



## Sample Application – GRO Mini-Grant (Exemplar)

### Disclaimer:

*This sample application is provided as an **example only**. It is not a real student submission and does not represent an actual award decision. Its purpose is to help applicants understand how to structure strong responses and preview the type of information requested in the application process.*

*Applicants must submit their own original work, tailored to their unique research, goals, and circumstances. Meeting the examples shown here does not guarantee funding.*

*Please note: questions prior to Q.16 are individual demographic questions and are not included in this example.*

### **Q16. Please provide the title of your project**

*Monitoring Ocean Acidification Impacts on Juvenile Lobster Growth in the Gulf of Maine*

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### **Q17. Provide a brief description of your project (no more than 750 words)...**

The Gulf of Maine is one of the fastest-warming bodies of water in the world, and lobsters—an economically and culturally critical species in Maine—face growing threats from both ocean warming and ocean acidification. This project seeks to investigate how varying pH levels affect the growth rates and survival of juvenile lobsters under laboratory conditions.

The research question guiding this study is: *How does exposure to different pH levels, simulating projected ocean acidification scenarios, influence the survival and growth of juvenile lobsters?*

The significance of this work is twofold. First, it addresses an urgent ecological and economic issue with high relevance to Maine's coastal communities. Second, the findings may inform sustainable fishery management strategies and provide baseline data for larger, federally funded research initiatives.

The methodology includes:

- Collecting baseline water samples from the Gulf of Maine to document natural pH variation.
- Conducting a laboratory experiment in which juvenile lobsters are raised in controlled aquaria with three pH treatments: (1) current average, (2) moderate acidification (2050

projections), and (3) severe acidification (2100 projections).

- Measuring survival, molting frequency, and carapace length over a 6-week experimental period.
- Performing statistical analysis to compare outcomes across treatments.

This project will be conducted under the supervision of Dr. [Faculty Mentor's Name], whose expertise in marine biology and fisheries management ensures strong scientific and methodological guidance.

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**Q18. What are the expected products of your research project or creativity activity?**

- A dataset documenting lobster survival and growth under three pH conditions.
  - A poster presentation at USM's *Thinking Matters* research symposium.
  - A manuscript draft for submission to *Marine Ecology Progress Series*.
  - A fact sheet summarizing results in plain language for distribution to Maine lobstering communities through extension partners.
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**Q19. What are the real world outcomes or implications of your project?**

Findings from this project will provide early evidence of how Maine's lobster populations may respond to future acidification conditions. This information is critical for fisheries managers, policymakers, and the lobster industry as they prepare for long-term sustainability challenges. In addition, this research may help shape future adaptation strategies, such as adjustments to catch limits, aquaculture experiments, or community-level resilience planning.

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**Q20. How does participating in this project align with your academic and career goals?**

As a graduate student in biology with a focus on marine ecology, I am committed to pursuing a career in applied marine science research. This project directly supports my long-term goal of working with fisheries management organizations to apply scientific evidence in resource sustainability. By completing this project, I will gain valuable skills in experimental design, data analysis, and science communication—all essential for doctoral training and future collaborative work with stakeholders in Maine's fishing industry.

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**Q21. Will this research involve human subjects?**

*No*

**Q22. Do you have IRB approval?**

*Not applicable*

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**Q24. Please provide a detailed budget.**

- **Airfare – \$350**  
*Roundtrip flight from Portland, ME (PWM) to Washington, D.C. (DCA) to attend the American Fisheries Society Annual Meeting. Must be booked through Concur in accordance with University travel policies.*
- **Lodging – \$270**  
*Three nights at the conference hotel at the discounted student rate of \$90/night.*
- **Conference Registration – \$100**  
*Student registration fee, which provides access to all sessions, poster presentations, and networking events.*
- **Ground Transportation – \$30**  
*Estimated cost for roundtrip airport shuttle service in Washington, D.C.*

**Total Request: \$750**

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**Q25. What is the total amount of funding you are requesting?**

*750*

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**Q26. Have you received any other funding for this project?**

*No*

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**Q28–29. Faculty Supervisor Endorsement**

*(Illustrative excerpt)*

"I fully support [Student's Name]'s proposal for the GRO Mini-Grant. This research is timely, well-designed, and addresses one of the most pressing challenges facing

Maine's marine ecosystem and economy. The student has demonstrated strong initiative and preparedness, and I am confident they will execute the project successfully with mentorship and guidance." – Dr. Science For Life