FACILITATION GUIDE

y·adapt

For further information on these materials please contact:
y-adapt@climatecentre.org

TABLE OF CONTENTS

FOREWORD

Welcome to Y-Adapt!

Climate change is happening. Impacts are projected to become increasingly severe. Youth can be important agents of change in raising awareness and taking action.

'Y-Adapt' or 'Youth Adapt' is an interactive, games-based curriculum. It educates, engages and inspires youth to act in their communities to adapt to climate change.

How does Y-Adapt create real world change?

- **Knowledge and Sharing** – Youth learn about climate change and its impacts and can share their experiences with other youth around the world.
- **Community** – Youth engage their local communities on climate change action and become part of the global Y-Adapt community.
- **Action** – Youth work together to adapt resources in their community to reduce climate change impacts and become more climate resilient.

Running Y-Adapt

Youth: This curriculum is designed for youth aged 13-25

Training: Facilitators should be trained in the methodology

Inclusive: Strive for an inclusive, gender balanced participant selection

Sessions: 7 sessions, that take approximately 1 hour each – see time guides

Duration: Recommended to run 1 or 2 modules per week over 3-4 weeks

Intensive: It is possible to run Y-Adapt intensively over 3 days

Action: After module 6, youth have 6-8 weeks to implement their action plan

Monitor: Progress is innovatively monitored through youth-led photo diaries

Evaluate: Actions are documented in 'Adaptation Cards' to evaluate outputs

Inspire: Y-Adapt actions are shared globally to inspire more youth-led action!

Optional Sessions

See the separate 'Y-Adapt Optional Sessions' booklet for specialised topics.

1. Introduction

Real World Goals

1. Adaptation Competition	Explore inspiring examples of youth-led adaptation from around the world through a creative competition. Think about actions relevant to your community. **[45 – 60 mins]**

Preparation

Materials	1. Printed 'Adaptation cards' [Resources]
	2. Writing and drawing materials, e.g. paper, pens, pencils

To Do	1. Write the following categories on flip chart paper:

- Realistic

- Participation

- Youth-led

- Creativity

- Time! 3 minutes

Competition criteria

2. Invite 2-5 people to judge – teachers, community, parents

3. Make a score card for each judge on a small piece of paper.

| Group	Realistic 0-5	Partici-pation 0-5	Youth-led 0-5	Creativity 0-5	Bonus points	Total
1						
2						
3						
4						

Activity 1 – Adaptation Competition

Set-up

1. Place the paper, pens etc. in the room for youth to use.
2. Give the judges their score cards. Explain the criteria and bonus points – if another team asks a good question they are awarded a point.
3. Stick the competition criteria on a wall, visible for all.

Introductions

1. Stand on one side of the room. Tell youth this point is January.
2. Ask youth to make a circle ordered by the month of their birthday.
3. To win, youth need to do this in 1 minute!
4. Once in a circle, check if the order is correct.
5. Tell everyone your name and favourite place in your community.
6. Starting with January birthdays, ask youth to say their name and favourite place in their community. Continue in order.

January
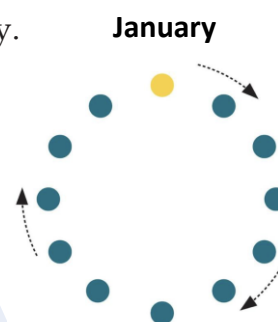
Instructions

1. Read the following statement:
   "Welcome to Y-Adapt! Y-Adapt stands for Youth Adapt. We're going to complete 7 interactive sessions. Through games, fun activities and challenges you'll learn what climate change is, its impacts around the world and how it may affect you and your community. At the end of Y-Adapt you'll work together to make an action plan to adapt to climate change in your community. You'll then have time to carry it out in real life, helping to make your community more climate resilient. We aim to capture your experiences on an adaptation card just like this one [show adaptation card], to inspire other youth around the world to take action!"

2. Give each youth an adaptation card. 3 minutes to read the card.
3. Youth should form pairs. Give the pairs 3 minutes to:
   a. Discuss each card and choose the one they find most inspiring.
   b. Return the cards they did not select to the facilitator.

4. Merge the pairs into 3 large groups. Give the groups 5 minutes to discuss each selected adaptation card and choose the one they find most inspiring.
5. Explain that we will have an adaptation competition!
    a. Each group presents their adaptation card in a creative way. Perhaps a role-play, song, dance, poem, letter or drawing?
    b. 15 minutes to prepare before the competition starts.
    c. Judges score the presentations on 4 criteria, worth 0-5 points each:
        - **Realistic (0-5)**   How realistic was the action plan?
        - **Participation (0-5)** Were all the youth in the group involved?
        - **Youth-led (0-5)**   Was the action clearly youth led?
        - **Creativity (0-5)**   How creative was the presentation?
        - **Time limit (0-5)**   3 minutes. 1 point lost for each minute over
6. Presentation time! Each group presents their adaptation card.
7. Judges share 1 highlight from each presentation and announce the winner.

Competition time! Creatively present a youth-led adaptation

Debrief

1. Ask the questions below. Youth can discuss with the person next to them:
    a. Can you think of something similar between the adaptation cards?
    b. Can you think of something different between the adaptation cards?
    c. Which adaptation cards might be relevant to your community?

Session 1 Closing

1. Congratulations, we've completed Session 1 of Y-Adapt!
2. We've seen youth-led climate change adaptation in communities around the world.
3. In the next session we will explore the causes of climate change and how it is exacerbating extreme weather events and hazards around the world.

2. Climate Change Challenge

Real World Goals

|		
1.	**Climate and Weather**	Explore the difference between climate and weather. **[10 mins]**
2.	**Seasonal Calendar A**	Record the climate in your community in a seasonal calendar. **[10 mins]**
3.	**Greenhouse Gas Game**	Understand the greenhouse effect and global impacts through an energetic game. **[30 - 40 mins]**
4.	**Investigation**	Find out if climate has changed in your community. **[10 mins]**

Preparation

Materials	1. Printed 'Climate debrief cards' – [Resources]
	2. 1 large sheet of paper for the seasonal calendar
	3. 50 small pieces of scrap paper or beans in a container
	4. String or chalk to mark out a large circle. IMPORTANT: do not use any materials the players could trip over
	5. Sheets of paper – A4 size
	6. Markers
To Do	1. On a large piece of paper (stick 2 pieces of flip chart together), make an outline seasonal calendar, as in the image.
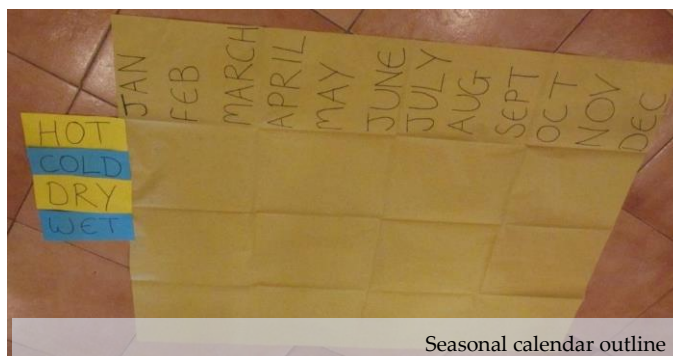
Seasonal calendar outline

2. Write the following words on different sheets of paper: HOT / COLD / RAINY / DRY / TODAY'S WEATHER.

3. Write the following sentences on different pieces of A4 paper and stick together:

    a. My birthday month is…
    b. 30 years ago
    c. Was it colder or hotter or the same?
    d. Was it wetter or drier or the same?

Activity 1 – Climate and Weather

Set-up

1. Place the 'HOT' paper at one end of the room and the 'COLD paper at the opposite end of the room.
2. Place the 'DRY' paper on one side of the room and the 'RAINY' paper on the opposite side of the room.

Instructions

1. Explain the difference between climate and weather:

Weather	Conditions like rain, temperature and wind at a time and place
Climate	What the weather is normally like (the average) over a long period of time (more than 30 years) in a specific area

2. Ask the youth to 'answer with their feet' to show the weather right now.
    a. If the weather is 'hot and dry', stand between HOT and DRY cards.
    b. If the weather is 'cold and rainy' stand between COLD and RAINY.
3. Discuss until everyone agrees and is standing in the same place.
    a. Place the 'TODAY'S WEATHER' card where the youth are standing.
4. Ask youth to 'answer with their feet' to show the normal weather on their birthday. Think about as many birthdays as they can remember.
5. Start with the current month. Check to see if everyone with a birthday that month is standing in the same place. If not, ask them to discuss and agree.

6. Ask youth to look at where the 'TODAY'S WEATHER' card is placed.
   a. Is it the same as the normal weather that month, or different?
7. Ask youth if they remember the difference between *climate* and *weather*. Explain:
   a. The 'TODAY'S WEATHER' card shows what it is like outside now.
   b. Where you are standing represents the climate in your birthday months. This is what the weather is normally like, based on as many birthdays as you can remember.

