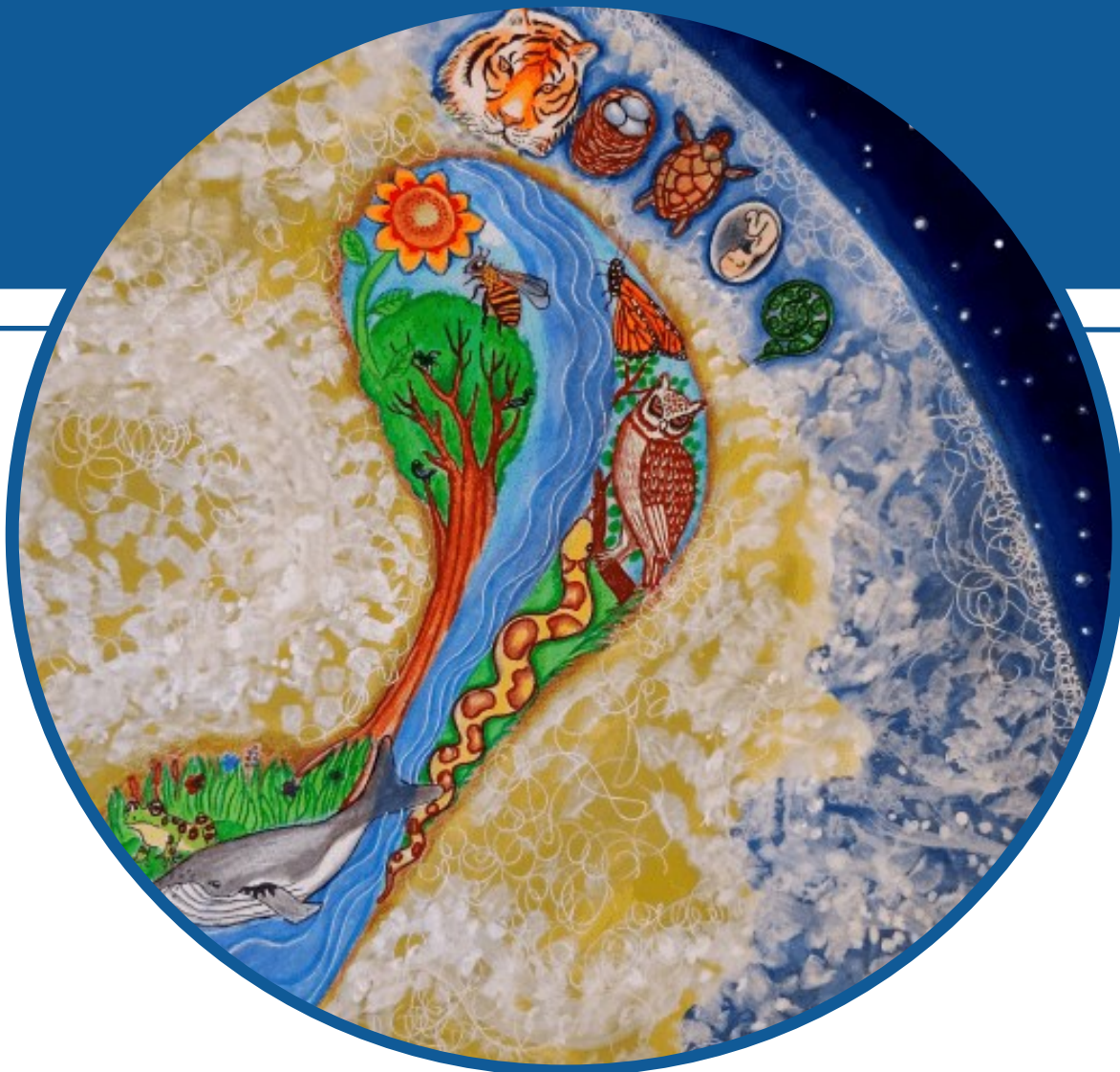


Climate Change Games & Activity Guide



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Cover Art: Imagine leaving a positive footprint

I've been called "unrealistic" or a "dreamer" for envisioning an equitable world beyond fossil fuels. But it's not only deeply pragmatic to solve the climate crisis, steward our precious natural capital and leave a "positive footprint," it's absolutely necessary to our survival. We owe it to our children and grandchildren to collaborate on a multitude of strategies to meet the greatest wicked challenge of our time. Doing so will be healing and transformative.

Amanda Suutari

<https://davidsuzuki.org/story/amanda-suutari-imagine-leaving-a-positive-footprint/>

RUNNING SUCCESSFUL ACTIVITIES AND GAMES



Preparation and Setup

- Practice facilitating a game with your peers/class to learn what can go wrong, what may be common misunderstandings, or what changes are necessary for your audience.
- Familiarize yourself with the material as much as possible and map out your presentation in advance. Practice will increase your confidence and help participants trust in you.
- Check materials: do you have enough of everything?
- Prepare the playing area and materials. If playing outside, ensure the playing area is clear of obstacles, e.g., tripping hazards.
- Ensure everyone can hear you – even when it gets very loud and noisy. Use a whistle, or noise maker to get people’s attention, and wait for everyone’s attention before giving instructions.

Notes:



Welcome and Introductions

- Be friendly, warm, and welcoming. Thank people for joining you.
- As participants join, ask them to form a circle, sit in a group in front of you, or stand so they can see and hear you.
- Introduce yourself and co-facilitators. If participants are new to the group, plan an icebreaker for people to learn names and become more comfortable.
- Keep eye contact with your audience to keep their attention and demonstrate interest. Scan the group often to include all participants
- Listen well and observe if any of the participants are feeling unsafe/uncomfortable - and allow them to be observers if they are not keen to participate. Respond to questions neutrally in a non-judgmental manner.

Notes:



Facilitating a Game or Activity

- Explain the purpose of the game or activity clearly and briefly. Organize information into chunks. Keep sentences short. Use language and examples that your audience will understand. Where possible show examples, model what happens in the game.
- Take clarification questions on game rules. (Don't give away what they will learn.)
- Pick fair teams/groups and mix up gender/ages/abilities etc.
- Do keep time. Let people know how much time they have. Have a plan on how to shorten the game if time runs out (e.g., shorter rounds, eliminate variations etc.).
- If something unexpected happens, be flexible; try to think of alternative solutions! Keep the end in mind – what do you want participants to learn? Always be fair and respectful to participants.
- Stop the game at any time if the game or activity becomes unsafe, e.g., breaking boundaries, playing roughly, weather changes, etc.

Notes:



Reflection and Debriefing

- Save enough time to reflect on the learning.
- Encourage sharing of experiences and thoughts in a safe and welcoming environment. Consider asking participants to share in pairs or small groups first, before sharing with the large group.
- Give thinking time for participants to answer (don't give the answers). Be comfortable with silence.
- Ask questions that everyone can answer, e.g., Describe what happened? What did you notice? Let participants tell their story.
- Ask questions about the theme of the game. Ask for important differences between activity and reality.
- Thank the participants for playing the game.

