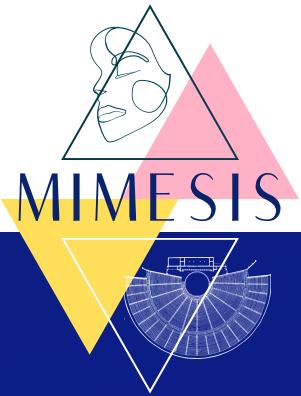


Teacher's card



WORLD ON FIRE

Learning objectives

- Associate problems and solutions
- Develop children's reflective skills
- Bring a project to completion & Make choices/proposals
- Raise awareness on responsibilities

Modalities of the activity

In the classroom

7-15 years

Materials needed

- Pens and papers
- Smartphone, clock or hourglass
- Projector and computer



Printable resources attached

- Information booklet (printable material 1)
- Role cards (printable material 2)

Acts

Act 1: Brainstorming

Act 2: Free your ideas!

Act 3: A Script to Save the Planet

Act 4: Time to Act!

Difficulty and targeted school level

Medium

Primary

Low Secondary

Introduction to the activity



Summary of the activity

The 'World On Fire' activity is an engaging and interactive group game inspired by theatre plays and creative techniques. Its primary objective is to empower children by providing them with a platform to confidently express their ideas and explore ways to transform them into reality.

How can we avoid bushfires or mass wasting ? Prevent the rising of the seas and drought ? It sounds tricky, but we can all have ideas to address those issues. Let's discover your full engineer potential with this game !

In the first part, children will go on an "idea safari" with the help of a little game. On the second, they will discover what jobs it takes to bring these ideas to real life. And at the end, they will play different role, to pitch their ideas to the rest of the group.

Sequencing the activity



ACT 1:
BRAINSTORMING



ACT 2: FREE YOUR
IDEAS!



ACT 3: A SCRIPT TO SAVE
THE PLANET



ACT 4: TIME
TO ACT!

Introduction to the activity



Overall learning objectives of the whole sequence

It's a group approach, human and liberating, enabling each individual to discover his or her voice, body and ability to concentrate.

Develop children's reflective skills. Consolidate the ability to associate problems and solutions. Act within a time limit. Learn to bring a project to completion, make choices/proposals. Raise awareness of a player's responsibilities.

Overall theatrical objectives of the whole sequence

The child can express his or her dynamism and strength of conviction. The young person can feel valued through stage games. He or she will learn to use the right tone of voice to convey a message.

Mastering language, listening, learning to respect each other's ideas. Giving each individual the opportunity to express him/herself alone or as part of a group. Work as part of a group on a common project. Improve diction.

Skills developed throughout the whole sequence

The first part helps children to think "out of the box" and to become creative.

The second part will enable you to work on your stage presence, creative writing, on-stage dynamism and interaction with others.

Construct a story within constraints. Build characters, write a screenplay. Theatrical improvisation, putting on a show, declaiming an argument. Learn to situate yourself in space, alone or with a group. Create and use a theatrical space. Self-assertion.

Act 1: Brainstorming



Summary of the activity - Act 1: Brainstorming

The teacher creates 3 to 6 groups of 4 to 6 children and gives to each group a sheet of paper and a pen. The teacher explains that it is a competition game and the group with the most points at the end will win, and explains the rules described below.

Tip: Before starting, an example round can be played with a generic word like sport.

For the game, we will have the words: **Landslide, Water rising, Bushfires, Nuclear explosion, Drought, Storm, Earthquake**

The words are written on different pieces of paper and put into a bucket. The teacher asks a student to draw a word of the bucket. The groups then have 1 minute to find as many words as possible that can be associated with the drawn word.

Example: The drawn word is Drought. Groups can find words: desert, heat, water, river, dried plants, etc.

When the time is over, the teacher counts the points.