Hot

TODAY'S WEATHER

Rainy   **Dry**
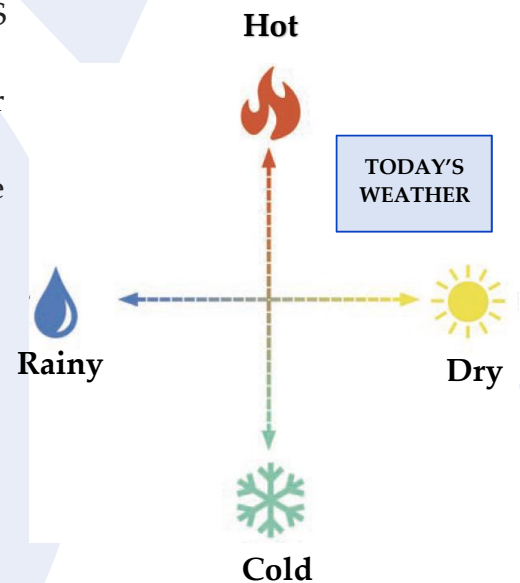
Cold

Activity 2 – Seasonal Calendar A

Set-up

1. Youth stay standing on the HOT-COLD-DRY-RAINY grid to show what the weather is normally like on their birthday.
2. Place the seasonal calendar on the floor in the centre of the group.

Instructions

1. Check if youth with January birthdays are standing in the same place to show normal January weather. If not, ask them to discuss and agree.
2. Ask a youth with a January birthday to record the normal weather on the seasonal calendar. For example, if it is normally cold and rainy in January, they tick cold (√) and tick rainy (√) under January on the grid.
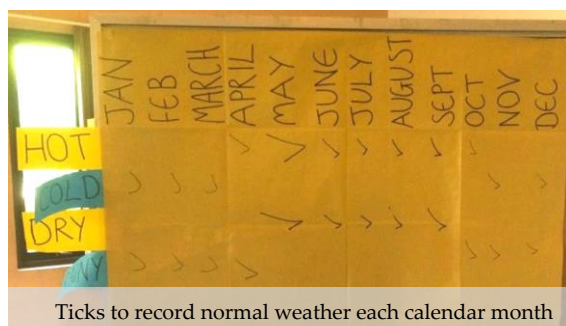
Ticks to record normal weather each calendar month

Standing to show normal weather on your birthday

3. Repeat steps 1 and 2 for February. Continue for all remaining months to fill the calendar.
4. If there are months with no birthdays, ask youth to agree on the normal weather and a volunteer to record it in the calendar.
5. Explain: We have created a seasonal calendar that shows the normal weather or climate each month in your community. We will return to this calendar later to show the changes over time.

Activity 3 – Greenhouse Gas Game

Set-up

1. Holding hands, youth form the largest circle possible.   Release hands and take two steps back.
2. Mark the outside of the circle using chalk or string.
3. Put the small circle in the centre of the large circle.
4. Make a starting line 3-5 metres from the large circle.
5. Put the heat cards in a container on the starting line.
6. If possible, appoint a co- facilitator to help during game play.
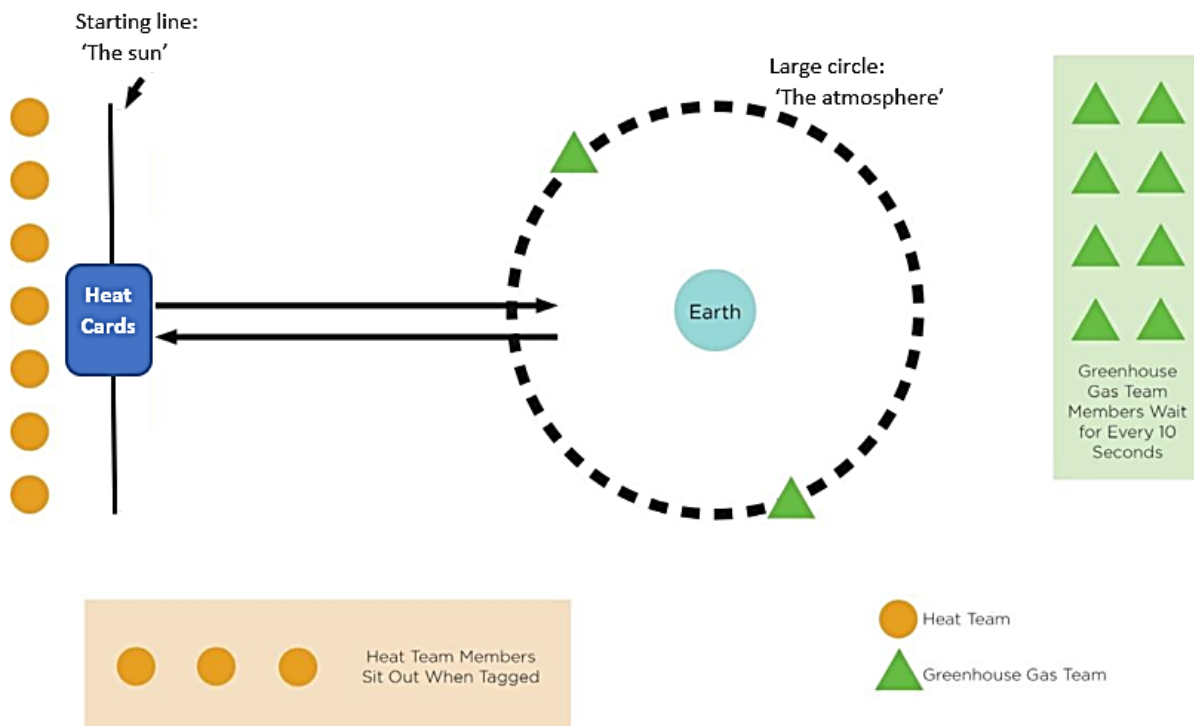
Instructions

1. Explain that the team with the most heat cards at the end wins.
2. In the circle, divide youth into 2 teams and ask them to count off A and B.
   a. Team A is the 'heat team' and team B is 'greenhouse gas team'.
   b. Ask youth to stay in the circle while you explain the game.
3. Explain the starting line represents the sun, the large circle represents the atmosphere and the small circle represents the earth.
4. Heat team starts behind the starting line, the 'sun'.
5. Heat team players:
   a. Grab a heat card from the container on the starting line.
   b. Run into the large circle to touch the earth with one foot.
   c. Run back to the starting line area, and give the heat card to the (co)-facilitator.
   d. Pick up a new card and repeat this as many times as they can.
6. Greenhouse gas team run around the large circle, the atmosphere, trying to tag the Heat team.
   a. Greenhouse gas team can only tag heat players AFTER they have entered the large circle, touched the earth, and are trying to escape back out.
   b. Greenhouse gas team MUST always keep both feet on the large circle, facing inwards and moving sideways only.
7. If a heat player is tagged, they give their card to the greenhouse gas team player that tagged them and then sit out.
8. Demonstration: Ask one player of each team to demonstrate the rules.
9. At the start of game 2 greenhouse gas players start on the large circle. The others stand at the side. Every 10 seconds the facilitator adds a greenhouse gas player to the circle.
10. The game ends after 3 minutes.
11. At the end of 3 minutes add up the TOTAL number of cards that the heat team retrieved and gave to the facilitator. This is their score.
12. Heat cards that the Heat team gave to the greenhouse gas players should be returned to the starting line. These do not count towards the scores.
13. Teams swap roles and play again for 3 minutes.
14. Announce the winner.

Debrief

1. Lay out the 'climate debrief cards' in the order of the image below.
2. Ask the youth:
   a. What did you experience playing this game?
   b. What do you think this game represents?
3. Using the 'climate debrief cards', have a mini-lecture to explain what the game represents. Read cards 1 to 4 first to describe the greenhouse effect (card 1) being impacted by human activities (card 2), leading to global warming (card 3), which intensifies the water cycle and impacts our weather systems over time (card 4) and leads to climate change.
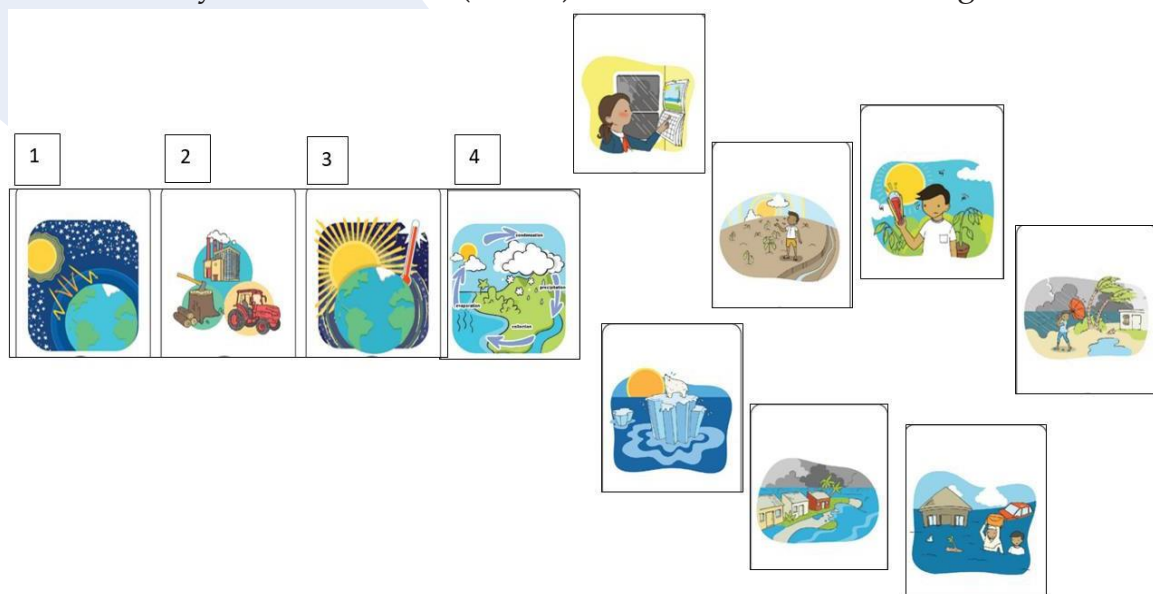
4. Ask youth to name extreme weather events and hazards that are happening more often or becoming bigger due to climate change. Ask them to look at the images for ideas!
5. Discuss that extreme weather events can be rapid onset events, such as heavy rain leading to flooding, or slow onset events, such as extreme heat leading to drought.
6. Recap the sequence of the greenhouse effect to hazards going through each picture consecutively.
   a. As you talk, ask youth to give the key terms i.e. 'greenhouse effect', 'human activities', 'global warming', 'water cycle', 'climate change'
7. Ask one youth to volunteer to lead the recap themselves.