Notes:

Inclusion



Instructional Accommodations for Inclusion

- Allow for extra time to complete activities
- Stop activities periodically to check in and reinforce understanding of concepts/skills, positive social interaction, safe practices (e.g., demonstrate to the participants what stopping safely in a tag game looks like)
- Incorporate written and oral language strategies (e.g., an instruction list of what is to be done, or pictures for those who cannot read or have trouble with oral directions)
- Use explicit and repeated instructions. Break up tasks into smaller steps (“chunking”)
- Provide clear, defined examples of behaviour that is expected in the game, e.g., tagging with soft touch
- Pair verbal instructions with a physical demonstration.

For additional examples and accommodations please refer to the [OPHEA Disability-Centred Movement: Supporting Inclusive Physical Education](#)

- [Students Ambulating Independently or with an Assistive Device](#)
- [Students who are Wheelchair Users](#)
- [Students who are Blind or Low Vision](#)
- [Students with Cognitive Disabilities \(Memory, Processing Speed, Attention, Focus, Impulsivity\)](#)
- [Students with Communication Disabilities](#)
- [Students with Sensory Processing/Integration Disabilities](#)
- [Students with Motor Coordination Disabilities](#)

Notes:

EVERYONE'S IT

Key Learning

We must act now for people and our planet.

We don't have to wait for the future we want—we can create it right now. Everyone has a role to play.

Goal of the Game: Players tag as many people as they can while avoiding being tagged and freeing frozen players.

Recommended Grade(s):

K - 8

Duration: 5 - 15 minutes

What You Need:

- Boundary markers to establish playing area, e.g., pylons, ropes
- Large playing area
- 10 players or more



Background:

Taking action on climate change is about educating and mobilizing audiences to confront the climate crisis. Everyone can play a part by raising their voice, sharing solutions, and advocating for change. We need all hands on deck. Cutting greenhouse gas emissions to net zero by 2050, and halving them by 2030, requires nothing less than a complete transformation of how we produce, consume, and move about. *Source: <https://www.un.org/en/climatechange/communicating-climate-change>*

Before you start

- Demonstrate safe tagging. Encourage a light touch, like a butterfly's wings on the shoulder. Avoid unsafe tags – hard contact that might cause the person being tagged to fall.
- Review the boundaries and the consequences for going outside them, e.g., count to 10 from zero, perform 10 jumping jacks to get back in.

How to Play

- Players get into a scattered formation within the playing area. All players are IT. On the leader's signal, players run around while simultaneously attempting to tag other players, avoid being tagged themselves and free people to keep them in the game.
- If a player is tagged, they become frozen (i.e., must remain where they are and keep their hands out in front of them). If two players tag each other at the same time, both players become frozen.
- To free a frozen player, any player may tap that player's hands three times or give a high five or some other action. While a player is freeing a frozen player, they cannot be tagged.

Everyone's It Considerations

Watch For



- Safe tagging practices.
 - Make sure players keep their head up when running.
-

Discussion



- How did it feel to have every person in the class tagging/participating?
 - Did you free people as well as tagging? Why was that important?
 - How did it feel when you were tagged and “frozen”?
 - What else did you enjoy about this game?
 - How might this game relate to everyone taking action on climate change – and no one is out?
-

Variations



- If two players tag simultaneously or you are not sure who got who first, change the rule to - shake hand and say ‘nice to meet you’ and then continue playing. While you are doing this nobody can tag you.
 - Auto-Defrost: If a frozen player wishes to unfreeze themselves, they may do so by performing a pre-determined physically active movement for a certain number of repetitions or duration (e.g., dance for 10 seconds, do 5 jumping jacks).
 - Try playing the game in ‘silence’ - if you talk or make a noise you squat down.
-

Inclusion



- If participants have different levels of mobility, set a pace that participants should move at to provide equal opportunity to tag each other.
- Encourage multiple roles in order to allow participants to demonstrate their different strengths and skills (e.g., create roles for stationary taggers within the playing area, taggers who can move around and participants who can save and defend).

FIND THE SOLUTION

Key Learning

Participants will learn that solutions to climate change are different for each community. Participants must collaborate and use the wisdom of their team to find a pathway forward.

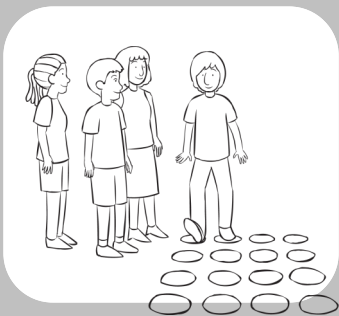
Goal of the Game: To find the secret path through the grid through trial and error

Recommended Grade(s):
1 - 8

Duration: 20 - 45 minutes

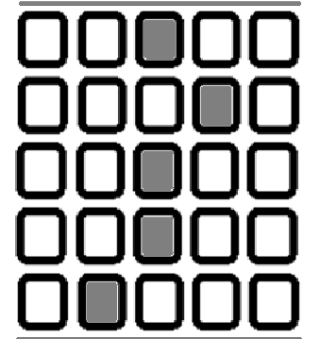
What You Need:

- Tarp/sheet with grid pattern or masking tape on gym floor, or chalk on asphalt
- noise maker to indicate incorrect squares (optional)
- 4 - 20 participants
- Large area to place the grid




Set Up

- Create a 5x5 (or larger) grid for the game with a designated starting side.
- On a sheet of paper create a map of the correct path(s) the group must travel that ONLY the leader can see.



How to Play

1. As a group, their goal is to find the secret path and get everyone from the start point to the end. The Secret Path represents the specific solutions for climate action that will benefit your community. Not all actions are good for all communities. Find the solutions that will work for you!  Correct Solution
2. Students line up behind the start square and take turns in order.
3. When it is their turn, they will step into the maze at the start and begin to choose an adjacent square – either forward, to the side or diagonal to the one they are standing on.
4. The player may look to their classmates for help.
5. If the square the student has stepped into is on the path, the leader with the map, lets them know by saying “Yes.” If it is a square that is not on the path, tell them “No.” Or use a noise maker for the incorrect squares.
6. Players continue their turn if they are right.
7. Once they step into an incorrect square, it is the next person’s turn.
8. As they begin to discover the path, they can mark it with markers to help the rest of the group.
9. Once they have uncovered the secret path choose one person to go through from start to end.

Find The Solution Considerations

Background

Connecting with the community is crucial for effective climate change solutions because it fosters collaboration, empowers individuals to take action, and creates a sense of shared responsibility for tackling this global issue. When choosing local climate actions, consider what is needed by observing behaviours, interviewing key members and listening actively. By responding to what is truly needed, solutions are likely to have a more positive, long-lasting impact and build stronger relationships within the community.