- A word found by both team is "0" points
- A word out of subject is "-1" point (football, bread...)
- A word found by only one team is "1" point

The game is reproduced several times to explore each of the words proposed. At the end, the teacher counts the number of points earned across the rounds and determines the winning team.



Improvising



Duration of the Act:
15 minutes



Earth Sciences



Brainstorming,
Logical Thinking

Phases of activity

- 1 Create groups. Explain rules and give the material. Write the words of the sessions on papers and put them in a box or a bucket.
- 2 Draw a word out of the box or bucket.
- 3 The groups have one minute to find as much words as they can, related to the word that has been picked.
- 4 The teacher counts the points.
- 5 Draw another word from the bucket and keep going until all the words have been studied.
- 6 The teacher calculates the total number of points and announces the winning team.

Act 2: Free your ideas!



Summary of the activity - Act 2: Free your ideas!

This second activity is based on the same concept than the first one. But this time, the team have to find solution to solve natural disasters and not words. The groups do not change.

The teacher explains the rules. In this game, all ideas are welcome and sometimes the craziest ones can turn out to be very interesting. Do not refrain yourselves from writing down impossible ideas. Ask one kid to draw a word.

Example: The word on is "Drought". Groups can find ideas: pump and remove salt from sea water to water plants, collect rain water to make the most of it, etc.

The teams have two minutes to find as many ideas as they can. When the time is over, the game master counts the points.

- An idea out of subject is "-2" points (eat pastas, play a game of chess)
- An idea found and well expressed is "2" points

The team with most points wins.

Conclusion: The teachers writes all the best ideas on the class board and take the time to review the ideas with the children. Did they know that they were able to have that much ideas ? How relevant are these ideas ? Can we apply this way of thinking in other disciplines (maths, writing, etc) ?



Scriptwriting
Improvising



Duration of the Act:
25 minutes



Earth Sciences



Brainstorming,
Critical Reasoning

Phases of activity

- 1 Create groups. Explain rules and give the material. Write the words of the sessions on papers and put them in a box or a bucket.
- 2 Draw a word out of the box or bucket.
- 3 The groups have two minutes to find and write down as much solutions as they can to address the issue.
- 4 The teacher counts the points.
- 5 Draw another word until there is at least the same number of words played as the number of groups participating to the session.
- 6 The teacher calculates the total number of points and declares the winning team.

Act 3: A Scrip to Save the Planet



Summary of the activity - Act 3: A Scrip to Save the Planet



Scriptwritting
Improvising



Duration of the Act:
45 minutes



Earth Sciences



Creativity,
Imagination, Critical
Reasonning

Set Up

The teacher creates 3 to 6 groups of 4 to 6 children. The groups can remain the same as in act 1 & 2. Each group choose a different disaster to work on : Mass Wasting, Water rising, Bushfires, Nuclear explosion, Drought, Storm.

Part I

Each group receives an information booklet Printable 1. The booklet contains informations on the disaster. The goal for each group is to find a solution to address the disaster they are working on. They can use an idea submitted during the act 2 or invent a new one. They use the booklet to understand the subject better. They have 10 minutes to write down the solution in a comprehensible way, describing it the best they can. They can add drawings, charts and plans.

Part II

Groups are given a set of role cards Printable 2. Each set contains as many role cards as there are children in the groups. Each group should at least receive 1 Citizen, 1 Scientist, 1 Rescuer and 1 Technician. If the group is larger than 4, the teacher can add two more role cards : 1 engineer and 1 politician. Each child of the groups picks a card and he will have to play this role. Within a group, the child can change their roles if they want to.