Activity 4 – Investigation

Set-up

1. Stick the prepared investigation questions up next to the seasonal calendar.

Instructions

1. When youth go home, they should ask elders the investigation questions. Make sure they write down their answers to bring to the next session.
   a. For example, if the youth's birthday is in January, they would ask:
      - Was January hotter or colder or the same, 30 years ago?
      - Was January wetter or drier or the same, 30 years ago?

Investigation
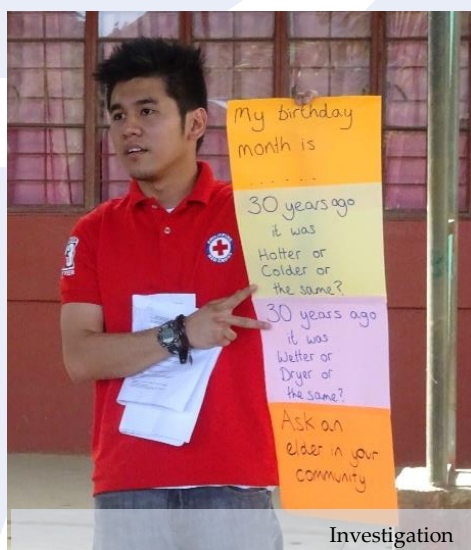
Session 2 Closing

1. Congratulations we have completed Session 2 of Y-Adapt!
2. We have learned the difference between weather and climate.
3. We have seen how human activities releasing greenhouse gases leads to climate change, which exacerbates extreme weather events and hazards around the world (makes them bigger, or happen more often.)
4. In the next session, we will look at the impacts of climate change at the local level in your community.

3. Map the Hazard

Real World Goals

|		
1.	**Sinking Island**	Introduce sea-level rise and flooding with a game. **[10 mins]**
2.	**Hazard Map**	Critically think through extreme weather events, hazards and impacts through a mapping challenge. **[30 - 40 mins]**
3.	**Seasonal Calendar B**	Discuss how climate has changed around you, by adding your investigation results to the seasonal calendar **[10 mins]**
4.	**Future Change**	See scientific projections on temperature and rainfall for 2100. Think about the two types of actions we can take; (i) to STOP climate change or (ii) to DEAL WITH its impacts **[10 mins]**

Preparation

Materials	1. Printed 'Extreme weather and hazard cards' [Resources]
	2. Printed 'Future change card' [Resources]
	3. Printed 'Taking action, CCA and CCM card' [Resources]
	4. 30 sheets of scrap paper, each roughly A4 size
	5. Pens / pencils for all players
	6. 'Seasonal calendar' from session 2
	7. Post-it notes / small pieces of paper in 4 colours

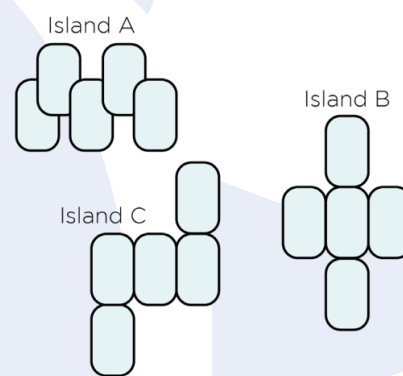# Activity 1 – Sinking Island

Set-up

1. Give each youth a piece of scrap paper, approximately A4 size.
2. Divide youth into groups of 4 - 6.

3. Groups arrange the papers on the floor to make an "island". The island can be any shape, but all the sheets must touch at least one other sheet.
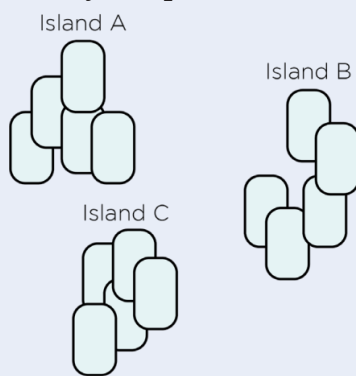
Example 1

Example 2

Instructions

1. Each group stands on their paper island. They represent a population.
2. Explain that sea level rise is making all the islands smaller. Each round there is a countdown. The last team to remain on their island wins the game.
4. Countdown from 10 to 1
   a. If all team members remain safely on the island -by not stepping off the paper- they proceed to the next round!
5. Say many years have passed and the sea level has been rising. All remaining players step off the island. Remove 1 piece of paper from each island. Teams CANNOT rearrange their island.
6. Players get back on their islands. Countdown from 10 to 1 again and, teams that are safe can proceed to the next round.
7. Continue until there is one team left.
   a. If multiple teams get down to 1 piece of paper, fold that piece of paper in half and play one last round.
8. Announce the winning team!

Sinking island

Activity 2 – Hazard Map

For Facilitators

	Extreme Weather & Climate Events	Hazards	Impacts
Extreme weather event	**Heatwaves**	• Heatstroke • Water shortage • Increased malaria • Dengue	• Animals get sick • People get sick or die • Crops can die • Not enough food • Damaged forests • Less fresh water •
	Drought	• Water shortage • Wind erosion • Desertification • Increased risk of wild fires	• Less or no crops • Less fresh water • Incomes are lost • Financial losses
	Extreme Rainfall	• Flooding • Flash –floods • Land-slide • Erosion	• Contaminated water • Crops can be washed away • Animals and people can drown •
	Storms *tropical storm, cyclone, typhoon*	• Severe wind • Storm surge • Flooding	• People dying • Animals dying • Incomes are lost • Loss of incomes •
Climate event	**Changing Rainfall Patterns**	• Delayed or early rainfall • Infrequent and unpredictable rainfall	• Crops can die • Incomes are lost • Interrupted transportation • Financial losses
	Increased Temperatures	• Increased malaria • Dengue Sea Level Rise • Increased evaporation	• Animals get sick • People get sick • Less or no crops • Not enough food • Damaged forests • Less fresh water • Water shortages

Set-up

1. Divide 'Extreme weather event cards' and 'hazard cards' in 2 separate piles.
2. Divide the youth into 4 groups.

Instructions

Part 1:

1. Give groups 3 minutes to write a list of extreme weather events that impact their community.
2. Each group should pick one extreme weather event from their list.
3. Each group now has 5 minutes to create a series of 3 'freeze frames'.
4. Using only their bodies and freezing in place, just like a photograph, groups must show (i) the beginning, (ii) middle and (iii) end of how the extreme weather event impacts their community.
5. Each group presents their 3 freeze frame photographs. The facilitator can introduce by saying; 'Freeze frame 1', Freeze frame 2', Freeze frame 3'.
6. The other groups watch and guess what the sequence of events is.


Freeze Frame 1

Freeze Frame 2

Freeze Frame 3

Part 2:

1. Youth stay in the 4 groups.
2. Place the 'extreme weather event cards' in a circle facing outwards.
3. Ask youth if any of these extreme weather events do NOT happen in their community? If yes, remove these cards from the circle.
4. Distribute all the 'hazard cards' between the 4 groups.
5. Ask youth if any of the hazards do NOT happen in their community. Groups should return these cards to the facilitator.