Watch For



- Encourage the participants to share their knowledge about which spots to step on.
 - Ensure spots are big enough to stand on without standing on the other areas.
-

Discussion



- What was challenging about this game?
 - What are some teamwork skills you used to help your group navigate the path?
 - How did you know which square to step into when you entered the Path?
 - Why was it important that team members make mistakes during this game?
 - How can you apply what you've learned from this activity to taking climate action at school or in your community?
-

Variations



- To make this activity more challenging for the students, impose a time limit, blindfold students, or add an additional tarp to increase the number of squares.
 - Choose different ways of moving through the grid, e.g., all players must be silent and only use non-verbal communications, grid pathway cannot be marked.
 - Vary the secret path by starting with only forward, and left and right movements to adding diagonals and backward movements.
-

Inclusion



- Use larger grid squares to aid participants with mobility challenges.
- Participants with mobility challenges can use hand held sticks to represent their feet. Check with participants if they need more time and/or motions to navigate the path.

GREENHOUSE GAS GAME

Key Learning

Participants will learn that greenhouse gases absorb heat energy and that human activities which release greenhouse gases have amplified the warming of the planet over the last century.

Goal of the Game: Players acting as sunbeams try to reach the earth and radiate back out into space without being caught by greenhouse gases.

Recommended Grade(s):

4 - 8

Duration: 10– 20 min

What You Need:

- Large playing area
- 2 ropes to create 2 concentric circles— one smaller inner circle for the earth, and one larger outer circle for earth's atmosphere
- Tokens to represent sun's energy



Background

In this game, the sun energy team (sunbeams) run from the sun, through the atmosphere to the earth. They tap the earth and then run back out through the atmosphere. This represents what happens in real life. The sun's rays pass through the atmosphere to the earth. When they reach the earth's surface they are reflected and pass back out through the atmosphere to space as heat energy. However, sometimes when the sun's energy tries to escape back out to space it is absorbed by gases in the atmosphere. These heat trapping gases are called GREENHOUSE GASES and the process of trapping heat in the atmosphere is called THE GREENHOUSE EFFECT because it is similar to what happens in a greenhouse. The sun's rays enter the greenhouse through the glass, but then get trapped inside. this keeps the greenhouse warm.

Since the industrial revolution, human activities have led to an increase of greenhouse gases in the atmosphere. In the last 800,000 years, there have not been as many greenhouse gases in the atmosphere as there are now. CO₂, a key greenhouse gas, has caused the most warming so far.

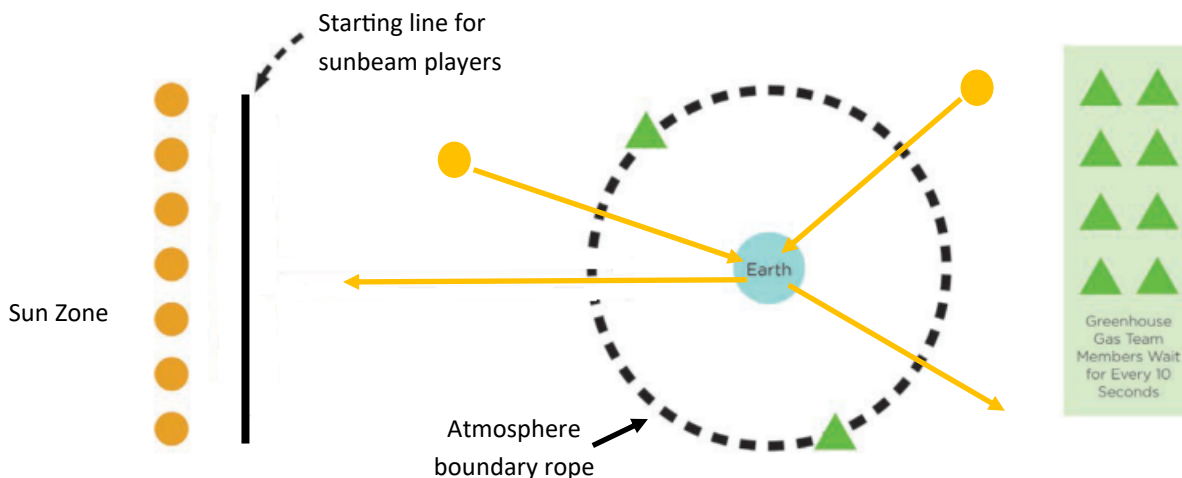
Set up:

1. Have everyone form the largest circle that they can with their arms extended to the sides and their fingertips barely touching the next person's extended arm and fingers.
2. Drop arms, and have everyone take two big steps back.
3. Mark a circle on the ground/floor around (just outside) the circle of people using rope, string or chalk.
4. Place a pylon or rope 3-5 meters from the circle to indicate the starting line for the sunbeams.
7. Place a hula hoop/small rope circle in the middle of the large circle.
8. Tell everyone the small circle represents the earth, the large circle represents the atmosphere, and the starting line represents the sun.

Greenhouse Gas Game Continued

Game play:

1. Divide all the players into two teams by having them count off A and B. Team A starts as the “Sunbeams Team” and Team B as the “Greenhouse Gas (GHG) Team”.
2. The Greenhouse Gas Team starts with two players in the Earth’s atmosphere. They can travel around the atmosphere, but must have one foot on the large “atmosphere” rope circle at all times. The rest of the Greenhouse Gas Team waits on the side until it is their turn.
3. The Sunbeam Team starts behind the starting line. When the facilitator says start, the Sunbeam players:
 - Run into the circle from any direction and grab a token e.g., popsicle stick from the earth. The token represents their change from light energy to heat energy – and now the sunbeams are “hot”.
 - Return to the starting line area without getting tagged, and place their token in the sun zone.
 - Repeat this as often as possible within the allotted time.
4. The Greenhouse Gas Team can only tag a Sunbeam player **AFTER** they have entered the atmosphere circle, picked up their token and are trying to escape back out. Greenhouse Gas Team players must also keep one foot on the atmosphere circle while tagging sunbeam players.
5. If a Sunbeam player is tagged, they must give their token to the Greenhouse Gas player that tagged them. The Sunbeam player returns to the sun zone and begins again.
8. Start the game with 2 Greenhouse Gas players in the atmosphere. Every 10 seconds add a Greenhouse Gas player to the circle. Note: be strict with the timing.
9. The game ends after 3 minutes.
10. At the end of 3 minutes add up the TOTAL number of tokens that the Sunbeam Team retrieved and placed in the sun’s zone. This is their score.



