



STUDENT WORKBOOK

This workbook belongs to:

Name: _____

School/Club: _____

Grade: _____

Date: _____



earthforce.org

@earthforce



STUDENT WORKBOOK

Table of contents

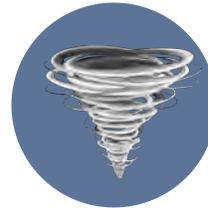
- What are natural hazards?
- Defining my community
- Selecting a natural hazard
- Proposing a solution
- The Scope of my project
- Benefits to my community
- Budget
- Presentation
- The RISE Challenge





What are natural hazards?

Natural hazards are natural events, such as flooding, wildfires, storm events, and drought, that threaten lives, property, and other assets.



Why is it important to investigate natural hazards?

Natural hazards affect thousands of people every year. We need to know what our risks are and take sensible precautions to protect ourselves, our families, and our communities.

Define Your Community

Defining your community is a way to define your project scope. Examples of communities are: my school, my town, my neighborhood, my county, among others.

What community are you going to work on?



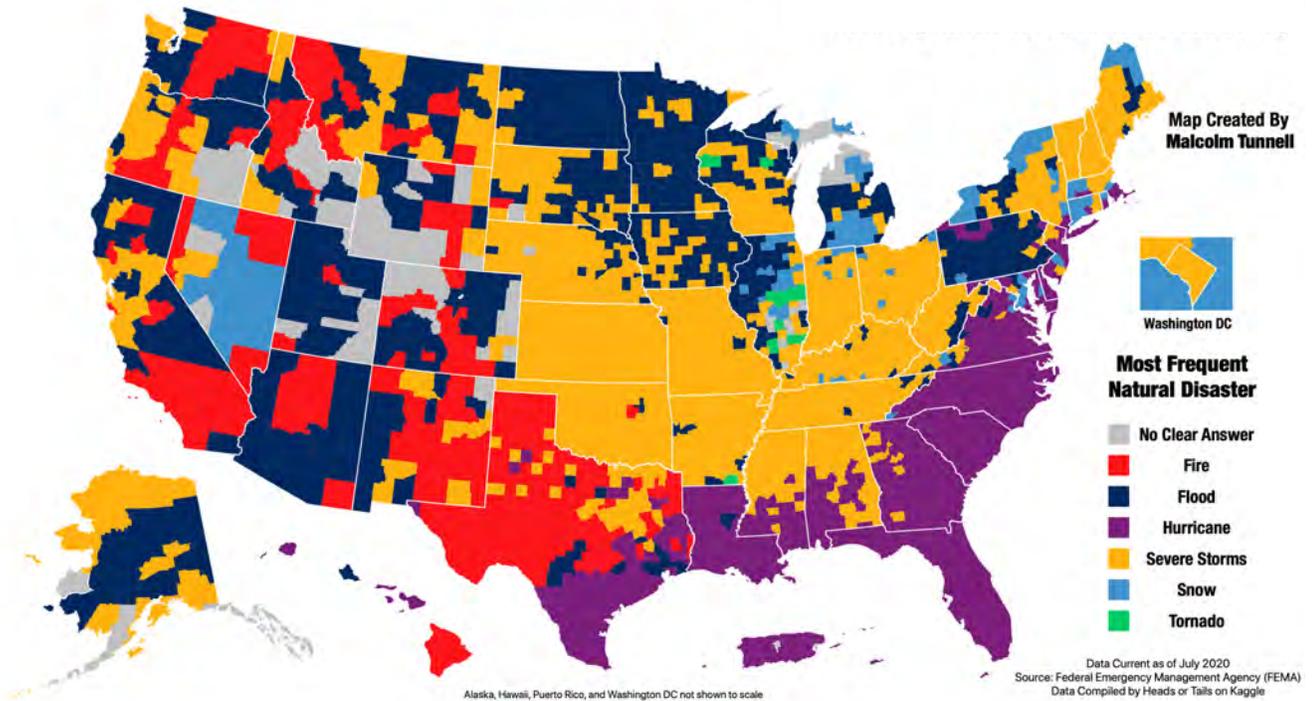
How many people are in your community?



EARTH FORCE TIP

Use a variety of methods such as research databases, talking to experts, conducting surveys, etc to understand your community.

Check the map below. These are the most common natural hazards in the USA per county.



What are the most common natural hazards that affect your community?



With help from your teacher(s), parent(s), or guardian(s), review your community's information resources on the natural hazard you are most concerned about. Learn about what your community is doing to protect itself, and what else can be done.