6. Groups should place the hazard cards under the extreme weather event cards that causes that hazard. Example: Heavy rain can cause floods; therefore, you could place the 'floods' card under the 'heavy rain' card.
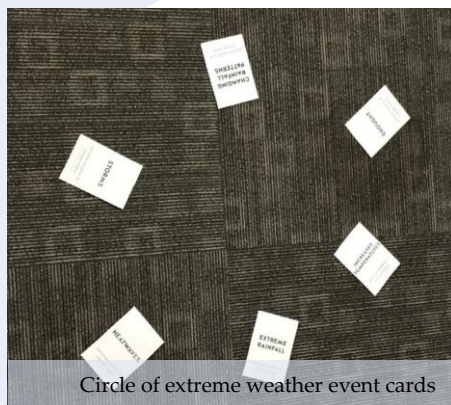
Circle of extreme weather event cards
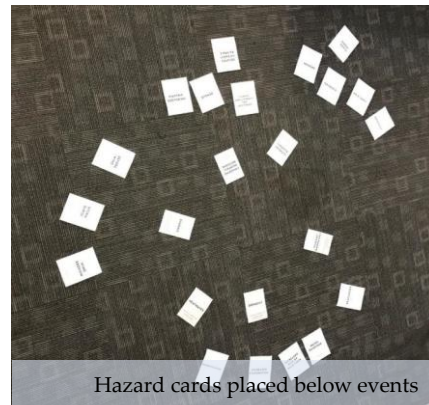
Hazard cards placed below events

Part 3:

1. Ask youth to return to their 4 groups.
2. Ask youth to think about the impacts of the hazards in their community.
3. Ask if the hazards impact different groups of people in different ways. For example, how does a flood affect children, youth, elderly, men, women?
4. Explain that the same hazard can impact different people in different ways. For example, flooding may cause a school to close. This impacts youth as their education stops, teachers are impacted as their income may stop and farmers may be effected as crops could fail.   These are 'differentiated impacts.' It is important to think about this when planning actions.
5. Give each group 4 pieces of paper in 4 colours. Assign each colour:
   a. Colour 1 represents youth
   b. Colour 2 represents men and boys
   c. Colour 3 represents women and girls
   d. Colour 4 represents a social group of the youth's choice
6. Groups choose a hazard and write the impacts on relevant coloured papers.
7. Add the impact papers to the map, under the relevant hazard.
8. Repeat 6 and 7 until youth are happy impacts are captured or time runs out.

Adding differentiated impacts to a hazard map

19

Part 4:

1. Ask each youth to choose 1 extreme weather event or hazard that happens most OFTEN in their community. They draw a tick (√) on that card. They cannot choose their coloured impact papers.

2. Ask each youth to choose 1 extreme weather event or hazard that has the biggest IMPACT in their community. They draw a star (*) on that card. They cannot choose their coloured impact cards.

Ranking hazards using tick and star markings

3. Select the 5 cards that have the most ticks and stars combined.
4. Write these top 5 extreme weather events and hazards on separate papers.

Activity 3 – Seasonal Calendar B

Set-up

1. Stick the seasonal calendar from session 2, activity 2 up on a wall or board.
2. Add the top 5 extreme weather events and hazards, chosen by the youth in Session 3 to the seasonal calendar, below the weather conditions.

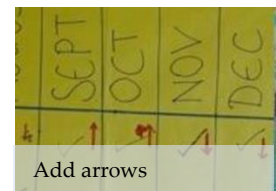Adding top 5 extreme weather event and hazards (green papers on left)

Instructions

1. Ask youth to make a semi-circle around the seasonal calendar in order of their birthday month.
2. Ask a volunteer to stand at the calendar with a marker pen.
3. Starting with the top ranked extreme weather event and hazard. Ask the youth if this happens in January. They should shout 'Yes!' or 'No!'
4. If 'Yes', the volunteer should draw a tick mark (√) under January.
5. If 'No', the volunteer leaves the space blank.
6. Repeat step 3 with the remaining months. Try to do it as quickly as possible!
7. Repeat with the remaining four top hazards.

Review Investigation

Add arrows

1. Ask youth to discuss with others in their birthday month their investigation findings -asking elders about how the weather has changed.
2. Each 'month' should agree whether the normal or average weather today is:
   a. Hotter, colder or the same as compared to 30 years ago?
   b. Wetter, drier or the same as compared to 30 years ago?
3. Ask 1 youth from each month to add their findings to the seasonal calendar.
4. Use arrows or equals symbols to show how the normal weather conditions (hot, cold, rainy or dry) may have changed over the last 30 years.

| **Increased:** Now more than 30 years ago | ⬆ | **Decreased:** Now less than 30 years ago | ⬇ | **The same:** Similar now to 30 years ago | = |

Future Change

1. Explain that the seasonal calendar shows their experience of what the normal weather is like in their community and how it may have changed.
2. Explain that we can also use scientific information to learn more about how the climate is changing.
3. Show youth the 'future change' resource card, showing how temperature and rainfall is predicted to change between now and the year 2100.
4. Read the back of the card and talk through the discussion points.

Taking Action

1. Discuss that there are two types of action we can take on climate change:
    a. Actions to STOP climate change from getting worse: 'Mitigation.'
    b. Actions to DEAL WITH the impacts of climate change: 'Adaptation.'
2. Explain 'Climate Change Mitigation' by talking through the resource card. Discuss to effectively stop climate change getting worse, we need all the countries in the world to agree to reduce their greenhouse gas emissions.
3. Explain 'Climate Change Adaptation' by talking through the resource card.
4. Ask the youth which type of action Y-Adapt focuses on. Ask if they remember the adaptation cards in session 1.
5. Discuss that Y-Adapt focuses on youth-led climate change ADAPTATION: youth-led action to deal with climate change and reduce impacts in your communities.

Debrief

1. Ask the questions below. Youth can discuss with the person next to them:
    a. Review the weather, hazards, and impacts map. What do you notice?
    b. Review the updated seasonal calendar. Did anything surprise you?

Session 3 Closing

1. Congratulations, we have completed Session 3 of Y-Adapt!
2. Remember in Session 2 we saw the link between greenhouse gases, global warming, climate change and extreme weather events across the world? In Session 3, we saw the links between extreme weather and the impacts in your community. The chain is getting complete!
3. We discussed actions to stop climate change, and actions to deal with climate change. In the next sessions you will plan your own actions to deal with climate change in your community. We'll start by prioritising important people, places and things (resources) and thinking about how these interact as systems.

4. See the System

Real World Goals

1.	**Systems Game**	Explore how people, places and things (resources) fit into systems and interact with each other, through a competitive card game. **[30 mins]**
2.	**Create Resources**	Identify important people, places and things in your community in a fast-paced, team activity. Understand that climate change impacts a range of systems. **[30 mins]**

Preparation

Materials	1. Printed 'System cards' [Resources] 2. Printed 'Resource cards' [Resources] 3. Printed 'Blank resource cards' [Resources] 4. 7 sheets of flipchart paper / large sheets of paper 5. Pens, pencils or markers for all youth
To Do	1. Write the below titles with the relevant example as a heading on 7 different pieces of flip chart paper. *Organisations e.g. city council' would go on one paper. 'Jobs/work e.g. Farmer, Teacher' would go on a separate paper etc.*

Titles	Examples
Organisations	Village or City Council
Jobs/Work	Farmer, Teacher
Structures	Road, Bridge
Mobility/Communication	Bicycle, Cell Tower
Knowledge	School
Health	Clinic, Doctor
Nature	Trees, River

Activity 1 – Systems Game

Set-up

1. Divide youth into teams of 4 or 5 players. Games should have 3 - 6 teams.
2. Each team gets a set of 3 Systems Cards.
   a. Two 'Regular' cards.
   b. One 'Double points' card.
   c. NOTE: Remove the 'Stop others from scoring' cards, unless playing the advanced version (instructions below).

Instructions

Part 1

Each team writes a team name on the front of all their cards (the 'systems' side).

1. Use the garden card as an example. Ask players what are the benefits or roles of a garden for a community.
2. Explain we've identified 5 categories to describe the benefits or roles of resources.
3. Read out each of the 5 categories, and provide an example for each category.
   a. **People:** Do people become smarter, more mobile, or healthier
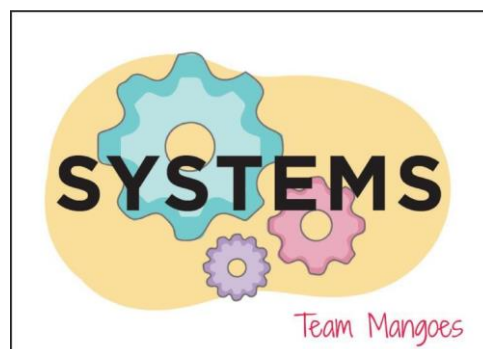
because of this?

    b. **Social:** Is this a group, organisation, or person that helps your community? Or does this help people interact with each other?

    c. **Structure:** Is this a man-made landscape or construction?

    d. **Nature:** Is this part of the natural environment?

    e. **Livelihood:** Does this provide money, income, food or jobs?

4. Looking at the garden card, we see that bubbles for Structure, Nature, and Livelihood are filled in. This is because we think garden fits into those systems:

    a. **Structure:** a garden is a man-made landscape.

    b. **Nature:** vegetables and fruit are all natural elements (not man-made).

    c. **Livelihood:** a garden could provide food, e.g. if you plant tomatoes.

5. Explain that on these cards not all bubbles are filled in that need to be.

6. Ask the youth if they think 'people' or 'social' should be filled in on the back of the garden card? If yes, ask them to explain why. If no, ask if a garden improves people's health. If someone gives a good reason why gardens improve peoples' health, you can also select 'people.'