The groups will have to create a script to explain the disaster and present the solution they found to the audience (their classmate). When presenting (in Act 4) each child will have to play his/her role (from the role card he chose) i.e. either:

- **The Citizen:** The one that suffers from the disaster. She/He has to explain to the audience what happened and what was lost. The children can find ideas in the information booklet. Example : I am a farmer, because of the drought I can't grow vegetables anymore, I'm now starving and very poor...
- **The Rescuer:** She/He can be a firefighter, a nurse, a charity member, a policeman... He helps the citizen with its first needs. She/He can help identify what are the risks and the needs of the population. Example: I am working for the UNO, we were sent in this region to give food and water to the farmer that starves, but we have to do more, find long term solutions.
- **The Scientist:** The one that explains the causes of the disaster to the audience. To play the scientist, the children can use the pieces of information contained in the booklet. Example: Droughts are made common because of climate change, deserts are becoming wider and wider as there is no more rain in some areas of the planet.
- **The Technician:** The one that can build and create things to address the disaster.

Act 3: A Scrip to Save the Planet



Roles can be added, optionnaly, such as:

- **The engineer** (option): She/He designs the solution to the problem and helps the technician building it.
- **The politician** (option): She/He has the power and the money to make things change. Example: We decided to stop sending the bigger part of our food production overseas to help feed the people in our country, etc.

Script guidelines

To write their script, the children can based themselves on the following guidelines. According to the level of the pupils, the teacher can give instructions on how to write the script:

- The citizen comes in and explain the situation.
- He's rescued by the rescuer. The rescuer gives his point of view on the disaster.
- The scientist explains why this disaster happened.
- All the characters comes together and try to find a solution to solve the problem.
- A solution is found. The technician (or the engineer if applicable) explains the idea to the audience.
- If the politician is playing, the characters have to ask him money and autorisation before building the solution.
- The technician builds the solution. He can use real props or a drawing to show the solution to the audience.

When writing the script, the children have to keep in mind that their classmates will have a smaller knowledge about the disaster than them. They have to ensure to describe what is happening in plain words, and can take inspiration from the information booklet to do so.

Phases of activity

1

Each group choose a disaster to work on (can be by throwing in the bucket).

2

The teacher gives to each group an information booklet Printable 1 that gives informations about the disaster they are working on.

3

The groups have 10 minutes to find a solution to the disaster they are working on. They can choose a solution proposed in the second act or invent a new one. They can help themselves with the information booklet.

4

The teacher gives a set of role cards Printable 2 to each group. Each child picks a role in its own group.

5

Following the script guidelines and the role's description, each group creates a script to describe their disaster explain the solution they found to the audience.

Act 4: Time to Act!



Summary of the activity - Act 4: Time to Act!

Set up

The teacher creates a stage in the classroom. He set up the projector and ensure there is a connexion good enough to play the video backgrounds. In groups, the children repeats their scripts.

The play

The teachers plays randomly the backgrounds video files from youtube: https://www.youtube.com/playlist?list=PLkWoF9vy6_sws76UfXB4FTsxlwUVN8AJn. When a video file is played, the groups that worked on the disaster on screen gets on stage and starts acting, following the script they wrote in the act 3.

Conclusion

When every group has played, the teacher turn off the projector. he asks the student how they found the activity, do they think playing a role is a good thing to earn knowledge? What were they favourite play? Why?



Scriptwritting,
Improvising, Acting



Duration of the Act:
60 minutes



Earth Sciences



Creativity, Critical
Thinking

Phases of activity

- 1 The teacher set up the classroom.
- 2 When called, each group goes on stage and acts!
- 3 Applause!
- 4 The teacher animates the feedback session.



Topic 1: Writing techniques

These resources can be used for Act I and Act III.

- <https://insights.gostudent.org/fr/écrire-avec-les-enfants-ateliers-ludiques>
- <https://apprendre-reviser-mémoriser.fr/travailler-écriture-enfants/>
- <https://youtu.be/y3L7VzcEFMI?si=-KBu6dIAE2OFQcHJ>
- <https://youtu.be/Vear7UYup3Y?si=5WcuefzsQngQrwEV>
- <https://www.loumina.fr/blog-l-écriture-creative>

Topic 2 - Acting techniques

These resources can be used for Act II and Act III.