Greenhouse Gas Game Considerations

Watch For



- Establish ground rules for tagging safely.
- To avoid conflicts with tagging, give sun energy players flag football belts that are easily removed when tagged.
- Do not use tokens that could hurt someone if they fell on them

Discussion



- Ask the greenhouse gas players, how easy or difficult it was during different parts of the game to tag a sun energy player? Ask sunbeam players, when was it easy or difficult not to be tagged by a greenhouse gas player? What changed? How does this game simulate the warming of the atmosphere?
- How are humans adding GHG's to the atmosphere?
- Ask if anyone can name any of the impacts of climate change. Have any of the impacts affected them personally, or people they know?
- Both individual and collective actions matter. What can individuals do to reduce levels of GHG? What can families and communities do?

Variations



- Instead of automatically adding greenhouse gases, play the game in rounds. During each round the Sunbeam Players try to touch the earth just once and return to space. Before the next round, describe a human activity that adds or draws down carbon and add or subtract Greenhouse gas players. For example, use natural gas to heat homes – add 2 GHG. Stop food waste going to landfills, subtract 2 GHG.
- The game should demonstrate that when you increase GHG, more heat is trapped, but also show how even small scale climate actions can decrease the GHG we emit to the atmosphere.

Inclusion



- **Overall considerations:** Encourage multiple roles in order to allow participants to demonstrate their different strengths and skills (e.g., create roles for stationary GHG taggers within the playing area, and sunbeams and GHG taggers who can move around).

GRAND PRIX EV RACE

Key Learning

Each group will learn how they can work as a team to complete the task

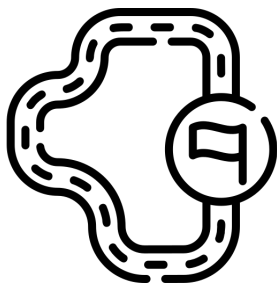
Goal of the Game: Players need to pass the webbing circle and knot quickly through their hands so the knot starts and ends at the same player before time runs out.

Recommended Grade(s):
3- 8

Duration: 10-15 minutes

What You Need:

- Webbing tied in a loop with one knot
- Timer/stopwatch
- Space for each small group to stand in a circle
- 5-7 participants per webbing loop



How to Play

Begin by spreading several webbing circles around the available space, in close proximity to each other. Ask participants to join one of the 'racing teams,' picking their favorite colour circle in the process. This activity works best with approximately 5 to 7 participants per webbing circle. Have participants hold the webbing circle with both hands in front of them.

Logistically, Grand Prix involves having the participants transfer the knot around the group as quickly as possible, using only their hands. This activity can even be performed for a seated audience. To begin, you'll need a "start/finish" line, which can be the person that was born the farthest distance away from the present location. The race begins at this location, and ends when the knot is passed around the circle, and returns to this same person. When the group reaches the finish line, they raise the webbing over their heads and yell Yesssss!



Typically in Grand Prix racing, there are three qualifying rounds or races. The first race is a single lap race to the right, with the knot traveling once around the inside of the circle to the right (counterclockwise). The second race is a multi-lap race (two or three laps) to the left (clockwise) around the circle. And the final race of the series is a 'winner take all' championship race, with one lap to the right (counter clockwise) followed by one lap to the left (clockwise). Alternatively, all groups can qualify and win if they beat a set time.

Tips for Facilitation

This is an energizer activity. Get your participants excited by having them make their best racecar sounds e.g., practicing revving their engine, shifting gears and making braking sounds when you say "Start Your Engines"!

Grand Prix EV Race Considerations

Watch For



- Establish ground rules for holding the webbing and not pulling the group in any direction.
 - If flat webbing is not available, use non-abrasive rope to avoid friction burns while the rope is passed quickly through players hands.
-

Discussion



- How do you feel now?
 - How did your team start the activity? Did you give enough time to think about and discuss with the team how to accomplish it?
 - If you were struggling to do the task, how did you get through it?
 - What behaviours were particularly effective in accomplishing the team objective?
 - In terms of working as a team, what would you continue doing? What would you do differently next time?
-

Variations



A second variation of this activity, rather than a typical oval or circular racetrack, use the webbing circle to construct a Figure-8 racetrack. When you begin the race, "On your mark, get set, go!" some groups will not immediately understand which way to move their hands in order to move the knot clockwise around the group. This is yet another simple but effective problem solving opportunity.

One final variation, and one of our favorites, is the pit stop. For the final long race of the season, spin the webbing two laps to the left, then everyone lets go, places the webbing circle on the ground, spins around 360 degrees on their own, picks up the webbing circle, and finishes by racing two laps back to the right.

Inclusion



- **Overall considerations:** The game can be simplified or made more complicated depending on age of participants and abilities. All players can be seated to accommodate those players with mobility challenges. An adult can be used as a sight guide for participants with visual impairments to help grasp the webbing circle.

GROUP JUGGLE

Key Learning

Each group will learn how complex problems can cause systems to collapse when there are too many issues to work with.

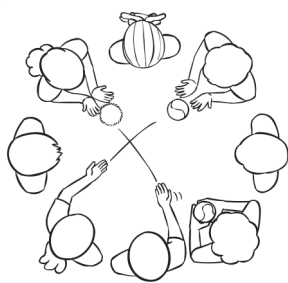
Goal of the Game: Players toss an increasing number of balls/items around the group following a pattern. Members try to keep all the balls in motion without dropping them.

Recommended Grade(s):
3- 8

Duration: 10-15 minutes

What You Need:

- Up to 3-5 different balls or throwable objects
- Space group to stand in a circle
- Up to 6-20 players



Background

People have become accustomed to the idea that problems will grow slowly in number and that it will usually be possible to deal with each issue as it arises. However, greenhouse gases are increasing in quantity at an ever increasing rate causing many places to change faster than anyone expected. For example: the Arctic is warming almost four times faster than anywhere else in the world. Climate change is also impacting the planet in multiple ways, causing some systems to reach their limit of coping with all the changes. For example, coral reefs are dying and may not be able to return to healthy ecosystems. This game shows how when too many things are happening at the same time, it is almost impossible to keep everything in balance.

How to Play

1. Form a circle with everyone facing inward.
2. Have the group develop a sequence for passing the ball to each other. When making the sequence, pass the ball to a player across from you, no player should pass the ball to a person standing next to them, and no one should get the ball more than once while the pattern is being developed. Have people raise their arm after receiving the ball to indicate they are now part of the sequence.
3. Each person will always have one person they receive the ball from and one person to whom they throw the ball. The last person throws it to the person who started the sequence.
4. Begin tossing the ball underhand in the designated sequence. The goal is accuracy not speed.
5. When the group is comfortable with the sequence explain the rules of the game.
6. **Rules:** *"Your team's goal is to keep as many balls in motion at the same time. Do this by continually catching balls from your designated thrower and then throwing them to your designated catcher".*

Group Juggle Considerations

How to Play Continued

8. Explain what you will do, *“We will start the game slowly. As I see you successfully keeping balls in motion, I will throw in more balls to anyone I see who is not currently holding a ball.”* As players start passing the ball around according to the established sequence, wait 5 seconds then throw in another ball. Wait three more seconds and then throw in another. Soon you will overwhelm the capacity of the group to maintain the balls in motion. Encourage group members to retrieve missed balls and put them back into the game. To provide even more distraction, throw in a rubber chicken or something similar. As the chaos grows and the group is having great difficulty or is laughing too hard, stop the game.