7. Show that the systems on the back of the 'resource cards' are the same as on the back of the 'system cards.'

1. Place the following 'resource cards' picture side up for everyone to see.

AGRICULTURAL FIELDS	FACTORY	BOAT
NAME:	NAME:	NAME:
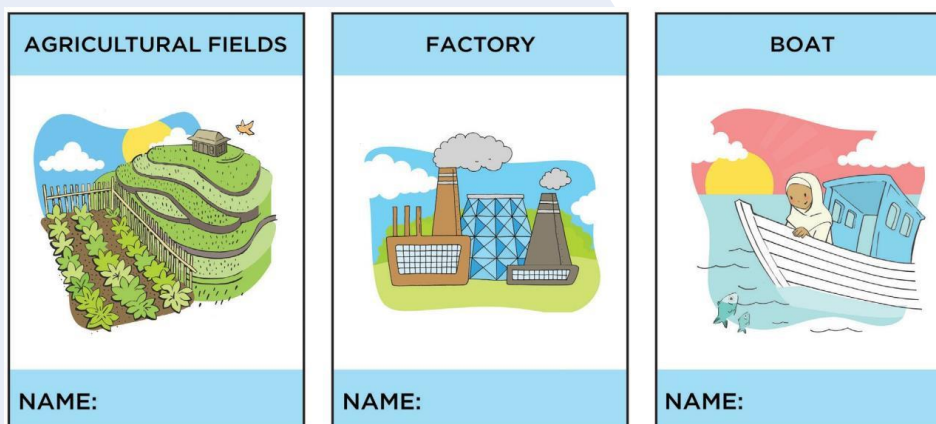
2. Have the teams take one of the 'regular' systems cards.

3. Give teams a few minutes to do the following:
   a. As a team, pick one of the 3 cards that are laid out (e.g. Agricultural Fields, Boat, or Factory).
   b. As a team, think about whether this card fits into people, social, structure, nature, and/or livelihood.
   c. If you think that the card fits into a system, fill in the system bubble on the 'regular' systems card.

4. Teams send 1 player to place their filled in regular systems card face down on the resource card of their choice.

5. Show how scoring will work in the game:
    a. Flip both the resource card and systems cards over
    b. For each correct bubble filled in a team earns 1 point.
    c. If a team has an incorrect bubble filled, they can argue why that card fits that category.
    d. If a team can't argue why their bubble fits they score zero points

EXAMPLE 1:

Team apples played on factory. They filled in social, structure, and livelihood. Factory has social, structure, and livelihood. <u>Team apples would receive 3 points.</u>

EXAMPLE 2:

Team bananas played on boat. They filled in structure and livelihood. Boat has structure, livelihood and people filled in. <u>Team bananas would receive 2 points.</u>

EXAMPLE 3:

Team oranges played on agricultural fields. They filled in people, structure, nature, and livelihood. Agricultural Fields only has structure, nature, and livelihood filled in. Team oranges now must argue why agricultural fields fits into people. Team oranges says, "Agricultural Fields give our community nutritious food, which makes people healthier." The facilitator judges that it is a valid argument. <u>Team oranges would receive 4 points</u>

EXAMPLE 4:

Team mangoes played on agricultural fields. They filled in people, social, structure, nature, and livelihood. Agricultural fields only has structure, nature, and livelihood filled. Team mangoes must argue why agricultural fields fits into people and social. They build on team oranges argument that food makes people healthy and the facilitator likes their answer for people. However, they can't give a good argument for Social. <u>Team Mangoes would receive 0 in total for that card.</u>

Part 3

Play the example round before explaining these.
1. The game lasts for 3 rounds. The round you just did as an example counts as the first round.
2. Once a card is played, the facilitator will keep that card.
3. Teams can play any of their available cards that they want to.

4. Double Points will give the team double points if they are correct.

Advanced Version

1. If you feel confident facilitating this game, you can add the card 'stop others from scoring.'
2. Play 4 rounds instead of 3. Teams will use each card one time (2 regular cards; 1 double points card; 1 stop others from scoring card).
3. 'Stop others from scoring' card stops other teams that played on the same resource card as your team from scoring points.
4. 'Stop others from scoring' card only stops others if the card is correct.
5. If two teams play 'stop others from scoring' on the same resource card and both are correct, then they stop each other and both teams score zero.

Debrief

1. Ask youth the questions below. They can discuss with the person next to them.
   a. What did you learn in this game about resources in a community?
   b. What was your strategy in this game?

Activity 2 – Create Resources

Set-up

1. Divide the youth into 7 groups and give each group a marker pen.
2. Stick up / place the 7 title flip chart papers (see preparations) around the room as spaced out as possible.

Instructions

Part 1:
1. Read out each title and example written up on the flipcharts.
2. Each group starts at a different title around the room.
3. Each group will have 1 minute to write down people, places, and things in

THEIR community that they think fit into that category.

4. After 2 minutes, shout 'ROTATE.' Groups move clockwise to the next category where they will read what has been listed already and add new ideas to it.
5. Continue until all groups have had a turn at each category.
6. Each group takes the paper for their final category and lays them out on the floor, to create a line of the seven categories.

Completed lists of community resources stuck up around the room

Part 2:
1. Give each youth a pen and ask them to do the following:
2. Draw ticks (√) next to the people, places or things (resources) they think are most important.
3. Each youth can draw 3 (√√√) ticks in total across all the resources, and can place them however they want:
    a. They could put 1 tick next to 3 different resources.
    b. If they think a resource is very important they could give it all 3 ticks.
    c. They could give 1 tick to 1 resource and 2 ticks to another

Ranking resources in your community with tick mark exercise

Part 3:
1. Give each youth a blank resource card. Ask them to write their name on it.
2. Ask youth to choose 1 priority person, place or thing from the lists:
    d. Youth can choose anything that has a tick (√) next to it.

    e. Once they have chosen, they cross it out on the list and write its name on their blank resource card.

    f. If something is already crossed out they can't choose it.

3. Youth draw what they chose on the front of the card. On the back, they should fill in the bubbles for the systems that it belongs to.

    g. This step could be done at home if the youth bring the cards back.

Debrief

1. Ask youth the question below. They can discuss with the person next to them.
    a. What did you learn about resources in YOUR community?

Session 4 Closing

1. Congratulations, we have completed Session 4 of Y-Adapt!
2. We have seen how important people, places and things (resources) are connected in a community system. Changes in one can cause changes in the other. For example: if a garden is flooded, vegetables (nature) may be destroyed meaning people have less food, or if people depend on the plants to sell then livelihoods are impacted. If the flood also impacts other ways of getting food such as livestock (nature), access to markets (structures) and jobs (livelihoods), this can be a big problem.
3. These connections are also important when you design your adaptation plan to deal with the impacts of extreme weather in your community. It is important to think about how one action will influence different people, places and things (resources) in your community system.
4. In our next session, we'll play a game with your resource cards. In the game, you'll think about how your resources are vulnerable to extreme weather and hazards in your community and how you can act to reduce the impacts. Let's see if you're ready to deal with the hazards!

5. Act to Adapt

Real World Goals

1.	**Act to Adapt**	Explore how extreme weather and climate could impact your community. Negotiate to prioritise vulnerable resources and determine action, through a giant board game. **[45 mins]**
2.	**Choose your Resources**	As a group, choose a final set of priority community resources that are vulnerable to extreme weather and climate, and that you wish to adapt in real life. **[15 mins]**

Preparation

Materials	1. Vote cards - 40 pieces of scrap paper roughly 10 x 10 cm
	2. Resource cards youth created in session 4; if fewer than 30 then add premade resource cards to make a total set of 30
	3. Sheets of paper – A4 size
To Do	1. If possible, appoint a co-facilitator
	2. Make a 'Resource chart' on the wall, with 2 columns 'Hazard' and 'Community'
	3. Write the top 5 hazards identified in session 3 on pieces of paper. Stick these down the side of the resource chart

Resource chart

Activity 1 – Act to Adapt

Instructions

1. Give everyone a vote card.
2. Every player should have their own resource card that they illustrated.
3. Ask youth to make a big circle and remember that this is their spot for the game.
4. Make the community:
   a. The first player reads out their resource and places it picture side up in the middle. They then return to their spot in the circle.
   b. The second player repeats step A. Continue for all players.

