

Science Adventure 3: Close to Home: Hazards Where We Live

Educator Preview

Adventure Snapshot

Learners create their own hazard and mitigation cards and play a matching game with them.



Timing | 50 minutes

Get Ready & Team Up 5 min.
 Hazards Where We Live 35 min.
 Reflect & Wrap Up 10 min.
Total 50 min.
Level Up Activities 5–45 min. each



Prep Snapshot*

Prep Time 50 min.
 Print and cut out Deck B.
 Think about local hazards.

**See Materials & Preparation for full info*



21st Century Skills

Connection

- Critical Thinking

Science Practices

- Obtaining, Evaluating, and Communicating Information



Guiding Question

What hazards exist where we live and how do we mitigate them?

Learners Will Do

Create Hazard cards reflecting hazards in the local area and Mitigation cards reflecting strategies the local community uses to address those hazards.

Learners Will Know

Scientists and communities have the skills and knowledge to mitigate hazards.



Connecting Across Adventures

Adventure 2: Exploring Hazards and Mitigation	Adventure 3: Hazards Where We Live	Adventure 4: Earth Hazards
Last time , learners acted out everyday hazards, figured out safety tips to address them, and started learning about hazard mitigation.	Today , learners explore hazards near their community and consider how people mitigate those hazards.	Next time , learners will learn about hazards on Earth and explore the methods people have come up with to mitigate some of them.

Adventure Resources

Access videos and digital resources using the link or QR code below. More information for teaching this curriculum is available in the [Educator Guide Introduction, pgs. iii-xxv](#). Access more PLANETS units, research, and pathways at <https://planets-stem.org/>.



weblink: <https://hov.to/046714cd>

Materials and Preparation

Materials

For the educator

- Scissors or paper cutter to prepare blank cards

For the whole group

- *Our Ideas* poster (on paper or a shared digital document)
[Examples](#) | [Templates](#)

For each learner or pair

- 3 blank cards from [Hazards Cards Deck B-Blank Cards \(PDF\)](#)
- Writing and drawing tools (i.e., pencils, markers)

Adventure 3 Materials Preparation (50 min.)

Ahead of Time

1. Review the “In-Use Example” in the [Prep & Setup Guide \(PDF\)](#) to help you think about what to add to the *Our Ideas* poster during the discussions in this adventure.
2. Print blank cards from [Hazards Cards Deck B-Blank Cards \(PDF\)](#). Print enough copies so each learner or pair can have at least one blank Hazard card and two blank Mitigation cards. (Save the extra Hazard cards in case learners want to use them.)
3. Cut these printed card sheets into individual cards with a paper cutter or scissors.



Support Learner Differences

This activity can be done in pairs or individually. Choose the best approach for your site resources (if you have limited printing budget) and learners. Check out the [Intentional Grouping Strategies, pg. xxii](#).



4. As an educator, think about hazards relevant to your community and look up the words for these in your local languages or languages spoken by learners in your program. For example, if you live in Hawai'i, you might look up the Indigenous language terms for invasive species or volcanic hazards like lava flows. If you live in Kansas, you might look up the terms for crop-eating pests or tornados in learners' preferred languages.

In Your Space

5. Place the *Our Ideas* poster in a visible place in your learning setting or prepare to share it digitally.



Support Learner Differences

Indigenous language terms can at times be difficult to look up on the Internet as they are primarily oral languages and often do not offer direct translations for noun-centric terms. If your program has native language speaking staff, ask them to assist, or consider asking a community member. Translations can be done over the course of the pathway or even afterwards to build this into your program in the future. Other multilingual learners may benefit from this approach as well.



Adventure Guide

Get Ready & Team Up (5 min.)

1. Invite learners who did Adventure 2, Exploring Hazards and Mitigation, to share what they did. *(They acted out everyday dangers and played a card game matching hazards with safety tips to help keep you safe from the hazards.)* As learners share, refer to the *Our Ideas* poster and the words *hazard* and *mitigation*. Read their descriptions aloud to the group and display related images. If learners shared words in their preferred languages that were captured in the poster, invite the learners to say them again in front of their peers.
2. Say: **Today, you will explore hazards where you live.** Share the Guiding Question with learners aloud and write it on the *Our Ideas* poster (using multiple languages as needed): **What hazards exist where we live and how do we mitigate them?**
3. If you choose the pairing up option, organize learners into pairs.