Watch For



- Establish ground rules for tossing the objects, underhand, help the receiver catch the ball, focus on accuracy. For safety, objects or balls should be fairly lightweight and soft or flexible material.
-

Discussion



- What happened? How did you feel during the first stage of the game? How did you feel when multiple balls were in the circle? How difficult is it to keep all objects in motion?
 - The objects in this game are like things we need to do or things that cause us stress, “stressors”. What activities in life cause you stress? Too many things to do or stressors can distract and confuse us – we don’t know which one to give our attention to. Can you give an example when you are trying to do too many things at the same time? Do you ever have to make a choice – and let other things “drop”?
 - Just like we have limits to what we can handle, so do other systems, even planetary systems. We can handle small changes – like adding a second ball in our game, but when we add too many, we can’t keep all the balls in motion. Can anyone think of an example of people or places that are under a lot of stress because of climate change? What ways can we take action on climate change and reduce the stressors?
-

Variations



This game can be simplified or made more challenging depending on how close players are to each other, and what is thrown.

Inclusion



Overall considerations: The game can be simplified or made more complicated depending on age group and abilities. All players can be seated to accommodate those players with mobility challenges. Choose objects that allow participants to demonstrate their different strengths and skills, e.g., balls with bells inside, larger softer beach balls, colour stringy balls (e.g., Koosh ball).

HELIUM HOOP

Key Learning

Participants learn that to change a system you first need to understand the rules. When the rules cause a problem, we need to change the rules instead of trying harder or blaming ourselves.

Goal of the Game: Players have to work together to raise and lower an object, while only using one finger each to support it.

Recommended Grade(s):
2- 8

Duration: 5 minutes

What You Need:

- Lightweight Hula hoop or long stick/pole
- 5-7 participants
- Small space for participants to stand around the hula hoop



Background

Everyone wants to reduce their country's greenhouse gas emissions but the emissions keep going up. The ways in which we get food, heat our homes, and live in a community put more and more carbon in the air. If we want to reduce our GHG emissions we need to change the way things are done – change the rules. We just can't do the same things better, we need to live and act differently. The more we do things the same way, the more we will see GHG's rise.

*Fun fact before you begin:

This activity gets its name because the hula hoop, while resting on participants' fingers, appears to float/move upward. By asking participants not to lose touch with the hula-hoop they unintentionally push the hula hoop up.

How to Play:

1. Ask team members to stand in a tight circle.
2. Say, *"I ask you to imagine that this hoop represents the level of CO2 in the atmosphere."* Our goal will be to lower it.
3. Tell them that each member should first hang their right arm down so that their elbow is near their waist. Have them extend their right hand out in front of them, palm down, make a fist and extend their index finger.
4. Make sure that all the team members understand the two rules:
Rule #1: Each person can only touch the hoop with the top of their finger.
Rule #2: No one must ever lose contact with the hoop. If anyone loses contact, the game stops and starts from the beginning.
5. Once you have ensured that their fingers are level, place the hula-hoop on top of their fingers. The goal is to lower the hula-hoop to the ground and raise it back up, all without losing touch.

Helium Hoop Considerations

Watch For



- Watch to ensure players are following the 2 rules
 - **Rule #1:** Each person can only touch the hoop with the top of their finger.
 - **Rule #2:** No one must ever lose contact with the hoop.
-

Discussion



- What happened? Why do you think this happened?
 - What did the group have to do to be successful?
 - Did you try different ideas? If so, why did you change your approach?
 - What lessons can we learn from this activity?
 - What rules need changing to give us a better chance for reducing GHG emissions?
-

Variations



- Try a long pole instead of a hoop
 - Instead of every group trying it, get a group of 5 -7 people to demonstrate it for all to watch
 - Add a time limit
-

Inclusion



- **Overall considerations:** All players can be seated to accommodate those players with mobility challenges and players could start the hoop at shoulder level with outstretched arms. An adult can be used as a sight guide for participants with visual impairments to help place the hoop on their finger correctly.

MEET A TREE

Key Learning

We can take a personalized approach to climate change by becoming familiar with our local trees and reflecting on how they play an important role in making our environment healthy; a reminder that all living beings must be respected.

Goal of the Game:

Participants work in partners to meet a tree or a natural item from a tree.

Recommended Grade(s):

JK - 8

Duration: 10 - 20 minutes

What You Need:

- 1 blindfold for every 2 participants (optional)
- 2 - 30 participants
- Outdoor area with trees or indoor area with space for participants to walk around.



How to Play

1. Participants are put into pairs. Each pair will choose one participant to be the guide and the other one to be guided.
2. The participant to be guided puts on the blindfold (or closes their eyes)

If playing in an outdoor area with trees:

3. The other participant guides them to a tree in the playing area. The participant that is guided touches the tree and its surroundings to get to know the tree.
4. The participant that is guided is then led back to the starting point.
5. The participant removes the blindfold (or opens their eyes) and must find their tree again.
6. Participants change roles and repeat the game.

If playing in an indoor area:

7. The other participant guides them to a natural item from a tree (e.g., a stick, seed pods, leaves, bark) in the playing area. The participant that is guided touches the natural item to get to know it.
8. The participant that is guided is then led back to the starting point.
9. The participant removes the blindfold (or opens their eyes) and must find their natural item again.
10. Participants change roles and repeat the game.

Meet a Tree Considerations

Watch For



- If playing in an outdoor area, set boundaries for the playing area.
- Participants must physically guide each other gently through the playing area while being careful of any obstacles.

Discussion



- What did you discover when meeting your tree?
- How is your tree linked to you and the other living things around it? (e.g., humans use trees for shade in warmer weather, squirrels eat black walnuts and seed pods, birds build their nests in trees).

- What gifts do trees bring to our local places and the planet?
- **For older students:** Can you think of ways that trees help fight climate change? (e.g., shade from trees around homes reduce air conditioning costs in the summer, conifers help block out cold winds to keep homes warm in the winter).

- Participants can personify their tree or natural item by giving it a unique name and looking for clues to identify the tree species.
- If playing in an indoor area, participants can be asked ahead of the game to bring a natural item from a tree that they found outdoors in their neighbourhood, local park, or community.

Variations



- Participants can be encouraged to remember their tree and come back to it throughout the year to observe its seasonal changes or use the tree as a quiet spot to sit.
- Participants can accomplish additional tasks with the tree or natural item linked to topics in mathematics (e.g., measure the tree's diameter or the natural item's length), visual arts (e.g., draw the tree or make a crayon rubbing of the natural item), science (e.g., act out the tree's life cycle), physical education (e.g., do a "tree stretch"), and languages (e.g., learn vocabulary related to the tree in a local Indigenous language).
- Younger participants can play the game with their eyes open and guide their partner to a tree or natural item that they like in the playing area. Younger participants can personify their tree or natural item by giving it a unique name and getting to know it better.

