

Hazard Literacy Center

Hazard Literacy Education Program

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Earthquake!
What Would You Do?



1. Program Overview

This program is a disaster safety education program centered on situational judgment. Through a game-based activity, students experience a variety of earthquake scenarios and decide for themselves how to respond appropriately depending on the situation and location. Centered on the question, "What should we do when an earthquake occurs?", students explore earthquake scenarios that may occur in a variety of places, including homes, schools, elevators, supermarkets, subways, movie theaters, outdoor areas, cars, mountains, and coastal areas. Rather than simply memorizing earthquake safety guidelines, the program is designed to develop students' ability to judge and choose appropriate actions based on the situation and location.

The program consists of five stages: making initial judgments about earthquake situations, choosing appropriate responses with scenario cards, comparing students' choices with recommended actions, organizing and applying earthquake safety guidelines, and exploring local earthquake evacuation sites. The scenario cards are based on earthquake safety guidelines from the Ministry of the Interior and Safety. Students review earthquake scenarios set in different locations and choose the action they think is most appropriate from three options: A, B, or C. They then explain their choices within their groups, agree on a final group decision, and compare it with the recommended action to reflect on their judgment. In the second part of the program, students organize the safety actions identified through the game according to the timing of the earthquake and their location, then apply what they have learned to new scenarios. They also use the National Disaster and Safety Portal to find earthquake evacuation sites near their school or home and identify in advance where they could evacuate during an actual disaster.

This program is designed to help students understand the safety actions needed during an earthquake and make appropriate decisions based on the situation and location. Through these activities, students move beyond simply memorizing earthquake safety guidelines and develop judgment and decision-making skills by identifying risks and choosing appropriate responses in a variety of situations. Students also apply what they have learned to new situations and locate earthquake evacuation sites in their own communities, helping them develop the disaster-response skills needed to prepare for earthquakes and act safely in real situations.

Grade Level	Upper Elementary or Middle School Students	Instructional Methods	Group-based decision-making game and activities
Learning Environment	Classroom with Access to Internet	Duration	2 sessions, 90 minutes
Required Materials	Worksheets, an internet-enabled digital device, A/B/C choice cards, and scenario cards		

2. Learning Objectives (Hazard Literacy Framework)

① Understand that hazards and appropriate responses during an earthquake may vary depending on the situation and location.
② Identify hazards in a variety of earthquake situations and use safety information to judge and select appropriate actions.
③ Apply earthquake safety guidelines to new situations, explore earthquake evacuation sites in the local area, and prepare for actual disaster situations.

Learning Objectives	Knowledge & Understanding		Reasoning & Skills					Values & Attitudes			Psychology & Emotion			Behavioral & Practical Engagement		
	A1	A2	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3	E1	E2	E3
Objective ①	O		O	O										O		
Objective ②			O	O			O					O		O		
Objective ③				O	O			O		O		O		O		

3. Key Concepts

- Earthquakes and safety actions
- Responses before, during, and after an earthquake
- Earthquake responses according to location
- Decision-making in earthquake situations
- Earthquake evacuation and safety guidelines

4. Program Sequence

	Activity Sequence
Introduction	-Ask, “What would you do first if an earthquake occurred?” -Check students’ current understanding of how to respond in different earthquake situations
Inquiry 1	-Examine scenario cards showing earthquakes occurring in different locations. -Individually select the most appropriate action from the A/B/C choices. -Discuss the reasons for each choice within the group and compare the group’s decision with the recommended action.

	Activity Sequence
Inquiry 2	-Organize earthquake safety actions according to when they should be taken. -Analyze hazards and appropriate responses in different locations. -Apply the safety guidelines to new earthquake scenarios and determine the most appropriate actions.
Inquiry 3	-Use the National Disaster and Safety Portal to explore earthquake evacuation sites nearby. -Identify the location and characteristics of the nearest outdoor earthquake evacuation site. -Identify evacuation sites in the local area that could be used during an actual earthquake.
Conclusion	-Use the National Disaster and Safety Portal to explore earthquake evacuation sites nearby. -Identify the location and characteristics of the nearest outdoor earthquake evacuation site. -Identify evacuation sites in the local area that could be used during an actual earthquake.