Support Learner Differences

If new learners are joining you, lead an [inclusion activity \(pgs. xx–xxii\)](#) and use other [engagement strategies as necessary \(pgs. viii–xviii\)](#).



Hazards Where We Live (35 min.)

4. Say: **You will create your own Hazard and Mitigation cards today.** If learners did not experience the last adventure, show all cards from *Hazards Cards Deck A–Everyday Hazards* as examples.
5. To ensure learners understand why the game is changing, say: **Along with common everyday hazards, some hazards are specific to where we live. The new cards will show hazards specific to our community and how people deal with them.** Pass out one blank Hazard card and two blank Mitigation cards to each learner or pair.
6. On the Hazard card, have each learner or pair of learners draw or write about one hazard they and communities they belong to deal with frequently. Then, on the Mitigation cards, have them draw or write about tools or strategies they and their communities use to protect themselves from this hazard. If they thought about hazards and mitigation at home after the last adventure, they can use the ideas they came up with.



Support Learner Differences

Encourage learners to identify their own strengths and the roles they would like to play during testing, and form pairs that can play a variety of roles. For example, one learner can specialize in drawing and another in writing and translating.



Support Thinking

If your learners need more specific prompts, use examples. Hazards can be everyday (like tripping hazards of things left on the floor) or natural (like pests, weather, or extreme events like earthquakes, hurricanes, or blizzards). You might try giving examples or limiting this to an area relevant to them (e.g., the playground).



7. Once all cards are filled, pair learners if done individually or group in fours if already paired and have them take turns explaining their cards.
8. Once learners have finished developing their Hazard and Mitigation cards, return to the *Our Ideas* poster where those words were defined in the previous adventure. Revisit the Guiding Question: **What hazards exist where we live and how do we mitigate them?** Have learners share what examples of hazards and mitigations they would like to add under these categories on the poster.

Reflect & Wrap Up (10 min.)

9. Say: **You will use the Hazard and Mitigation cards you made today in the next few activities. So far, all cards apply to Earth. How could the cards you created be hazards or mitigations in space?** (A possible response: *the hazard of tools or backpacks on the floor might be similar to not putting tools away in a small spacecraft, where they could float around.*) Give learners the chance to talk about this in pairs.
10. Say: **Next time, you will think about how to mitigate natural hazards that affect other parts of Earth.**



Support Learner Differences

- ★ Indigenous learners and others may be interested in describing spiritual hazards in addition to physical ones.
Invite a community member to share examples of terms for hazards and mitigations in traditional languages.
- ★ It is possible that stories about hazards may bring up trauma. If you notice this, ask the learner privately what they might need at that moment. If they do not know, you can offer some ideas from the [Arizona Adverse Childhood Experiences Consortium Resource Library](#).
- ★ To ensure equitable participation, consider using strategies that support all learners sharing their ideas, such as providing time to think before asking for answers and allowing learners to discuss in pairs or small groups before sharing with the whole group.



Level Up!

- ★ Have a whole-group discussion about the hazards and mitigations learners chose and how they appear in the local community. Be aware that learners may have experienced natural disasters; think ahead of time about how to be sensitive to their experiences. (10 min.)
- ★ Have each group invent a story using the cards they created. Allow learners to share their stories with the whole group. (10 min.)
- ★ Ask this story prompt: **What is a hazard you have experienced and how did you mitigate it?** Have learners share with a partner. Tell learners, if anyone asks what they did today, they can say “we shared stories about hazards where we live and ways we mitigate them,” and then ask them the above story prompt. Consider returning to learners’ ideas at the start of the next adventure. (5 min.)
- ★ Get families or a community member involved to share relevant stories of experiencing and mitigating hazards in your local area. Download customizable flyers and get ideas on the [Space Hazards Family and Community Connections webpage](#) (45 min.).

After the Adventure

1. Clean up:
 - Keep the *Our Ideas* poster for use in Adventure 4.
 - Keep the cards learners created for use in future adventures.
2. Plan for Science Adventure 4. See [Science Adventure 4 Preparation on pgs. 39–40](#).
3. Take time to reflect on the following educator prompt: **How did you support learners making personally relevant connections to local events?**

Space Hazards Additional Resources

Resources include All Downloads, All Videos, Family Connections, and more.



weblink: <https://hov.to/940428f7>