Your community! Resource cards spaced out across the circle

5. Pick 2 players to be on the hazards team (Pick 1 if the group is less than 15)
   a. These players should not be near each other in the circle
6. Remove the hazard team's resource cards from the circle
7. Hazard team players should tear up and crumple their vote cards into 7 pellets
   a. Demonstrate how to do this as quickly as possible
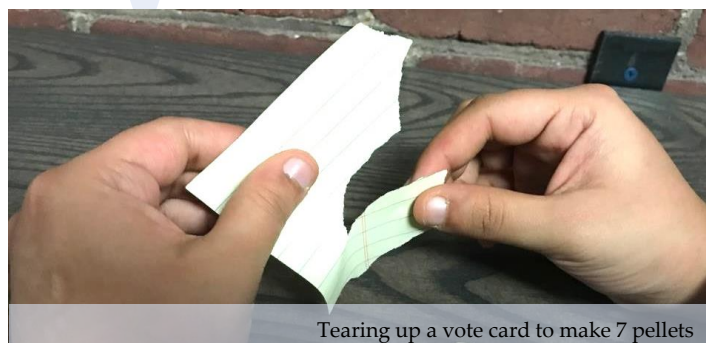
Tearing up a vote card to make 7 pellets

How to win the game

1. The team with the most resource cards at the end is the winner.
    a. Hazard team represents the top 5 hazards from session 3. It aims to destroy as many resource cards as possible. Destroyed resources go to the hazard team.
    b. Community team aims to adapt as many resource cards as possible. Undestroyed resources after 5 rounds are kept by the community team.
    c. The game ends after 5 rounds (not including the practice rounds).

How the hazard team gets cards

1. Reveal one of 5 hazard cards.
2. Using the paper pellets that you tore up as a demonstration say the following:
    a. Pellets represent the hazard (e.g. flood). Staying in their positions, the hazard team throw the pellets on the resource cards. Pellets must be thrown all at once.
3. Explain that resource cards are destroyed if a pellet lands on them.
    a. Demonstrate how to throw the pellets all at once.
    b. 'If a resource card is destroyed by the hazard team, it is removed from the floor. The hazard team wins that card - the facilitator should move it to the resource chart, under the hazards column and next to the specific hazards for that round.
    c. Whoever's name is on the destroyed resource card joins the hazard team. When a player joins the hazard team, they should tear up their vote card into 7 paper pellets (not more!).
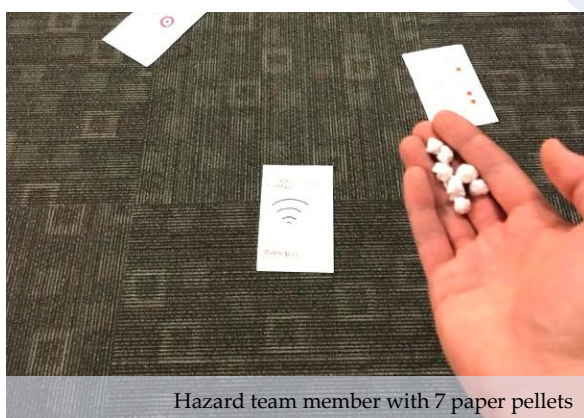
Hazard team member with 7 paper pellets
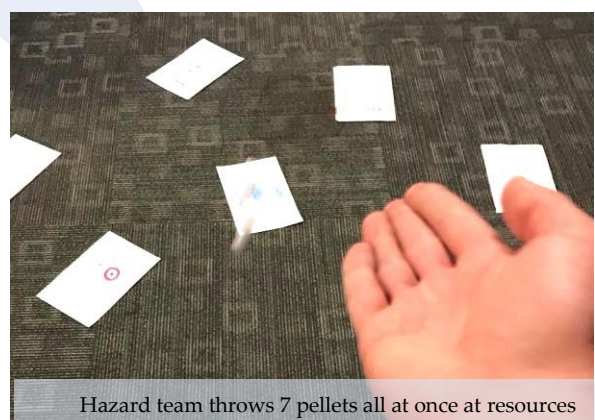
Hazard team throws 7 pellets all at once at resources

How the community team gets cards

1. There are 2 ways the community team can adapt resource cards:

COMMUNITY ACTIONS: Protect cards for the rest of the game.
To take a community action, place your vote card on a resource card in your community circle. For the card to be adapted it must receive votes from one third of the community. The adapted card is then moved to the community section of the resource chart, next to the hazard for that round, and it is adapted for the rest of the game.'

No. of community players	9	10-12	13-15	16-18	19-21	22-24	25-27	28-30
No. of votes for community action	3	4	5	6	7	8	9	10

INDIVIDUAL ACTIONS: Protect cards for one round only.
To take an individual action, give the vote card to the facilitator and flip over one resource card. On the back of each card are bubbles. For flipped cards to be destroyed by the hazard team, the number of pellets that land on it must be more than or equal to the number of black bubbles. For example, a card with 3 black bubbles now needs at least 3 pellets to land on it, to be destroyed. Individual actions only last one round. At the end of the round cards will be flipped back.

Practice round 1
1. Reveal a hazard that will impact the community – any hazard from session 3.
2. Community team has 60 seconds to discuss what action they should take:
   a. Players cannot move from their spot in the circle.
   b. Players should think about which resources are both important and vulnerable to the hazard for that round.
3. Get opinions from the community team on what to adapt. Ask:
   a. 'Raise your hand if you think a specific resource should be adapted.'
   b. Ask for their answer, and ask others to raise their hand if they agree
   c. Repeat this 3 times
4. Choose half of the players to take community actions.
   a. They place their vote cards on the resource cards they want to adapt
   b. Remind them how many votes are needed to adapt a card (see table)
5. Count the vote cards on each resource card. If there are enough to make a community action to adapt the resource, move the card to the resource chart under 'community' and next to the specific hazard for that round.

6. Choose half the players to take individual actions.
   a. Players hand the facilitator their vote card.
   b. They can then flip over a resource card of their choice.
7. Have the hazard team throw their pellets!
   a. Move destroyed cards to the resource chart under 'hazards' and next to the hazard for that round.
8. Players with destroyed cards join the hazard team.
   a. They should make 7 pellets from their vote card.
9. Flip cards adapted by individual actions back over, so the picture is upwards.
10. Re-distribute the vote cards, so each community member has 1 vote.

Practice round 2
1. Reveal the hazard (any hazard from session 3) that will impact the community
2. Community team has 60 seconds to discuss what action they should take:
   a. Players cannot move from their spot in the circle.
   b. Players should think about which resources are both important and vulnerable to the hazard for that round.
3. Get opinions from the community team on what to adapt. Ask 3 times:
   a. 'Raise your hand if you think a specific resource should be adapted.'
   b. Ask for their answer, and others to raise their hand if they agree
4. This round community team can now choose themselves whether to take an individual or community action. On the count of 3:
   a. If players want to take a community action, they will step forward
   b. If players want to take an individual action they will stay where they are
   c. Have everyone close their eyes and count '1, 2, 3'
5. Players that stepped forward to take a community action will act first:
   a. They place their vote cards on the resource they want to adapt
   b. Remind them how many votes are needed to adapt a card

No. of community players	9	10-12	13-15	16-18	19-21	22-24	25-27	28-30
No. of votes for community action	3	4	5	6	7	8	9	10

6. Count the vote cards on each resource card. If there are enough to make a community action to adapt the resource, move the card to the resource chart under 'community' and next to the hazard for that round.
   a. NOTE: If the community team did not have enough votes to adapt a card, point this out. Suggest that next round they may want to better communicate or may want to take an individual action instead.
7. Individual actions are taken next.
   a. Players must hand the facilitator their vote card.

     b.   They can then flip over a resource card of their choice.

     c.   NOTE: If no individual actions were taken ask them why.

8. Hazard team throws their pellets!

     a.   Resources with pellets on are destroyed. Move them to the resource chart under 'hazards' and next to the specific hazard for that round.

9. This is the end of the practice round. Move all the cards from the resource chart back to the community circle. You will now play for 5 rounds.

Play the Game

Completely reset the game. All players will need a vote card. There should be 2 hazard team players to start (for groups of 15-30). You will play for 5 rounds.

Summary steps of each normal round

1. Give each player on the community team a vote card.
2. Reveal the hazard that is going to hit the community.
3. 'Community team: without moving, discuss which resource to adapt'.
     a.   Give them 30 seconds to discuss - (no longer).
4. Making the choice: 'Community team you need to decide whether you will take an individual or community action. Everyone shut your eyes. I will count '1, 2, 3, go'. If you want to take a community action when I say go, then take one step forward. If you want to take an individual action, then stay where you are.
5. Count; '1, 2, 3, go!'
6. Players who chose community action should place their vote cards. To adapt the resource card, they need 1/3 of the community to vote on it.
     a.   Remember you will need 'x' cards to adapt the resource
7. Players who chose individual action should give the facilitator their vote card and then flip one resource card over. They return to their place in the circle
8. Hazard team throws their pellets!
     a.   Resources with pellets on them are destroyed. Move them to the resource chart under 'hazards' and next to the hazard for that round.
     b.   The players that initialled the destroyed cards join the hazard team and tear their vote cards into 7 pellets each.
9. Hazard team pick up the pellets – 7 each.
10. Flip cards adapted by individual actions back over.
11. Give the remaining community team members their vote card back.
12. Play 4 more rounds revealing a new hazard each round.

Declare a winning team

1. Add remaining cards in the community to the resource chart under community
2. Count hazard team and community team cards. The team with the most wins!

Debrief

1. Ask youth to discuss the below with the person next to them:
   a. What did you experience in this game? Ask youth to think about community actions compared to individual actions? Hazards becoming bigger or smaller? Did you have a strategy?
   b. Look at the resource chart. Were there any cards that were destroyed that you wish you could have adapted?
2. Pick 1 or 2 of these cards and show the systems on the back. Ask what would happen if these systems were impacted in your community?