- https://youtu.be/Qm4ZjFxTCs0?si=3hhong_St0kWBkID
- <https://youtu.be/akANMxTg1zU?si=OowWXFI4IZk2bnmC>

Topic 3 - Self-assertion in theatre

These resources can be used for Act IV.

- https://youtu.be/P3ZFbDDyS3A?si=G4_NkNxxQh8ux0-9
- <https://youtu.be/6JuKXBCeqzM?si=GXKv0fWM6jmxSEQU>



Information booklet - 7 themes:

The 7 following pages will give you information (definition what to do if it happens, the cause of the disaster, how to prevent it) on the different concepts approached in the World On Fire pedagogical sequence i.e.:

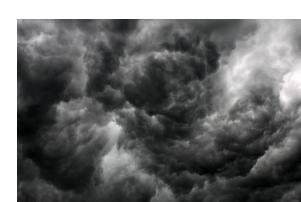
Drought:

A long period without rain is called drought. The lack of water causes the drying up of soils, and the evaporation (water turns into steam) of rivers, lakes and water tables (water reserves contained in the earth's subsoil).



Storm:

A storm is a meteorological phenomenon that can be recognized by several clues. It is recognizable by its violent and rapid winds, as well as heavy rain sometimes accompanied by thunderstorms that give rise to lightning and thunder.



Forest fire:

The forest fire can be of natural origin, because of lightning or a volcanic eruption for example. It can also be of human origin. Some fires are accidental, for example due to a badly extinguished cigarette, and others are criminal. Nine times out of ten, forest fires are started by human action.



Landslide:

A landslide is a mass movement of rocks, debris, earth or mud on a slope. It is particularly dangerous because of its speed. Some landslides have reached speeds of over 160 kilometers per hour. The main risk is the burial of a person, and the overturning of houses, vehicles, trees and objects.



Nuclear accident:

A nuclear incident, such as an explosion, causes the release of radioactive gases into the air, which becomes toxic. The incident can take place in a nuclear power plant, but also in any place with radioactive materials.



Flooding:

Flooding is a temporary submersion, by water, of land that is not normally submerged in any direction. There may be flooding due to flooding of rivers, mountain torrents and streams, but also due to upwelling, urban or agricultural runoff, as well as marine flooding beyond the limits of the sea shore.



Earthquake:

An earthquake is a natural disaster that is a shaking of the earth's surface caused by the displacement of part of the earth's crust and the sudden release of a large amount of energy. There are mild earthquakes, but there are also very strong ones. The energy of earthquakes, called magnitude, is determined by a scale created by the American scientist Charles Richter.





Drought

What to do if it happens?

In case of drought, it is necessary to save water on several levels. At the industrial level, set up closed circuits if possible. That is to say that the water used is recycled, cleaned and sterilized and then put back into the system, so the water makes a kind of loop and is not lost. In agriculture, it is the implementation of water towers, which allow to calculate the needs of each plot, in order to use only what is necessary. Finally, at home, we prefer showers to baths, we use washing machines when they are really full, we limit the watering of plants, we don't let the water run too long.

How to prevent it?

To best prevent drought, specialists rely on accurate monitoring of water levels in the water tables. For example, if the water level in the water tables in winter is low (due to low rainfall), then the risk of drought for the summer is to be expected. These analyses are important to manage drought episodes in the best possible way. Finally, the best way to prevent drought is to adopt the right actions throughout the year.

Definition

A long period without rain is called drought. The lack of water causes the drying up of soils, and the evaporation (water turns into steam) of rivers, lakes and water tables (water reserves contained in the earth's subsoil). The drought episodes are getting worse with global warming and have consequences on plants, animals and human activities. They can lead to other disasters such as forest fires.

The cause of the disaster

The causes of droughts are numerous. First of all, they are linked to the dry climate and the lack of rain as explained above, but they can also be caused by periods of heat waves, as is the case in the summer when it is very hot. Human activities can also be the cause, for example, deforestation leads to evaporation of water from the soil. The excessive use of water resources (for agriculture, industries, domestic uses) can accentuate droughts.