Inclusion



- If participants are visually impaired, they can describe what they notice when they touch the tree and its surroundings or natural item (e.g., it has rough bark, it has a thick trunk, it is in a grassy area), instead of being blindfolded (or closing their eyes) and needing to find their tree or natural item again.
- If participants cannot wear a blindfold due to sensory differences, they can close their eyes.
- If a participant is nervous about this activity, they can keep their eyes open, let their partner pick a tree or natural item, and share something they like about that tree or natural item.

SHRINKING ISLAND

Key Learning

Participants will learn that climate change is impacting islands, which are getting smaller and smaller due to rising sea levels.

Goal of the Game:

Participants must work together to ensure that everyone is safe while their island is shrinking.

Recommended Grade(s):

4 - 8

Duration: 20 - 30 minutes

What You Need:

- 1 large tarp for every 10 participants
- 10 or more participants
- Large playing area



How to Play

1. Participants are divided into groups of 10. Each group of 10 is given a tarp
2. Participants must fully unfold their group's tarp and step on to it. Explain that the tarp is the group's island where they have the food, water, shelter, and space they need to survive. Ask participants whether they feel they have enough space to survive.
3. Due to climate change, sea levels are rising, which is making the island smaller. Ask participants to step off the tarp, fold it in half, and step back onto the tarp. Ask participants whether they feel they have enough space to survive.
4. Due to climate change, sea levels are rising more which is making their island even smaller. Ask participants to step off the tarp and fold it in half again. Participants are encouraged to step back onto the tarp but can choose to leave the island if they feel there is not enough space (e.g., some participants might not be comfortable being close physically to others). Ask participants whether they feel they have enough space to survive.
5. Play several rounds, with the island continuing to shrink, until there isn't enough space to continue (e.g., participants are very close physically, or most participants have chosen to leave the island).



Shrinking Island Considerations

Watch For



- Ensure that there is enough open space to play this game safely.
- Participants should not be pushing or shoving each other on the island.
- Remaining on the island as it shrinks may be difficult for some participants so they should be encouraged to literally support each other during this exercise so no one is injured.

Discussion



- How did participants feel throughout the game as their island continued to shrink?
- How did participants feel when they left the island, either by choice or due to a lack of space?
- Can participants think of islands affected by rising sea levels? (e.g., Canadian coastal communities in the Atlantic and Arctic regions, Cuba, Venice, Madagascar, Tonga). What can these communities do to survive climate change?

Variations



- Challenge groups to make their island as small as possible, without having any participants leave the tarp. Facilitators supervise the groups to ensure they are playing safely and that no participants leave the tarp.
- Tarps must have a clear marking on the underside (e.g., a large duct tape "X") for this variation. Explain that due to climate change, severe storms are causing destruction to their island. To survive these severe storms, groups must work together to flip their tarp so that the underside is on top, without having any participants leave the tarp. If any participants leave the tarp, the group must re-start the round. Facilitators supervise the groups to ensure they are playing safely, that no participants leave the tarp and to confirm when groups have successfully flipped their tarp (i.e., when the marking on the underside is visible on top). This variation represents the need for some communities to radically change how they are living and give up the comforts that they are used to.

Inclusion



- Group size can be reduced to aid participants with sensory differences.
- Instead of using a tarp, the playing area can get increasingly smaller by moving pylons or line markers to aid participants with mobility challenges.

STILL, SWIM, SHADE

Key Learning

Participants will learn ways to keep cool in warmer weather.

Goal of the Game:

Participants must quickly perform survival actions to survive warmer weather.

Recommended Grade(s):

JK - 3

Duration: 10 - 20 minutes




• What You Need:

- 1 whistle or bell
- 6 or more participants
- Large playing area
- Water spray bottle (optional)



How to Play

1. Set boundaries of the playing area that will allow participants to always see and hear the facilitator.
2. With participants, think of some of the ways that humans and animals keep cool in warmer weather.
3. Demonstrate the three warm weather survival actions and have participants practice them.
4. As the game begins, call out one of the warm weather survival strategies and provide time for participants to get into position. If participants are unable to find a group during a round, they will have to stay still to survive.
5. Play several rounds, randomly calling each strategy, and increasing the speed at which instructions are called.
6. The facilitator can use a whistle or bell between rounds to get the participants' attention.

Warm weather strategy	Action	Real-life example
STILL 	Individuals Each participant stands frozen in one place.	Humans: Staying still to conserve your body's energy. Animals: Birds are less active in hot weather.
SWIM 	Groups of two Participants find a partner and stand together in diving positions. Optional: Participants who would like to be misted with the water spray bottle by the facilitator make a swimming motion with their arms.	Humans: Going for a swim with a friend to cool down your body's temperature. Animals: Deer are good swimmers and can be found wading in bodies of water during warm weather.
SHADE 	Groups of three Two participants shelter the third group member.	Humans: Finding shade under a tree to avoid being under the hot sun. Animals: Snakes seek shade under leaves on hot days.

Still, Swim, Shade Considerations

Watch For



- Determine guidelines to create warm weather survival actions with other group members respectfully.
 - Encourage participants to form groups with new people.
-

Discussion



- What was your favourite way to stay cool in warmer weather?
 - Can you think of an animal that stays still, swims, or seeks shade to survive warmer weather?
 - What other strategies do humans and animals use to survive warmer weather?
-

Variations



- Introduce a “drink water” instruction. Participants pretend to drink like a human or animal.
 - Introduce elimination rounds.
 - After playing several rounds of the game, challenge participants to build a shelter that an animal could use for shade.
-

Inclusion



- For participants who are deaf or hearing impaired, pictures could be used instead of calling out the commands, e.g., “still” could be a picture of someone standing alone, “swim” could be a picture of a person swimming, and “shade” could be a picture of a tree or shelter.
- If participants are unable to do the actions for each command, come up with other appropriate actions and/or sounds that could be used.

THE GREAT BIRD MIGRATION

Key Learning

Participants will learn the challenges that birds experience when migrating.

Goal of the Game: A flock of migrating birds (participants) must migrate to their spring region by travelling through their migratory habitat.

Recommended Grade(s):

2 - 8

Duration: 30 - 45 minutes

What You Need:

- 1 habitat per participant, e.g., spot markers, mouse pads, carpet, cloth, or hula hoops
- 4 pylons or line markers
- 4 - 30 participants
- Large playing area



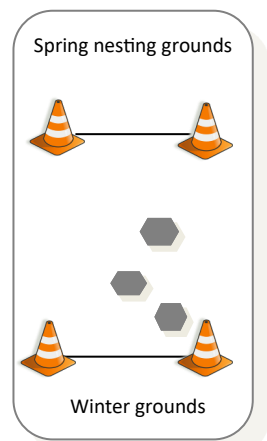
How to Play

1. Set up a starting and finish line using pairs of pylons or line markers 50 paces (steps) apart.
2. Discuss what the participants know about the terms habitat and migration.