Discussing adapted and destroyed resources

Activity 2 – Choose your Resources

1. Divide youth into 6 groups.
2. Give 3 minutes to choose the resource card they think is most important to adapt to extreme weather and hazards in their community. Ask youth to:
   a. Think about what is important to you as youth, but also to think about the different groups of people in your community.
   b. Think carefully as in the next session you will make a real-life action plan to adapt the resource. Each group shares their decision.
3. Put the chosen 6 resource cards to one side, ready for the next session.

Session 5 Closing

1. Congratulations, we have completed session 5 of Y-Adapt!
2. We have seen how important resources in your community are vulnerable to specific hazards.
3. We have seen how climate change will increasingly make extreme events more intense and more frequent. And we have seen that you can adapt your community by acting alone and by acting together.
4. In our next session you will plan your adaptation action for your community.

6. Choose your Challenge

Real World Goals

1.	**Action Plan**	Use your learning to plan a community adaptation, guided by questions. **[25 - 35 mins]**
2.	**Reality Role-Play**	Critically think through the action plan, challenges and solutions with a reality role play competition. **[25 - 35 mins]**
3.	**Choose your Challenge**	Choose the action you want to implement in real life over the next 6 weeks and set up step-by-step logistics. **[10 - 15 mins]**

Preparation

Materials	1. Printed 'Adaptation cards' [Resources] 2. Printed 'Adaptation challenge cards' [Resources] 3. Printed 'Photo diary' [Resources] 4. Printed 'Blank adaptation cards' [Resources] 5. Resource cards filled by youth in session 5 6. Flipchart paper and markers
To Do	1. Invite 2-5 people to judge – teachers, community, parents 2. Write the 'Adaptation challenge card' questions on flipchart 3. Write competition criteria on flipchart paper visible for all: Relevance; Realistic; Challenges; Solutions; TIME! 5 minutes. 4. Make a score card for each judge on small pieces of paper:

	Relevance (0-5)	Realistic (0-5)	Challenges (0-5)	Solutions (0-5)	Time (-1)	Bonus points	Total
Group 1							
Group 2							
Group 3							

5. Make an action phase time plan on flipchart paper.

Week	Activity	Lead person	Photo lead
1			
2			
3			
4			
5			
6			

Activity 1 – Action Plan

Set up

1. Divide the youth into 3 groups.
2. Lay out the top 6 resource cards that were chosen in session 5.
3. Lay out the adaptation cards from session 1.
4. Give each group an 'adaptation challenge card', paper, pen and flipchart sheet.
5. Stick the flipchart adaptation challenge questions up on a wall, visible for all.

Instructions

1. Read the following: *'So far in Y-Adapt we have seen youth are taking action all around the world to adapt resources, or people, places and things, to extreme weather and hazards impacting their communities. We now know it is crucial to act now because climate change is causing hazards and extreme weather events to become more frequent, and more intense, across the world, both today and in the future. As a group, you identified which hazards and extreme weather events have the greatest impact in your community. You also prioritised the resources in your community that are most vulnerable and important to adapt, whilst thinking about the interconnected systems that could be affected. In this session you will now design action plans to adapt the priority resources in your community.'*

2. Explain that the next 6 weeks is the 'Action phase of Y-Adapt!' This is when you will take real life, youth-led, action in your communities to adapt.
3. Ask each group to choose a resource from the 6 they prioritised in session 5.
   a. It should be the resource they think is most important to adapt to extreme weather and hazards in their community.
4. Ask a volunteer to read out the questions on the 'adaptation challenge card'.
   a. Explain that these questions are to guide their action planning.
   b. Highlight that the action plan should be step by step and realistic for them to implement over the next 6 weeks in their community.
5. Point to where the adaptation cards from session 1 are laid out.
   a. Youth can use these as ideas to inspire their own adaptation planning.
   b. Remind youth that there are step by step actions on the back of the cards.
6. Groups have 20 minutes to answer the 'adaptation challenge' questions.
   a. Answers should be recorded on flipchart paper.
7. After 20 minutes each group should share their ideas with the whole group.

Activity 2: Reality-Role-Play

Set up

1. Give the judges their score cards. Explain the criteria and bonus points – if another team asks a good question they are awarded a point.
2. Stick the competition criteria on a wall, visible for all.
3. Stick the action phase timeline on a wall visible for all.

Instructions

1. Each group should look at their 'adaptation challenge' answers and identify a key supporting group or stakeholder involved.
   a. For example: Perhaps they need approval from teachers for actions at school, or support from local council for actions in the community? Or perhaps they need to propose their idea to a specific organisation to ask for funding?
2. Each group should divide in half. They should choose:
   a. 1 sub-group to be themselves – 'youth' implementing their action plan.
   b. 1 sub-group to act as the 'support' group involved.
3. For each group, the youth sub-group and support sub-group sit on opposite sides of the room.
4. Place their 'adaptation challenge' answers in the middle, so both sub-groups can see.

Sub-groups sit on opposite sides of the room to prepare their proposal

5. Explain that each group will perform a 'Reality roleplay'.
   a. The 'youth' sub-group will present their action plan to their 'support'

sub-group, just like they would in real life.

    b. The 'support' sub-group will ask the 'youth' sub-group questions about the plan, just like they might do in real life.

    c. The sub-groups are NOT allowed to discuss before the reality role play

6. Explain that it will be a competition! Judges want to see that key criteria have been considered by both the youth's presentation and by the support group's questions:

➢ RELEVANCE: Is the plan relevant to youth and community priorities? Does it address the impacts of a relevant hazard?

➢ REALISTIC: Can this plan be implemented by youth in 6 weeks?

➢ CHALLENGES: Have potential challenges been sufficiently considered?

➢ SOLUTIONS: Have solutions to the challenges been proposed?

➢ *TIME:*   *5 minutes to present. Minus 1 point for each minute over.*

7. 10 minutes to prepare: Youth groups and support groups prepare separately.

    a. Remind them that they can NOT discuss during preparation.

8. Roleplay reality time! The three groups roleplay their action plans (see step 4)

9. Judges should ask questions after each presentation.

    a. BONUS! If the other 2 groups ask a good question they score a point.

10. Judges combine scores and announce the winning group!

Activity 3: Choose your Challenge!

1. Explain that the next 6 weeks is the Y-Adapt Action Phase, when you will implement your action plans in real life!

    a. All the actions will be youth-led by yourselves, but we'll check in each week to see how you're getting on and if you need any support.

    b. Each week we'd like you to share one photo that represents the actions taken that week – it can be positive or challenges.

    c. We will make these into a photo diary to inspire other youth!

2. Check that youth are satisfied with their initial action plan topic

    a. If they are more interested in another action, they can change groups.

3. When youth have made their final decision ask them to write their names and phone numbers on the back of the 'Adaptation Challenge' they have chosen.

4. Each group sets up a WhatsApp or other social media group of their choice, including a facilitator, so they can stay in contact

    a. Facilitators can check-in and youth share a weekly photo via the group

5. Give the youth 5 minutes to discuss immediate next steps

    a. When will they next meet to start their adaptation action plan?

      b. Where will they meet?

      c. Do they want to appoint one or two leaders?

      d. Do they want to assign specific roles to members of their group?

6. Groups should copy the 'Action phase time plan on their flipchart paper (see preparation step 7).

      a. Groups should start to complete this time plan, assigning tasks.

      b. Suggest that in their first meeting they can finalise this time plan.

What's next?

1. Youth have 6 weeks to implement their action plans in their communities.

      a. Youth should aim to meet once a week.

2. Communication with each other is via the WhatsApp / media groups.

      a. Youth send their weekly photo and caption to facilitators via the group.

      b. Facilitators check youth are making progress and remind youth to send their weekly photo-caption. They can offer support if needed.

3. When the action is complete, we'll all meet for a final Y-Adapt session.

      a. We'll make your weekly photo-caption into photo diaries:

Photo Diary: Dengue Campaign, led by Y-Adapt youth in Santa Rossa, Guatemala

1. Planning meetings
2. Making a weekly plan of action
3. Proposing campaign to local government
4. Official permission for campaign
5. Discussing campaign with clinic
6. Info & support from local clinic
7. Organising an event
8. Dengue campaign by RC Youth
9. Sharing on social media

b. We'll record your actions in an adaptation card. Show youth a blank and completed card. It will be used to inspire youth across the world!

Youth in Indonesia install a slow drip irrigation system

Session 6 Closing

1. Congratulations, we have completed session 6 of Y-Adapt!
2. You have made a relevant and realistic plan of action to adapt important resources in your community, that are vulnerable to hazards and extreme weather.
3. You have critically thought through challenges and solutions, and who you may need support from.
4. Over the next 6 weeks you will implement your adaptation. You will share a photo and caption each week to document your activities. Facilitators will be ready if you need support. When the action(s) is complete, we will meet for our final Y-Adapt session to record your activities in a photo diary and adaptation card. These will inspire other youth across the world to take action!

★ ACTION PHASE!

