your 2 peers.) |
| --- |
| 1. In brief, what feedback did they give to you? |
| 1. Was their feedback useful to you? Did it feel kind? Why or why not? |
| 1. Who did you give feedback to? (Give the first and last names of 2 peers- they may be the same or different peers from above.) |
| 1. Do you feel that you gave useful and kind feedback to your peers? Why or why not? |

**After you updated earlier parts of the worksheet based on your feedback, please go back to Canvas and continue with your learning content. Return to Part D prior to submitting your milestone.** 

# PART D: Daily 3 Challenge Report

Please answer the following questions honestly. There are no wrong answers! This is your opportunity for self-reflection.

| 1. How many days out of the past 7 did you do 20 minutes of movement? |
| --- |
| 1. How many days out of the past 7 did you write 3 morning pages? |
| 1. Overall, how do you feel you are doing on building your Daily 3 habits? Explain. |
| 1. What is your biggest barrier to staying motivated? |
| 1. If you have been practicing at least some movement and/or morning pages:   A) What effect (if any) have you noticed on your mood, focus, and productivity?  B) What helps you stay motivated? |
| 1. If you haven’t been practicing any movement and morning pages, what would motivate you to get started? |

**Once you have completed this worksheet, export/convert to .pdf, rename it per the instructions, and upload to Kritik as your Milestone 3 Submission. Celebrate a job well done!**