

Hazard Literacy Center

Hazard Literacy Education Program

Hazard Literacy Center

The Cry of the Parched Earth : Act for Resilience



1. Program Overview

Building on the scientific principles of drought and the awareness of social inequality covered in previous sessions, this is an action-oriented education program in which learners study action guidelines for responding to real drought disasters and design a three-tier set of climate adaptation action guidelines. Learners analyze the National Drought Information Portal and the Ministry of the Interior and Safety's National Drought Action Guidelines to classify practical drought-response measures at the individual, school, and community levels. Rather than confining the issue of drought to individual conservation measures such as "using a cup when brushing your teeth," the program expands it into civic action that calls for structural and institutional resilience—such as inspecting a school's water infrastructure, improving a community's water leakage rate, and enacting ordinances for water reuse. This program aims to help learners grow not into passive victims or bystanders of disaster, but into citizens who take active action in an era of climate crisis.

Grade Level	Elementary and middle school students	Instructional Methods	Lecture, discussion, group learning
Learning Environment	Classroom (with computer access)	Duration	Total 80 minutes (1 session)
Required Materials	Activity sheets, writing tools		

2. Learning Objectives (Hazard Literacy Framework)

① Understand the national action guidelines for each drought warning stage (Attention–Caution–Alert–Severe) and be able to propose adaptive actions appropriate to each situation.
② Be able to establish and commit to practicing a three-tier (individual–school–community) set of drought prevention and response guidelines that go beyond individual water conservation to strengthen the climate resilience of schools and communities.

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		
Objective ②			O									O	O	O	O	O

3. Key Concepts

- National action guidelines by drought stage (public disaster response manual)
- Climate adaptation and resilience
- Three-tier response system (individual – school – community/government)
- Civic activism

4. Program Sequence

Stage	Contents
Introduction (5 min)	-Pose the question: "Besides simply waiting for rain, what structural responses can we take?"
Lecture (20 min)	-Lecture on government/local government/individual response manuals by drought stage (Attention–Caution–Alert–Severe) -Explain the difference between individual water conservation and building structural/institutional resilience
Inquiry (40 min)	-Draft a three-tier set of drought prevention and response action guidelines -Develop guidelines across three levels: individual / school / community-government -Explore and concretize practical examples for each level -Develop specific, immediately applicable action plans for daily life and the community
Wrap-up (15 min)	-Group presentations

5. Theoretical Background and Activity Design for Disaster Education

Hazard education in an era of climate crisis should not stop at instilling fear of disaster risk; it must connect to a sense of self-efficacy and the capacity for action that empowers learners to protect their own living environment. Likewise, if drought response is reduced to simple personal etiquette such as "let's use a cup when brushing our teeth," students can easily come to feel powerless in the face of large-scale climate disasters. This program is therefore designed to help students explore a three-tier action framework spanning the individual, school, and community/government levels.

● Individual level: Everyday water conservation and drought-preparedness practices (reducing household water use, checking for leaks, etc.)
● School level: Inspecting the school's water infrastructure and running community campaigns (water-saving faucets, use of rainwater storage tanks, etc.)
● Community/government level: Structural water justice measures demanded of local governments and businesses (budgeting for repairing aging, leak-prone water pipes, enacting ordinances for industrial water reuse, etc.)

By focusing on citizenship that goes beyond changes in individual habits to drive "structural change" at the school and local-government level, this program helps students develop the agency to actively speak up for public safety and justice—even in the face of a disaster as vast as the climate crisis.

6. Instructional Considerations

Encourage students to write drought prevention and response actions in specific, concrete terms. Guide students so that drought response is framed as a way of strengthening community resilience through solidarity and cooperation, rather than individual effort alone.

7. References

- National Drought Information Portal: https://www.drought.go.kr/main.do
- Korea Meteorological Administration Weather Data Open Portal: https://data.kma.go.kr/data/gaw/selectSpiRltmList.do

The Cry of the Parched Earth: Act for Resilience

Topic	Drought Prevention and Response
What will you learn?	① Understand the national action guidelines for each drought warning stage (Attention–Caution–Alert–Severe) and be able to propose adaptive actions appropriate to each situation. ② Be able to establish and commit to practicing a three-tier (individual–school–community) set of drought prevention and response guidelines that go beyond individual water conservation to strengthen the climate resilience of schools and communities.

1 Thinking About the Impacts of Drought

- What economic impact might drought have on us?

- What social impact might drought have on us?

- What environmental impact might drought have on us?

2 Drought Warning Stages and Drought Response

- Drought warnings are divided into the following four stages. Fill in the blank cells below.

Category	Attention	Caution	Alert	Severe
Meteorological Drought	• SPI6 ≤ –1.0 • Precipitation approx. 65% or less of the annual average • Drought expected to continue	• SPI6 ≤ –1.5 • Precipitation approx. 55% or less of the annual average • Drought expected to continue	• SPI6 ≤ –2.0 • Precipitation approx. 45% or less of the annual average • Drought expected to continue	• SPI6 ≤ –2.0 • Persisting 20 days or more • Nationwide damage expected
Agricultural Water	• Paddy reservoir rate ≤ 70% • Effective soil moisture in dry fields ≤ 60%	• Paddy reservoir rate ≤ 60% • Effective soil moisture in dry fields ≤ 45% • Water supply shortage expected	• Paddy reservoir rate ≤ 50% • Effective soil moisture in dry fields ≤ 30% • Water supply restrictions needed	• Paddy reservoir rate ≤ 40% • Effective soil moisture in dry fields ≤ 15% • Large-scale damage expected
Domestic/ Industrial Water	• Falling water levels at rivers and water facilities • Water surplus management needed	• Falling water levels • Reduced river baseflow / water supply restrictions needed	• Water shortage occurring / concern • Water supply restrictions needed	• Water shortage expanding • Water supply restrictions needed

✓SPI: The Standardized Precipitation Index (SPI) is a drought index developed by Mckee, Doesken & Kleist (1993) that uses precipitation alone to calculate drought severity, and can flexibly represent both long- and short-term drought depending on the time unit used.
Recommended by the World Meteorological Organization (WMO) as a representative drought index for meteorological drought monitoring
※ SPI1, SPI3, SPI6, ..., SPI24 refer to analyses of cumulative precipitation over 1, 2, 3, ..., 24 months, respectively (Source: Korea Meteorological Administration Weather Data Open Portal)
✓For agricultural water, the paddy reservoir rate is based on the average reservoir rate during the farming season.
Source: National Drought Information Portal

- Summarize what each of the following actors primarily does to respond to drought.

- Ministry of the Interior and Safety: :
- Meteorological Administration:
- Local government::
- ( ):
- ( ):

3 Practicing Water Conservation

- The first step we can take toward overcoming drought is water conservation. Research what actions should be taken at each stage of drought.

Drought Stage	Action Guidelines
Normal	
Attention	
Caution	
Alert	
Severe	

- We are currently in the "Normal" drought stage. Choose a water-saving habit you will practice in your daily life, and actively practice it for one week.

- Water-saving habit:
- Specific action plan::
- Achievement rate of the action plan (write after one week):
- Reflection (write after one week):

4 Beyond "Me" — To School and Society

- As you learned in the previous session, drought can be made more severe by the climate crisis. How can we get more people interested in drought prevention and response, and drive structural change that goes beyond the individual?

- First, let's design a campaign encouraging students at our school to take drought prevention and response actions.

- Research what the community and government should do to help.
(Consider water resource distribution justice for disaster-vulnerable populations, responsibility for the climate crisis, the prolonged nature of the climate crisis, etc.)