5. Theoretical Background and Activity Design for Disaster Education

An earthquake is a natural phenomenon in which the ground shakes as energy accumulated inside the Earth is suddenly released. Earthquakes can cause various types of damage, including structural damage or collapse, falling objects, and fires. The hazards people face and the appropriate actions they should take can vary depending on their location and surrounding environment. Earthquake safety education therefore needs to go beyond simply memorizing safety guidelines and help students identify hazards in different situations and locations and determine appropriate actions. Previous transmission-oriented approaches to earthquake safety education have limitations in developing the ability to respond effectively in real situations, highlighting the need for educational experiences that allow students to experience situations and make their own judgments (Lee et al., 2024).

This program is designed to provide students with opportunities to experience earthquake scenarios that may occur in different locations and determine appropriate actions for themselves. The scenario cards were developed based on the Earthquake Safety Guidelines by Situation and Earthquake Safety Guidelines by Location provided by the Ministry of the Interior and Safety (2025). Students select an appropriate action from the A/B/C choices, discuss the reasons for their decisions with group members, and then compare their decisions with the recommended actions. Through this process, they review their own judgment and develop an understanding of appropriate safety actions during an earthquake. The Ministry of the Interior and Safety organizes earthquake safety guidelines according to both the sequence of events and the location in which an earthquake occurs.

Students also organize earthquake safety actions according to the sequence of events and analyze the relationship between location-specific hazards and appropriate responses. They then apply the safety guidelines they have learned to new situations and use the National Disaster and Safety Portal to explore earthquake evacuation sites near their school or residential area. The portal provides information on the locations and facilities of earthquake evacuation sites by region, allowing students to use this information to prepare for earthquakes within their own communities. Through these activities, students develop hazard literacy competencies by understanding earthquake risks, using relevant information to make appropriate decisions, and taking safe actions during actual disaster situations.

6. Instructional Considerations

When teaching this program, make sure students do not assume that the same action should be taken in every earthquake situation. Explain that appropriate actions may vary depending on whether the shaking is still occurring, the person's current location, and surrounding hazards. Students should avoid reaching overly simple conclusions such as "If an earthquake occurs, run outside immediately." Instead, guide them to understand situation-specific safety principles, such as protecting their head and body while the ground is shaking and, once the shaking stops, checking their surroundings before evacuating safely.
During the scenario card activity, the focus should not be simply on choosing the "correct" A/B/C answer. Encourage students to explain their choices and reasoning and compare their judgments with those of their group members. After checking the recommended action, students should go beyond simply recording the correct answer. Questions such as "What is dangerous in this location?" and "Why is this action safer?" can help them understand the relationship between location-specific hazards and appropriate safety actions. Because earthquake safety guidelines are directly related to personal safety, students should not reach conclusions based only on their own assumptions. Their responses should be checked against official safety guidelines provided by public agencies such as the Ministry of the Interior and Safety.
Toward the end of the program, students apply the safety guidelines they have learned to new situations and use the National Disaster and Safety Portal to explore earthquake evacuation sites near their school or residential area. Rather than simply identifying the names and locations of evacuation sites, guide students to determine in advance where they could actually evacuate if an earthquake occurr. Finally, students compare their initial judgments with their judgments after completing the activities and identify the earthquake response principle they consider most important. This helps students move beyond memorizing safety guidelines and develop the ability to assess risks and act safely during real disaster situations.

7. References

- Lee, H. J., Lee, S. J., & Park, J. Y. (2024). Development of the Metaverse-based Program for Earthquake Safety Education. School Science Journal, 18(1), 33-49.
- Ministry of the Interior and Safety. (2025a). Earthquake safety guidelines by situation [Poster]. https://www.mois.go.kr/frt/bbs/type002/commonSelectBoardArticle.do?bbsId=BBSMSTR_000000000530&nttId=117078
- Ministry of the Interior and Safety. (2025b). Earthquake safety guidelines by location [Poster]. https://www.mois.go.kr/frt/bbs/type002/commonSelectBoardArticle.do?bbsId=BBSMSTR_000000000530&nttId=117079
- Ministry of the Interior and Safety. (n.d.). National Disaster and Safety Portal: Earthquake evacuation sites. https://old.safekorea.go.kr/idsiSFK/neo/sfk/cs/sfc/res/victimList.html?acmdfclty_cd=2&emgPage=Y&menuSeq=855

Session 1: Earthquake! What Would You Do?