Real World Goals

Take Action! Youth implement actions to help their communities adapt to climate change. Youth record activities in a photo diary to inspire others. **[6 weeks approx.]**

Preparation

To Do

1. Youth use their action plan from session 6.
2. Youth and facilitators use the media / WhatsApp groups set up in session 6.
3. Facilitators should have a contact for Y-Adapt managers in case additional support is required.

Activity - Take Action!

Youth

- 6 weeks led by youth to implement their action plans in their communities.
- Youth should aim to meet up once a week.
- Communication is via the WhatsApp / media groups set up in session 6.

Facilitators

- Facilitators message youth each week to remind them to send their weekly photo and caption.
- Facilitators check youth are making progress and can offer support if needed.
- Facilitators can contact managers if any questions.

7. Global Y-Adapt Community

Real World Goals

1. Adaptation card	To capture the youth-led action(s) in adaptation card(s) and to create a photo diary, to inspire other youth around the world to take action! **[60 mins]**	

Preparation

Materials	1. Printed 'Blank adaptation cards' [Resources]
	2. Coloured pens
	3. Laptop with PowerPoint to create the photo diary
	4. Youth's weekly photo and caption

Activity – Adaptation Card

Instructions

1. Support the youth to fill out an adaptation card for each adaptation they made.
2. Take a picture or scan both sides of the card.
3. Support the youth to create a PowerPoint photo diary (see resource card)
4. Email the card and photo diary to Y-Adapt@climatecentre.org
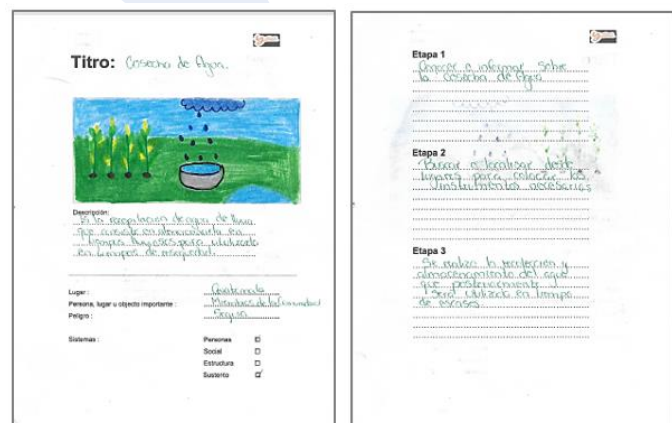
Frequently Asked Questions

1. **Why is climate change happening?**
    The main reason the climate is changing is because human activities are adding greenhouse gases to the atmosphere. The most important greenhouse gas is carbon dioxide, which is released when people burn fossil fuels to do everyday activities like driving cards, heating buildings and making electricity. As greenhouse gases build up in the atmosphere, they cause the earth to trap extra heat, making the planet warmer.

2. **What is the greenhouse effect and how does it affect the climate?**
    The greenhouse effect is a natural process that helps make the earth warm enough for us to live. It works like this: the earth gets energy from the sun, heats up and then gives off energy in a different form, called infrared radiation. Greenhouse gases in the atmosphere trap some of this energy, warming the atmosphere, so the greenhouse effect is becoming stronger and the earth is getting warmer.

3. **Is climate change the same as global warming?**
    No. Global warming refers to an increase in the average temperature near the Earth's surface. Climate change refers to the broader set of changes that go along with global warming, including changes in weather patterns, the oceans, ice and snow, and ecosystems. Most experts now use the term 'climate change' because it gives a more complete picture of the changes that are happening around the world.

4. **Does the 'ozone hole' have anything to do with climate change?**
    No. The ozone hole refers to a decrease in the layer of ozone gas found high in the earth's atmosphere, which helps shield the planet from the sun's harmful ultraviolet rays. The ozone layer has become thinner because of chemicals that were once commonly used in products ranging from spray cans to foam furniture cushions. While a thinner ozone layer allows more ultraviolet rays to reach the Earth, increasing the risk of sunburns and skin cancer, it doesn't cause climate change.

5. **Why is it a problem if the Earth's average temperature gets a little warmer?**
    Temperature plays an important role in how nature works, and even a small change in average temperature can lead to large changes in regional temperatures and seasons where you live and have a noticeable impact on plants, animals, and other natural processes. For example, just a 1 – 2 degree increase in global temperature can lead to a much greater risk of wildfires. Some parts of the world are warming a lot more than average, which means the effects are much more

dramatic.

6. **How can the Earth be getting warmer is it's colder than usual where I live?**

The average temperature around the world is rising, and 2001-2010 was the warmest decade on record. But that doesn't mean we won't still have occasional cold spells. To see why, it's helpful to understand the difference between weather and climate. 'Weather refers to day-to-day conditions, such as a rainstorm of today's temperature. In contract, 'climate' refers to the average weather conditions you would expect to find in a certain place, based on patterns over many years. Day-to-day weather will always have its ups and downs and there will always be a chance of extreme cold events. But as the Earth's climate gets warmer over time, most places will experience more days with record high temperatures and fewer days with record low temperatures.

7. **What is El Nino / La Nina and how does it link to climate change?**

El Nino and la Nina are natural climate patterns that sometimes occur in the Pacific ocean. During an el Nino episode the water in the Pacific ocean near the equator gets hotter than usual. And during la Nina episodes, the same water cools. These changes are so big that they affect weather all over the world. Weather depends a lot on ocean temperatures. As the Earth's climate changes, natural changes in the climate such as el Nino and la Nina will also change. We know that the impacts of el Nino and la Nina – extreme rainfall, and drought will likely become more extreme with climate change.

8. **Is there a link between climate change and vector-borne diseases (Dengue / Malaria)?**

Global climate change will affect all living things on this planet. For many species the change in their environment may mean extinction. However, the mosquito may benefit from changes in the climate. While relationships between climate., physical and biological factors that influence disease transmission are complex, we know that at higher temperatures mosquitoes fly faster and further, reproduce more rapidly and bite more frequently.

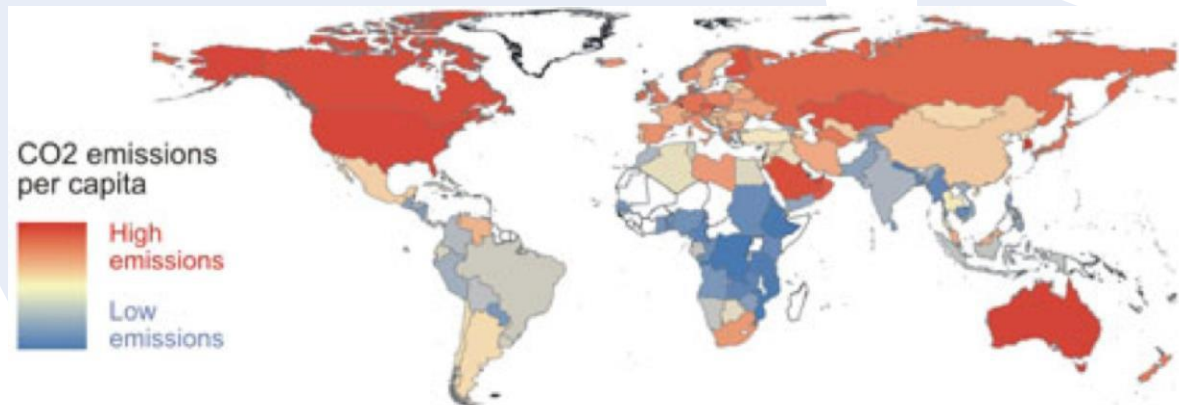9. **Does climate change cause forest / bushfire?**

Heat from sun energy alone does not trigger forest / bush fires; they are typically caused by humans or lightening. However, increased hot and dry conditions increase the likelihood of fires burning longer and being more intense.

10. **What causes coastal erosion?**

Waves, generated by storms, wind or fast-moving motor craft can cause coastal erosion, which may take the form of long-term losses of sediment and rocks, or the temporary redistribution of coastal sediments; erosion in one location may result in accretion nearby.

11. Can we stop climate change?

All countries in the world are contributing to the greenhouse effect, some more than others (see map). To stop climate change from getting worse, we should all emit fewer greenhouse gases. However, if we all stopped emitting today, the earth would continue to get warmer for decades to come because of all the gases that are in the atmosphere now.

CO2 emissions per capita

High emissions

Low emissions

Source : https://skepticalscience.com/graphics.php?g=15

12. What can I do to prevent or reduce climate change?

Although no one can prevent climate change alone, every little change can help. Here are 9 simple actions you can take:

- o Reduce, reuse, recycle
- o Use less heat and air-conditioning
- o Use energy-efficient products
- o Drive less and drive smart
- o Use less hot water
- o Use the off switch on your electrical appliances
- o Plant a tree
- o Encourage others to conserve energy

13. Can we prevent or reduce climate related hazards?

Extreme weather events such as heat waves, heavy rainfall and others are not possible to prevent by the community. However, we can limit the impact by acting! See the Y-Adapt adaptation cards for youth-led examples.

Note: thanks to A Global Student's Guide to Climate Change: US EPA for some of the answers.