Let's identify what your community is doing to overcome its natural hazards.

What are we doing well?

What can we do better?

NATURAL HAZARD ISSUE

We are going to pick a natural hazard that you will focus on in your community. Let's go!

Think about resilience in terms of preparedness (actions to reduce the impact of a natural hazard event on people and property), mitigation (actions to reduce overall risk posed by a natural hazard), or response (what happens after an event)

Resilience: Ability to adapt to changing conditions and withstand and rapidly recover.

Describe some of the natural hazard issues you have observed in your community.

How are these issues increasing your community's natural hazards risk?



EARTH FORCE TIP

It is important to talk to stakeholders and experts about the issue that you will focus on to understand the different points of view of the issue.

NATURAL HAZARD ISSUE

From the previous page, choose the natural hazard issue you will focus on:

A simple line drawing of a target with three concentric circles and a central bullseye. An arrow is shown hitting the center bullseye from the upper left.

Describe some helpful things you have seen people doing to help your community's resilience to natural hazards:

Empty rectangular box for describing helpful things seen in the community.

How do these things help your community be more resilient?

Empty rectangular box for explaining how the things help the community be more resilient.

Describe the helpful things you see people from other communities doing to help build resilience.

Empty rectangular box for describing helpful things from other communities.

Describe some policies in place that help your community be more resilient:

How do these policies help your community be more resilient?

Describe policies in other communities that help them to be more resilient:



True or False?

T or F Water follows the path of least resistance.

T or F Impervious surfaces hold water from rainfall.

T or F Everyone has a flood risk.

Check your answers on the next page.

MY SOLUTION

Identify a realistic solution to address the issue you selected. Think of something innovative that you could accomplish in your community, or a concept that exists, but you think could be done better.

Describe your solution

Is your solution sustainable and achievable? YES NO

How so?

If you checked no, go back and think of another solution.

My idea involves...

Preparedness

Mitigation

Response

My idea will start in

School

Community

Province/state

Other: _____



EARTH FORCE TIP

It's important to be innovative but realistic with solutions. Choose something that addresses the root causes of the issue you selected.



Answers: True, False, True

PROJECT SCOPE

In this section we will dig into who the project impacts, when it will occur, and who will help you reach your goal.

My project will impact:

School Community Province/state

Other: _____

When will you begin your project?

List your short-term goals (within the next 3 months)

List your long-term goals

I will need help from:

Family and Friends School/Club Community Member(s)

. Industry Expert Government Other: _____

Make a list of people you will need to contact:

PROJECT SCOPE

My idea will help my community's natural hazard response through:

Preparedness

Mitigation

Response

Other

Describe why this idea will help your community:

PROJECT BENEFITS

Describe how your idea is going to make positive changes in your community:

Why do you think your project will be effective?

To implement your project you will need to think about the materials, costs and the time that you will invest to make it a reality.

What materials do you need to implement your project?

My budget

Budget: Describes where the money is being spent (expenses) and where you are getting it from (income)

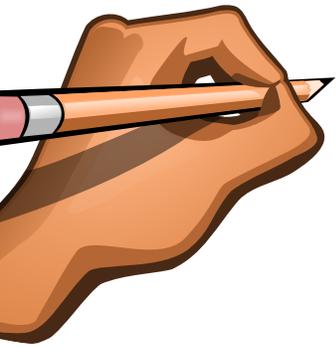
A detailed budget must include everything that you will be spending money on. Some important considerations are things like mileage, volunteer time, paper, letter writing, social media outreach, installation, etc.

Some items or services may be donated. They may include things like Mr. X from the school will be installing the drains and so while you are not paying him directly, someone else is, or he is volunteering his time. The \$ amount that you would have had to pay him can be considered “in-kind”. If people or an organization gives you materials, that is also considered in-kind.

Remember, you cannot spend money you do not have!

If there is still cash needed in your budget, be sure to explain where the funds will come from. Work with your Teacher/Club Advisor to decide how to best raise any additional funds still needed for your project.

Make sure your solution meets all of the criteria of a strong action project



- Your solution clearly reflects your voice and decision making at all levels of development.
- You worked with 3 or more community partners who represent different points of view on your natural hazard issue.
- Your solution includes a detailed budget. The values it contains appear accurate and comprehensive. You have secured additional funding sources.
- Your solution asks for change from people in power
- Your solution does all of the following:
 - Focuses on a significant issue
 - Your project is highly likely to produce measurable impacts and improvement
 - It has approval/ support from key stakeholders
 - Includes project timeline

It is time to present your project. Choose a creative format to express your solution.