Topic	Choosing the Right Action in Different Earthquake Situations
What Will We Learn?	① Understand that hazards can vary depending on the situation and location during an earthquake. ② Decide on and choose appropriate actions in different earthquake situations.

1 Think About It

- What would you do first if an earthquake occurred?

- How well do you know what to do in different earthquake situations?
  - ☐ Very well
  - ☐ Fairly well
  - ☐ Neither well nor poorly
  - ☐ Not very well
  - ☐ Not at all

2 Choosing the Right Action in Different Earthquake Situations

- Read the front of each scenario card and think about what you would do before turning it over to see the A/B/C choices.
- Share your idezas with your group and choose the most appropriate action.
- Finally, compare your choice with the recommended action.

Situation	My Choice	Group Choice	Recommended Action
Home	A / B / C	A / B / C	
School	A / B / C	A / B / C	
Elevator	A / B / C	A / B / C	
Supermarket	A / B / C	A / B / C	
Subway	A / B / C	A / B / C	
Theater	A / B / C	A / B / C	
Outdoors	A / B / C	A / B / C	
Car	A / B / C	A / B / C	
Mountain	A / B / C	A / B / C	
Beach	A / B / C	A / B / C	

Session 2: Know Earthquakes, Be Prepared

Topic	Understanding Earthquake Safety Guidelines and Applying Them to Different Situations
What Will We Learn?	① Explain the difference between what to do during the shaking and after the shaking stops. ② Explain location-specific hazards and appropriate responses. ③ Apply earthquake safety guidelines to a new situation and determine the appropriate action.

1 Learning What to Do During an Earthquake

- Think back to what you learned from the scenario cards and organize earthquake safety actions according to when they should be taken.

When?	What Should You Do?
During the Shaking	
After the Shaking Stops	
When Evacuating	
After Evacuating	

2 Exploring Hazards and Safety Actions by Location

- Identify the main hazards to watch out for and the appropriate actions to take in each location.

Location	What Hazards Should You Watch Out For?	What Should You Do?
Home, School		
Supermarket, Department Store		
Elevator		
Subway		
Car		
Mountain, Beach		

- What would be the appropriate action in the following situation?

> You are staying in a hotel room while traveling with your family. Suddenly, strong shaking begins, and objects in the room start to move and shake.

3 Finding Earthquake Evacuation Sites Near You

- Where should you go if you need to evacuate from a building after an earthquake?
- Go to the National Disaster and Safety Portal (https://old.safekorea.go.kr/idsiSFK/neo/main/main.html)
- Go to Disaster Information → Local Disaster Information → Earthquake Evacuation Sites and find outdoor earthquake evacuation sites near your school or home.

1) Which area did you search?

2) Where is the nearest outdoor earthquake evacuation site to your home or school?

3) Why do you think this location is suitable as an earthquake evacuation site?

4 Reflection

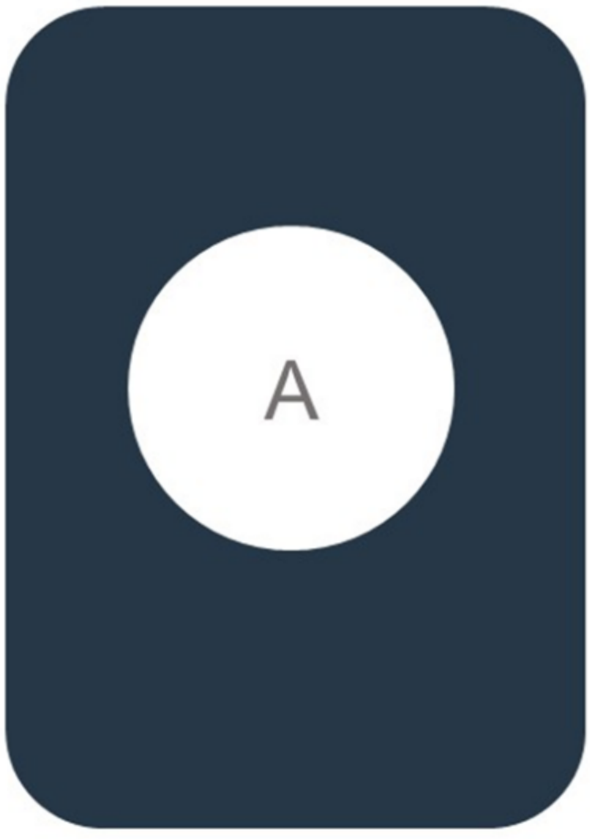
- Think about what you learned through the earthquake activities.