Storm

What to do if it happens?

In case of a storm, it is advisable to stay at home, to make sure to close the shutters, windows and doors. Unplug all electronic devices. Inform yourself on the safety instructions given by the authorities in the media, and on the risks of flooding. If you are outside, in case of storm and lightning: move away from metal structures (gates, posts, fences). Do not stay under a tree and take shelter in a building. If there is no shelter, crouch on the ground.

How to prevent it?

The risk of storms is established by meteorologists and climate specialists. They are usually announced a few days before in the media with orange or red alerts depending on their intensity. They can be predicted up to 72 hours in advance. To predict storms, specialists use precise tools such as radar, satellites, and volunteer boats, thanks to which they can foresee the arrival of violent winds, temperatures, and the water content of the atmosphere.

Definition

A storm is a meteorological phenomenon that can be recognized by several clues. It is recognizable by its violent and rapid winds, as well as heavy rain sometimes accompanied by thunderstorms that give rise to lightning and thunder. Depending on its intensity, it can be classified in different categories: cyclones, typhoons, and hurricanes. The violent winds can reach 150 km per hour on the coast and 100 km per hour inland. The storm can therefore cause a lot of material and human damage, but also other disasters such as floods, due to heavy rains.

The cause of the disaster

A storm forms when a warm air current from the sea meets a cold air current from the land. The clash between the two air masses with different temperatures and water content (the cold air is dry and the warm air is humid) causes strong winds and thunderstorms.

Forest fire

What to do if it happens?

If you witness a fire starting, quickly call the fire department (18 or 112), you can try to extinguish an incipient fire by covering it with earth, sand or water. Protect yourself and evacuate the area quickly. Beware that the fumes are toxic and can deprive you of oxygen.

How to prevent it?

Fires can be prevented by using simple gestures, do not smoke in the forest, in the woods, or in the vicinity, do not throw cigarette butts out of the car window, do not light a fire within 200 meters of the forest, do not barbecue, respect the prohibitions of access to certain wooded areas in periods of risk (wind, drought).

Preventing risks also means maintaining the access roads to the forests to allow the circulation of firemen's vehicles.

Definition

The forest fire can be of natural origin, because of lightning or a volcanic eruption for example. It can also be of human origin. Some fires are accidental, for example due to a badly extinguished cigarette, and others are criminal. Nine times out of ten, forest fires are started by human action.

The cause of the disaster

For a forest fire to occur, there must be three elements: a fuel (a material that can burn), a heat source (spark or flame) and oxygen (naturally present in the air we breathe). Forest fires are becoming more and more frequent, especially in the summer, due to the increasing periods of drought and the high temperatures associated with global warming.



Landslide

What to do if it happens?

If you are indoors, during a landslide take shelter under a table or a solid bench. Hold on tightly and don't let go until the rockfall stops. If you are outdoors, move quickly away from the likely path of the rockfall, and away from utility poles and trees that could fall on you.

How to prevent it?

It is difficult to predict a landslide because it can happen gradually. You can learn to recognize the warning signs, such as cracks, or unusual water flow on a slope. Landslides can be prevented by consolidating soils to make them more stable with barriers or by planting trees.

Definition

A landslide is a mass movement of rocks, debris, earth or mud on a slope. It is particularly dangerous because of its speed. Some landslides have reached speeds of over 160 kilometers per hour. The main risk is the burial of a person, and the overturning of houses, vehicles, trees and objects.

The cause of the disaster

There are several factors that cause landslides. Some soils (including clay soils) tend to slide more easily. Heavy rains or melting snow can be the cause of these landslides.

Deforestation weakens soils because tree roots create a grid that prevents the soil from sliding. Drought can cause soil to crumble more easily.

Nuclear accident

What to do if it happens?