Community judges will be reading your proposal. Visuals can often sell your idea better than words! If your idea involves a brochure, poster, video, song, cartoon, book, or model – then make it and attach it to the proposal. If your idea doesn't have a tangible visual, then include diagrams, charts, graphs, and tables to showcase your facts.

REFERENCES

Do you know what plagiarism is? If you answered, yes, then don't do it! You'll be disqualified from the RISE Challenge contest. If you're not sure, think of it this way: if you copy and paste content from someone else, you have to say who wrote it, when, and where.

All research that has been quoted, paraphrased, or summarized must have proper in-text citations (such as MLA or APA guidelines.)



Improper Quote

The National Risk Index can be used to support resilience building efforts.



Proper Quote

According to FEMA, "The National Risk Index can be used to support resilience building efforts." ("National Risk Index for Natural Hazards").

Citation:

"National Risk Index for Natural Hazards" FEMA, Department of Homeland Security, 16 August 2021, www.fema.gov/flood-maps/products-tools/national-risk-index



THE RISE CHALLENGE

The RISE Challenge is a regional competition that creates a generation of citizens with the knowledge, skills, and motivation to improve community resilience to natural disasters. The RISE Challenge is hosted in a growing number of states - enter the contest closest to you.

By telling community judges your solution you have a chance to win rewards for yourself, your school/club, and implement your idea!

Use the information you have compiled in your Student Workbook to create a proposal. Your proposal can be written, recorded in a video, or other format. Remember, this isn't a report on what a natural hazard is - this is a proposal to the community detailing one solution that you have that would make an actual difference.

Competition details



1. You can work by yourself or in a group of young people
2. Identify a community natural hazard concern
3. Research the concern (discuss the idea with parents, teachers, friends, and local experts)
4. Identify a realistic solution to address the concern
5. Explain your idea in a proposal. Your proposal can be written, recorded in a video, or other format. Use graphics, models, pictures, or videos to supplement your proposal.
6. Entries are judged on (See Judges Rubric for details)
 - Innovation
 - Community Impact
 - Comprehensive Scope and Communication
 - Budget
 - Realistic Solution
 - Visuals
7. Check with your educator or local Program Coordinator to submit your entry online. All support materials not submitted online must be sent to the local Program Coordinator before the contest deadline.
8. Ten finalists will be selected to make a 5-minute verbal presentation to a panel of judges and a public audience. Everyone at the finals receives a cash award.
9. Win awards for yourself and your school or club! (Content Score 40% + Verbal Score 60% = Final Score Determines Winner)
10. Implement your idea! Funding is available.

SMART Proposal Writing

When writing your proposal, ask yourself: is it S.M.A.R.T.?

S - Specific: Is your plan detailed? Try to keep it from being too general. Talk about one solution and the actions you are going to take to make it happen.

M - Measurable: Set clear goals for yourself. What do you want your project to do? Make your goals specific so you can evaluate whether you are successful.

A - Achievable: Make your project achievable. If you need help making your idea happen, make sure you identify who needs to be involved (government, industry organizations, conservation groups, etc.)

R - Realistic: Is it possible to complete this project? This project could really happen, and the more reasonable it is, the more likely it is to succeed.

T - Timely: How long would it take? When would you complete your project by?

A detailed overview of the proposal



Project proposals will be judged on a variety of criteria, such as whether or not the proposal identifies a natural hazard issue and how the project idea would help address the concern. Does it clearly communicate a specific plan/course of action for the project idea? Is the project idea realistic? Does the proposal include a budget? Are there helpful visuals? And does it demonstrate a solid understanding of the issue, proposed solution, and their complexity?

This guide, along with the RISE Challenge Judging Rubric, is meant to serve as a reference for what judges will be looking for, and what details are important to include. There is no suggested written length for the proposal or its sections, with the expectation that the proposal should be explanatory and succinct, without missing important/relevant information.

1. Introduction

This is your chance to catch our attention and tell us what you are going to talk about in your proposal. Make us care about your project by thinking about why it is important to you.

2. Define your “community” of focus

Tell us what community your issue takes place in. Why did you choose to focus on this community? What natural hazards are present and impacting your community? Keep this section brief. Remember this is not a report on the state of your community but a proposal for a solution to a natural hazard affecting it.