1) What did you learn that you did not know before this lesson?

2) What do you think is the most important principle for staying safe during an earthquake? Why?

3) How well do you know what to do in different earthquake situations?

- ☐ Very well
- ☐ Fairly well
- ☐ Neither well nor poorly
- ☐ Not very well
- ☐ Not at all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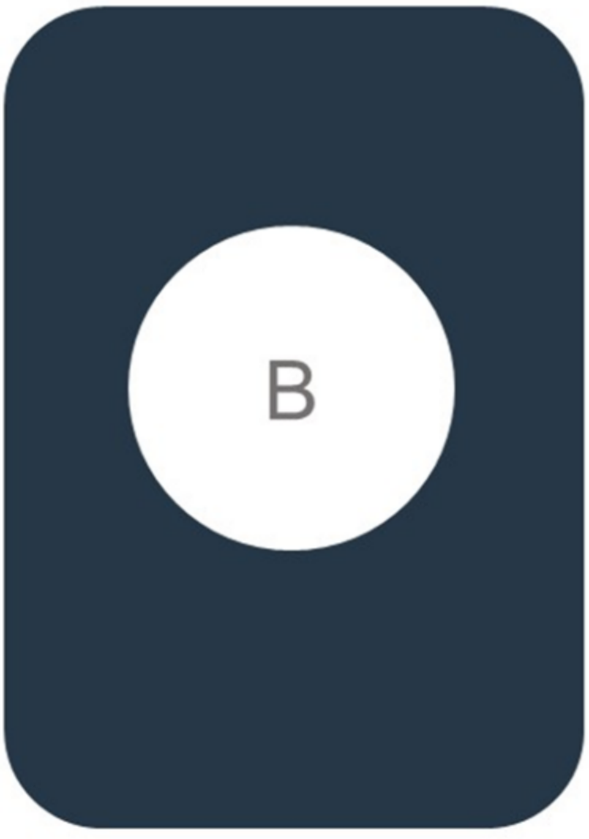
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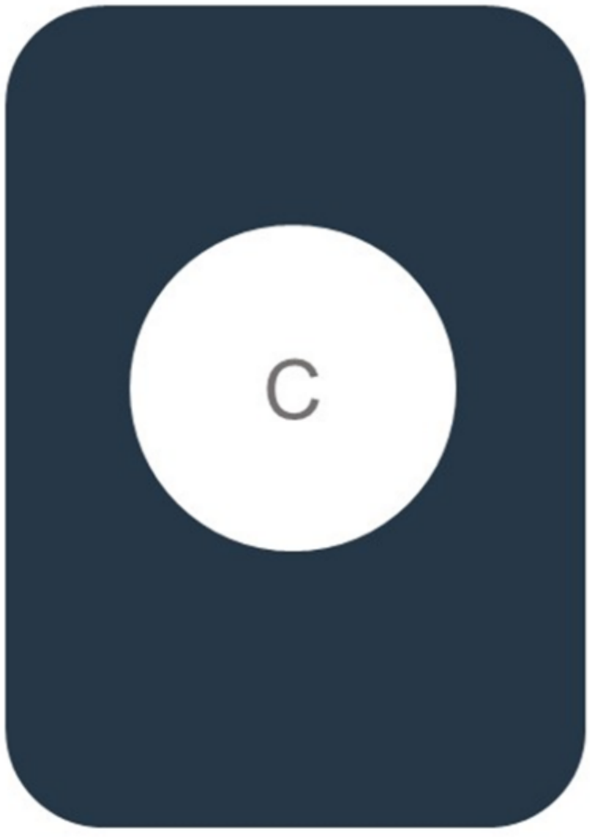
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Earthquake!
What Would You Do?
GAME RULE
1
Look at the front of the scenario card and think about what you would do.
2
Turn the card over and choose A, B, or C individually.
3
Share your choices and reasons with your group and decide on your group's final choice.
4
When your teacher gives the signal, hold up your group's A/B/C choice card.
5
Check the recommended action provided by your teacher and record it on your worksheet.