Habitat: the place where an animal, plant, or other organism lives that provides it with the food, water, shelter, and space that it needs to survive. With participants, discuss things that may impact the health of a habitat.

Migration: seasonal movement of animals from one region to another. With participants, discuss why animals migrate, and what challenges they have along the way.

3. Participants will be challenged to migrate as a flock of birds (e.g., Blue Jay, Red-winged Blackbird, Canada Goose) from their winter region (starting line) to their spring nesting region (finish line).
4. Provide each participant with a habitat. Since the habitat provides the food, water, shelter, and space that birds need to survive, participants must always have one part of one foot on a habitat during their migration.
5. The goal of this game is to get the whole flock of birds from their winter region to their spring region without any participants leaving the safety of their habitats. If any participants leave their habitats (step off a habitat), they must go back to the starting line and begin again.
6. More than one participant can share a habitat. They may pass along habitats as they go; however, participants cannot throw, or slide on, the habitats. Habitats cannot be moved that are under a participant's foot.
7. Facilitators play the role of human entrepreneurs. Human entrepreneurs can develop land to build their businesses by removing unoccupied habitats. The facilitator can connect this role to how humans change landscapes without regard to the other living beings within it.
8. The migration begins once the first participant places the first habitat over the starting line. The migration ends once all participants have passed over the finish line (through the pylons or line marker).



The Great Bird Migration Considerations

Watch For



- Participants should not be throwing, or sliding on, habitats.
 - Ensure habitats are big enough for two people to stand on and that participants are being honest if they slip off.
 - Maintaining balance may be difficult for some participants so they should be encouraged to literally support each other during the exercise so no one is injured.
-

Discussion



- How did you work as a team during this game? What went well, what was challenging?
 - How does this simulation realistically or unrealistically portray the challenges birds face during their migrations?
 - How does climate change impact where animals migrate, and when?
 - Habitat loss and degradation are the threats that puts birds most at risk. How can humans impact the health of a habitat for migrating animals?
-

Variations



- Use a larger playing area.
 - Reduce the number of habitats that are given to the flock of birds at the beginning of the game (e.g., only one habitat for every three participants).
 - Place obstacles to simulate buildings. Participants must migrate around the buildings to avoid collisions with windows and survive.
 - Add in the effects of climate change (e.g., severe storms that hit the migratory route).
 - Participants can gain additional habitats by pitching business ideas to the human entrepreneurs that will benefit migrating birds (e.g., build a conservation area, plant more trees, create wildlife corridors).
 - Once the game has begun and participants are progressing through the migration, move the finish line farther away. Explain that due to climate change, the birds' spring region is no longer viable, and the birds must migrate farther.
-

Inclusion



- A larger or smaller area can be used depending on participants' needs.
- Use larger habitats, or chairs to touch, to aid participants with mobility challenges.
- Participants with mobility challenges can act as human entrepreneurs.

TRIANGLES

Key Learning:

Participants will learn that because everything is connected, when one part of the system changes, it impacts all other parts.

Goal of the Game:

Participants will form invisible triangles with two other people by adjusting their position and putting themselves equal distance from each person.

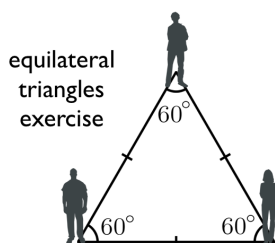
Recommended Grade(s):

3-8

Duration: 10 - 20 minutes

What You Need:

- Large space for participants to move freely
- 10 or more participants

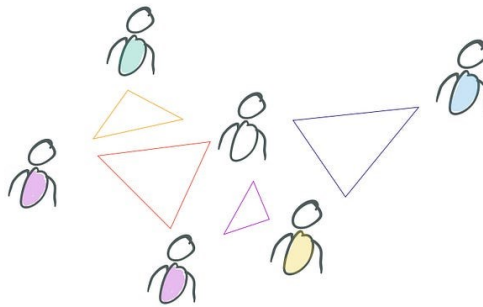


How to Play

Ask the participants to spread themselves out randomly around the room.

Ask the participants to pick two other people in the room without talking and to remember who they have chosen. Don't let on to anyone including the facilitator, who they have selected. It's crucial that their selections remain private.

Explain that the goal for each person is to now form a **triangle** between themselves and the two people they have chosen **without talking**. They may find that they need to keep changing their position so that at all times they are an equal distance from the two people they selected. For example, explain "if you stand 2 metres from one person, stand 2 metres from the other" just to be clear.



Let it continue for some minutes and then tell people to stop where they are to reflect on what happened.

Round Two: Endangered Ecosystems:

Have everyone repeat the process— choosing new people but this time tell them you will move through them and randomly tap one person on the shoulder. After silently counting to five, this person will sink to the floor or squat down as if they are part of the ecosystem that has died or been destroyed. Then anyone who has chosen to move in relation to this person will also silently count to five and sink down; and then those whose movements have been affected will follow suit, until the whole group is down. After starting out slow, the progression begins to accelerate and ends in a cascade effect that shows how everything is connected.

Round Three: Social Innovation or Climate Action

With everyone squatted down, talk about actions people and communities can take to reverse the impacts of climate change, both in social and natural systems. To show this, walk through and secretly tap someone; this person silently counts to five and then rises, and so on. The above process now plays out in reverse, illustrating the accelerating effect of new ideas, behaviors, or positive climate actions spreading throughout a system.

Watch For



- Ensure the area is free of obstructions so that participants can move safely.
-

Discussion



- What happened, what did you experience?
 - why do you think it happened that way?
 - Think about the communities you belong to – school, families, others? In what ways do you already influence the communities where you live? What new ways might you start?
-

Variations



- Participants can put their arms out and point at the two people they're trying to triangulate on).
 - Use different examples of systems both locally and globally. Use these examples as case studies instead of generic examples, e.g., how Toronto flooding impacts social and natural systems.
-

Inclusion



- An adult can be used as a sight guide for participants with visual impairments to position themselves equal distance from two others.

WHERE THE WIND BLOWS

Key Learning:

Participants will notice that they have been collectively impacted by the effects of climate change.

Goal of the Game:

Participants respond to prompts related to the effects of climate change while trying to keep a spot in the circle.