In case of a nuclear incident, take shelter in a solid building, close the doors and windows and cut the ventilation. If you are outside, do not touch anything (objects can be contaminated).

How to prevent it?

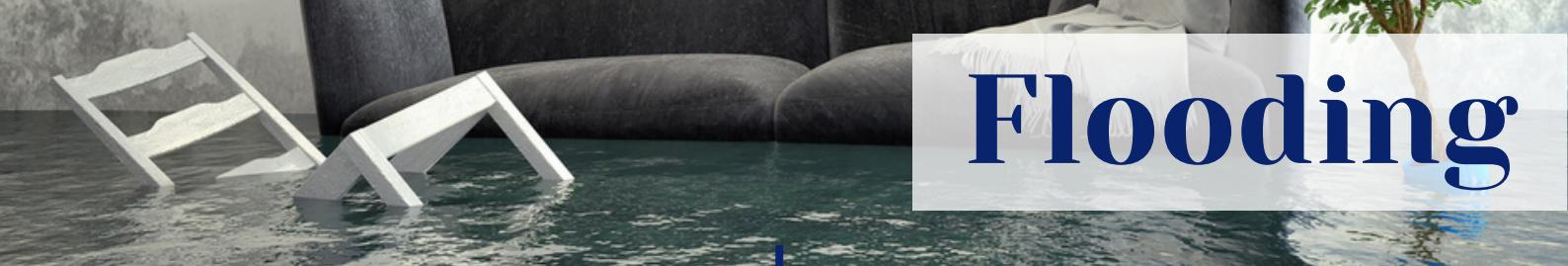
Nuclear accidents are hard to prevent because they are sudden. People can be trained to follow safety instructions in case of an accident. The risk of contamination can be reduced by taking iodine tablets. The most important thing is to maintain the plants and places at risk properly.

Definition

A nuclear incident, such as an explosion, causes the release of radioactive gases into the air, which becomes toxic. The incident can take place in a nuclear power plant, but also in any place with radioactive materials. If one breathes radioactive air, the risks are numerous: contamination, skin burns, etc...

The cause of the disaster

Nuclear accidents can have several causes. They can be linked to a technical problem of equipment or plant failure. But they can also be caused by an external event such as a storm, a fire, or a tsunami that would impact a nuclear power plant.



Flooding

What to do if it happens?

In France, flooding is the leading natural hazard in terms of the extent of the damage it causes, the number of municipalities affected, the extent of flood-prone areas and the populations living in these areas. Flooding is a natural phenomenon that causes a great deal of damage (loss of human life, displacement of populations, health risks, environmental damage, economic impact). Because of their frequency, they account for half of all natural disasters worldwide. The recommendations are to stay at home and on high ground, unplug electrical equipment, avoid calling the emergency services to avoid saturating the lines (except in cases of real danger), try to stay informed, follow the instructions of the emergency services and, above all, avoid unnecessary travel.

How to prevent it?

Documents of various kinds map the hazards and risks related to flood phenomena to prevent risks and adapt human activity (control of land use, planning in flood zones, preservation of flood expansion fields, adaptation of future or existing constructions). Vulnerability reduction consists of mitigating damage, either by limiting the intensity of hazards related to rising water levels with the construction of structures or protective devices (dams, watersheds), or by adapting human activity to risks.

Definition

Flooding is a temporary submersion, by water, of land that is not normally submerged in any direction. There may be flooding due to flooding of rivers, mountain torrents and streams, but also due to upwelling, urban or agricultural runoff, as well as marine flooding beyond the limits of the sea shore. If the flood affects inhabited areas, it quickly turns into a risk and has more or less serious consequences on populations, their property and the environment.

The cause of the disaster

Many factors influence flood risk. Among the most important are the amount and type of precipitation, the nature and condition of the watershed, as well as the climate and, of course, human activity. Some floods are related to natural phenomena recurrent each year (monsoons), others to particular weather circumstances (cyclones or violent thunderstorms). They can also be due to the simultaneous effect of several phenomena.