3. Identify the issue or concern you chose

Tell us about the natural hazard issue you have chosen to address. What community inventories did you use to discover your issue? As a group, how and why did you select this issue?

4. Describe how you went about researching your issue

What policies and/or community practices contribute to this issue? What research did you undertake to understand this issue? Did you consult experts or stakeholders involved with the issue? If so, what information did they share? Did you get different points of view on your issue? How did your research inform your understanding of the strategies suited to addressing your issue?

5. Explain your proposed solution

What overall strategy are you proposing to take to address your issue? How is your proposed action appropriate to address the issue? How does your solution address the root cause(s) of your issue in terms of policy or community practice? If your project requires you to ask for change from those in power, how do you plan on doing so? Be specific and realistic about what you will do, how it will work, and what it will take to make it happen.

6. Explain the scope of your project

How big of a project is this and what impact will it have? Is this a project that will affect your school, your watershed, your county, or beyond? What is your timeline for this project? Is this project something that you can do alone, or will you need help? How many people will be affected by this? Think about project scope in terms of the amount of work you need to put in, the number of people it affects, and the area it will impact.

7. How will this benefit the community?

Explain to us how your idea is going to make positive changes to your community. Maybe you plan to educate people so they change how they do things. Maybe you will make the physical/environmental features of your community stronger, safer, or more able to bounce back from natural hazards. How are you going to measure the success of your project? Tell us how and why this is going to work!

8. Describe the resources needed to make this idea happen

You should be able to implement this project; what will you need to make it happen? What will it cost and where will you get the funding to pay for it? Do you have additional sources of funding? What approvals do you need to get and how will you obtain them to do the project? Tell us where and how you will make this project happen. Think about the materials needed, the costs involved, as well as the time required to make this project happen.

9. Conclusion

Sum up your project and why it will help your community and the environment. Remember, don't introduce anything new about your idea, just go over what you've told us to remind us how great your idea is.

10. Include visuals

Show us what your project would look like in a model, drawing, cartoon, video, or graph - whatever creative way you want to express your solution. For example, if you want to make natural hazards signage - design a template and a map of proposed locations! If you want to create a rain garden - draw us a picture or make a magazine collage of the plants you would include, the size it would be, where it would be located etc.

11. Cite references

Community judges will be reading your proposal and they are often professionals and natural hazard experts so it is important that you cite your references. Who knows . . . you might be citing some of their work!



Judge's Scoring Rubric - Written Proposal

The top ten entries with the highest score will advance to the final competition.

Youth Voice	Proposal clearly reflects high involvement of student voice and decision making at all levels of development.	Proposal reflects moderate involvement of student voice and decision making.	Proposal reflects limited student voice and does not appear to be driven by students.	Proposal does not reflect student voice and does not appear to be driven by students.
Community Interaction	Students worked with 3 or more partners.	Students worked with 2 partners.	Students worked with 1 partner.	Students did not interact with any partners.
Budget	A detailed budget is included. Values appear accurate and comprehensive. Budget has secured additional funding sources.	A detailed budget has been included. Values appear accurate but a few costs may be missing. Budget identifies potential additional funding sources.	A budget has been included. Values appear inaccurate and costs may be missing. No additional funding sources have been identified.	No budget is provided. Costs of the project have not been mentioned, or values mentioned appear unrealistic. No consideration for funding is apparent.
Civic Component	Students do all of the following: plan to ask for change from people in power, discuss/ deliberate throughout the process, and vote on issues to work on.	Students do two of the following: plan to ask for change from people in power, discuss/ deliberate throughout the process, and vote on issues to work on.	Students do one of the following: plan to ask for change from people in power, discuss/ deliberate throughout the process, and vote on issues to work on.	Students do not do any of the following: plan to ask for change from people in power, discuss/ deliberate throughout the process, and vote on issues to work on.
Project Impact & Planning	Students do all of the following: Focus on a significant issue. Project highly likely to produce measurable impacts and improvement. Proposal has approval/ support from key stakeholders. Proposal includes project timeline.	Students do three of the following: Focus on a significant issue. Project highly likely to produce measurable impacts and improvement. Proposal has approval/ support from key stakeholders. Proposal includes project timeline.	Students do one or two of the following: Focus on a significant issue. Project highly likely to produce measurable impacts and improvement. Proposal has approval/ support from key stakeholders. Proposal includes project timeline.	Students do not do the following: Focus on a significant issue. Project highly likely to produce measurable impacts and improvement. Proposal has approval/ support from key stakeholders. Proposal includes project timeline.