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Scenario Card



AT HOME

The house suddenly begins to shake while you are relaxing at home.

What Should You Do?

↻ Flip the card to see the choices.

Front

What Would You Do?

Choose A / B / C

A — Hold the furniture to keep it from falling over.

B — Get under a table and protect your head and body

C — Open the front door and quickly evacuate outside.

Back

Scenario Card



AT SCHOOL

The classroom suddenly begins to shake during class.

What Should You Do?

↻ Flip the card to see the choices.

Front

What Would You Do?

Choose A / B / C

A — Quickly run outside to the school playground.

B — Get under your desk and protect your head and body.

C — Open a window and check what is happening outside.

Back

Scenario Card



IN AN ELEVATOR

You suddenly feel strong shaking while in an elevator.

What Should You Do?

↻ Flip the card to see the choices.

Front

What Would You Do?

Choose A / B / C

A Press the button for the first floor and quickly leave the building.

B Stay in the elevator until you reach your destination

C Press the buttons for every floor and get off when the elevator stops and the the doors open.

Back

Scenario Card



AT A SUPERMARKET

Strong shaking suddenly begins while you are shopping.

What Should You Do?

↻ Flip the card to see the choices.

Front

What Would You Do?

Choose A / B / C

A Move away from the shelves and protect your head and body.

B Find the nearest exit and quickly go outside.

C Stand next to the shelves and try to avoid falling objects.

Back

Scenario Card



ON THE SUBWAY

You suddenly feel strong shaking while on the subway.

What Should You Do?

↻ Flip the card to see the choices.

Front

What Would You Do?

Choose A / B / C

A — Open the door, get off the train, and move onto the tracks.

B — Hold on to a handrail and stay calm while following instructions.

C — Quickly move to a car closer to an exit and wait there.

Back

Scenario Card



AT A THEATER

Strong shaking suddenly begins while you are watching a movie.

What Should You Do?

↻ Flip the card to see the choices.

Front

What Would You Do?

Choose A / B / C

A — Protect your head and stay in your seat until the shaking stops.

B — Find the nearest exit and quickly go outside.

C — Move into the aisle between the seats, crouch down, and wait.

Back

Scenario Card



OUTDOORS

You suddenly feel strong shaking while walking outside.

What Should You Do?

↻ Flip the card to see the choices.

Front

What Would You Do?

Choose A / B / C

A — Move away from buildings and go to an open area.

B — Go inside the nearest building and protect yourself.

C — Stay close to a building wall and protect your head while you wait.

Back

Scenario Card



IN A CAR

You suddenly feel strong shaking while driving a car.

What Should You Do?

↻ Flip the card to see the choices.

Front

What Would You Do?

Choose A / B / C

A — A Speed up and drive to the nearest safe place.

B — Stop immediately and quickly get out of the car.

C — Turn on the hazard lights, slow down, and pull over to the right side of the road.

Back

Scenario Card



ON A MOUNTAIN

Strong shaking begins while you are hiking.

What Should You Do?

↻ Flip the card to see the choices.

Front

What Would You Do?

Choose A / B / C

A Move to a safe place away from slopes to avoid falling rocks.

B Take shelter under a nearby rock to protect yourself from the shaking.

C Run down the hiking trail to get off the mountain quickly.

Back

Scenario Card



AT THE BEACH

You suddenly feel strong shaking while spending time at the beach.

What Should You Do?

↻ Flip the card to see the choices.

Front

What Would You Do?

Choose A / B / C

A Stay where you are and wait for an official announcement.

B Stay on the beach and watch for changes in the sea.

C Move away from the coast and quickly go to higher ground.

Back