Recommended Grade(s):

1- 8 (modify prompts for each grade)

Duration: 15 - 30 minutes

What You Need:

- 1 place marker for each space in the circle, e.g., bean bags, spot markers, mouse pads, cloth squares, paper plates, or craft sticks.
- Prompts related to the effects of climate change in an envelope, box, or paper bag.
- 1 whistle or bell (optional)
- 6 or more participants
- Large playing area



How to Play

1. Have participants stand in a circle with one participant standing in the middle of the circle. Each participant in the circle stands on or beside a place marker.
2. The participant in the middle of the circle calls out: "The wind blows for..." with a prompt related to the effects of climate change that they will pick at random from an envelope, box, or paper bag.
3. If a participant answers "yes," the participant moves forward into the circle. If a participant answers "no," the participant remains standing in the same spot.
4. Each participant answering "yes" must then find a new vacant spot in the circle to stand in. This includes the participant who called out the prompt. The last participant standing in the circle calls out the next prompt.

Sample Prompts:

... anyone who saw an insect in winter.
... anyone who had a sunburn.
... anyone who stayed indoors because of poor air quality.
... anyone whose home flooded.
... anyone who went camping but couldn't build a fire because of fire bans.
... anyone who wore a pair of shorts in winter.
... anyone who lived somewhere with a drought.
... anyone who moved because of climate threats.
... anyone who checked their body for ticks after spending time outdoors.
... anyone who was stung by mosquitos many times in the same day.
... anyone who was forced to change their travel plans because of severe storms.
... anyone who couldn't grow certain vegetables or plants in their garden because of extreme weather.
... anyone who knows an endangered animal species.
... anyone who couldn't swim in a natural body of water because of poor water quality.
... anyone who stayed indoors because of extreme heat.

Where the Wind Blows Considerations

Watch For



- Ensure that participants are not colliding into each other when moving in the circle.
- Create prompts that match the participants' ages and lived experiences (e.g., include prompts which participants who were born outside of Canada can relate to).

Discussion



- What effects of climate change have impacted the most participants?
- What effects of climate change did you find the most surprising?
- Can you think of other effects of climate change that impact our lives?
- How do the effects of climate change force humans and animals to live differently?
- Can you think of actions that we can take to reduce the effects of climate change?

Variations



- Simplify language for younger participants to make it appropriate to their grade level.
- Participants prepare their own prompts before the game or during the game.
- Play a second round with actions that participants can take to reduce the effects of climate change. Sample prompts below:

... anyone who composts food scraps.
... anyone who recycles.
... anyone who planted a vegetable garden.
... anyone who planted a tree.
... anyone who walked, cycled, or took public transit instead of getting a ride in a car.
... anyone who uses reusable containers for their lunch.
... anyone who donated old clothing to someone in need.
... anyone who unplugs their electronics when not in use.

... anyone who turns off the lights when they leave a room.
... anyone who uses a clothesline instead of the dryer.
... anyone who takes their own bags to the store when they go shopping.
... anyone who wears more clothing layers when they are cold instead of turning up the heater.
... anyone who reuses paper.
... anyone who repairs or repurposes items instead of throwing them away.
... anyone who is part of an EcoSchool.

Inclusion



- If participants have mobility challenges, set a pace that all participants must move at to ensure that all participants have an equal opportunity to get an open spot. Use images to support the prompts for those who are deaf or hearing impaired.

ADDITIONAL GAMES & ACTIVITIES

[Arctic Survivor](#)

Using a game format (*Project Wild-Oh Deer*), students role-play polar bears and their interactions with the habitat components of food, water, shelter and space. The result is a better understanding of how polar bear populations are affected by changes to their habitat especially those caused by climate change. From Habitat Conservation Trust Foundation (HCTF) Education (2014)

[Carbon Cycles!](#)

In this active game, students follow the path of carbon through the carbon cycle to learn where carbon is stored and how it circulates. From Habitat Conservation Trust Foundation (HCTF) Education (2014)

[Carbon—The Short and the Long](#)

This fun outdoor game introduces students to the importance of Carbon as a building block of all life and the fundamental role of the carbon cycle in sustaining a healthy planet. As the class moves carbon particles between air, plants, animals and soil they will learn how this vital element supports life and is released back into the atmosphere through natural processes like decomposition. From Habitat Conservation Trust Foundation (HCTF) Education (2014)

[Catch Your Breath Game](#)

Students learn about the impacts of CO₂ and air pollutants on the Earth and on the human cardiorespiratory system through an active relay game. From Suzanne Horsley, Subject to Climate (2024) as part of Cardiorespiratory Health and Climate Change lesson

[Caught Up in the Carbon Cycle](#)

A simulation game that encourages students to learn about systems that influence climate change. From Green Teacher (2018)

[Climate Change Dodgeball](#)

Climate Change Dodgeball is a fast-paced game to show how increasing greenhouse gases causes global warming. From Learning Through Landscapes (2019)

[Climate Change Education Learning Resource](#)

This resource provides fun and interactive activities to help students understand the importance of keeping our land and oceans healthy and clean. The resource is divided into two main activities.

Activity One: Blue Carbon - will help students understand what happens to carbon when it is absorbed and stored by our ocean's ecosystems. This will be done by playing an interactive game.

Activity Two: Climate Change Olympics - students participate in a series of activities that will encourage them to make connections between climate change and their daily lives. The activities include reflection with an art mural, running games with relays, and individual connections with a climate change scavenger hunt. From Sierra Club BC Environmental Education Programs (2015)

[Climate Change Scavenger Hunt](#)

Following an in-class discussion of climate change basics, students participate in a scavenger hunt designed to help them learn more about their local environment. While the focus of this outdoor activity is on teamwork and developing leadership skills, some attention is given to reinforcing those climate change concepts introduced at the beginning of the lesson. From Nunavut Climate Change Centre (2014)

[The Carbon Dioxide Game](#)

The Carbon Dioxide Game is a fun, active way to explain the greenhouse effect and human contribution to global climate change. The activity is played in several rounds. From Green Teacher (2013)

[Get Outside Month 2020 – Climate Change Focus](#)

In 2020, the TDSB Outdoor Education Department compiled a month's worth of climate change related lessons that gets learners outside.

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Sources:

Cornell, J. (1979). *Sharing nature with children* (1st ed.). Nevada City, Cali.: Ananda Publications.

Cain, J. (n.d.) *Raccoon Circles– A Guide of Facilitators– Teamwork & Teamplay* <https://www.teamworkandteamplay.com/resources/raccooncircles.pdf>

Greenhouse Gas Game and Facilitation Tips– Red Cross Red Crescent Climate Centre. (n.d.). <https://www.climatecentre.org>

Hidden Pathway (n.d.) <https://www.howtoplaystuff.com/hidden-pathway/>

Everybody's It (n.d) <https://www.blueearth.org/pdf/trc/games/Everybody's%20It.pdf>

Meadows, D., Sweeney, L. B., & Mehers, G. M. (2016, January 1). *The Climate Change Playbook*. Chelsea Green Publishing

Project WILD K-12 curriculum & activity guide. (2000) (3rd ed.). Houston, TX.

Where the Wind Blows (n.d.) <https://guideinc.org/2015/12/21/icebreaker-the-wind-blows/>

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Climate Change Games & Activity Guide 2024

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