However, human activity aggravates the risk of flooding, either by developments (activities, roads, agricultural consolidation, deforestation ...) that modify the conditions of flow (soil sealing and runoff), or by economic activities, failure of structure (dam or), and the presence of sensitive activities in flood zones increasing the risk of pollution).



Earthquake

What to do if it happens?

If you are at home:

- stand under a door frame, under a table, desk or bed and stay there until the shaking stops.
- get out of the building quickly without using the elevator
- watch out for falling objects
- outside, stay away from buildings and power lines

If you are at school:

- don't panic, don't scream and don't run
- quickly leave the building with the others
- stay away from buildings
- follow all the teacher's instructions

How to prevent it?

Earthquakes cannot be predicted or prevented

However, there are several methods used to predict earthquakes. The best method currently available to scientists and planners in terms of earthquake prediction is the record of seismic events that have occurred in an area in the past. By looking at the frequency of events of a certain magnitude over time, scientists can calculate the statistical probability that similar events will occur within a certain period of time in the future.

Definition

An earthquake is a natural disaster that is a shaking of the earth's surface caused by the displacement of part of the earth's crust and the sudden release of a large amount of energy. There are mild earthquakes, but there are also very strong ones. The energy of earthquakes, called magnitude, is determined by a scale created by the American scientist Charles Richter and is called the "Richter scale." The science of earthquakes is called seismology.

The cause of the disaster

Earthquakes occur most often in a natural way and as a result of accumulated tension and deformations in the earth's crust. The area of destruction is called the focus of the earthquake. They are caused by the release of heat in the earth's bowels, the formation of tectonic faults and volcanic activity. Tectonic causes predominate, and the earthquakes produced by them have the greatest extent and cause the greatest damage.

Human activity can also cause earthquakes, for example drilling for coal and oil, construction of heavy buildings, underground nuclear explosions. The construction of large reservoirs disturbs the balance of the rocks in the earth's crust by additionally loading them with a huge water mass.



Role Cards

The politician



He has the power and the money to change things. The other players have to convince him to intervene.

Example : *I have decided to stop sending most of our food production abroad abroad to help feed our own people during these troubled times.*

The engineer



She designs the solution to the problem and helps the technician implement it.

Example : *I've imagined a city on water that won't be submerged by rising oceans.*

The scientist



She explains the causes of the disaster to the public. To play the role of the scientist, you can use the information on your disaster sheet.

Example : *Droughts have become common due to climate change, deserts are expanding as rainfall increases in some parts of the planet.*

The civilian



The one who suffers from the disaster. She must explain to the public what has happened and what she has lost. To play the civilian, you can use the information on the disaster sheet.

Example : *I am a farmer, because of the drought I can no longer grow vegetables, I am now hungry and very poor...*



Role Cards

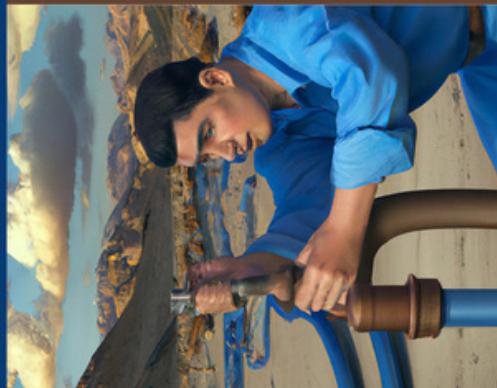
The rescuer



He may be a firefighter, a nurse, a member of an NGO, a policeman... He helps the population and talks about the dangers and risks associated with disasters.

Example: *I work for the UN, we were sent to this region to give food to the farmer who are dying of hunger, but we need to do more, to find long-term solutions..*

The technician



The one who can build and create things to address the disaster.

Example : *My team and I built a fence to prevent landslides.*