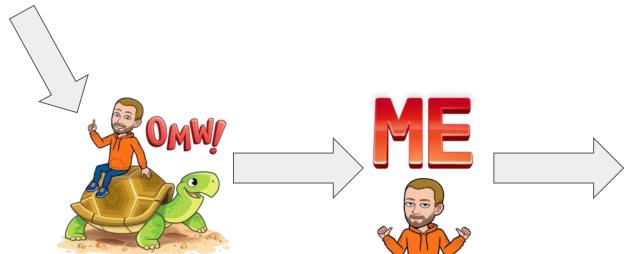
# A Walking Curriculum: Supporting Learning Through Focused Walking

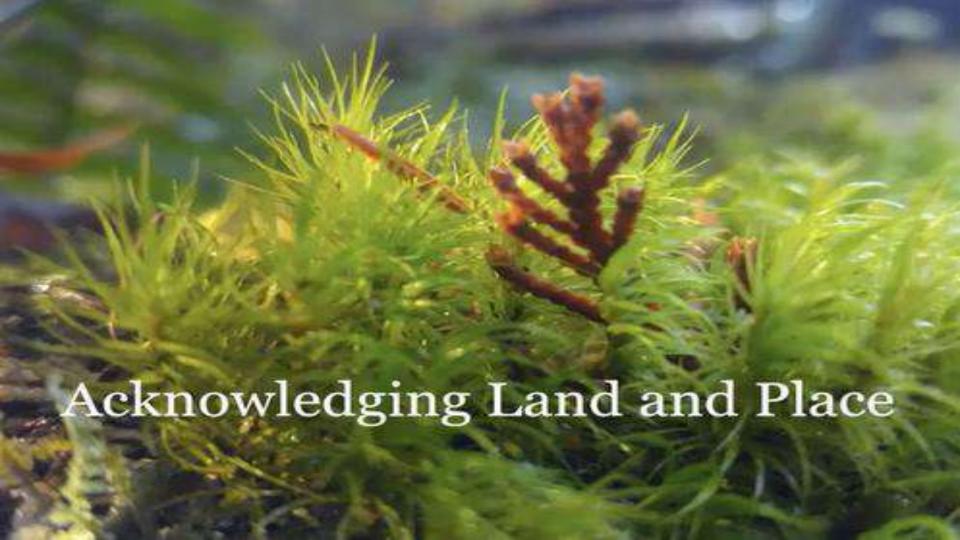














# Land Acknowledgment



"We acknowledge the lands which constitute the present-day City of Mississauga as being part of the Treaty and Traditional Territory of the Mississaugas of the Credit First Nation, The Haudenosaunee Confederacy the Huron-Wendat and Wyandot Nations. We recognize these peoples and their ancestors as peoples who inhabited these lands since time immemorial. The City of Mississauga is home to many global Indigenous Peoples.

As a municipality, the City of Mississauga is actively working towards reconciliation by confronting our past and our present, providing space for Indigenous peoples within their territory, to recognize and uphold their Treaty Rights and to support Indigenous Peoples. We formally recognize the Anishinaabe origins of our name and continue to make Mississauga a safe space for all Indigenous peoples."





Coalition ontarienne des écoles en santé 
 Ontario Healthy Schools Coalition

















ONTARIO.com









This game is similar to rock, paper, scissors.

In this game, the student has to find a partner.

Partners go back-to-back. Each person starts to think of either the Bear, Mosquito, or Fish. The teacher will count down from 3 and when the teacher reaches 3 the students turn to face their opponent while acting out the characteristics of the species they chose.

- Bear eats fish
- Fish eats Mosquito
- Mosquito stings bears



## How Exercise Creates Conditions in the Brain to Help Support SEL

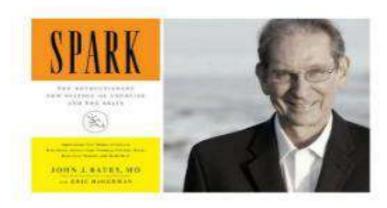




@lifeisathletic

# Myokines

"It turns out that moving our muscles produces proteins that travel through the bloodstream and into the brain, where they play pivotal roles in the mechanisms of our highest thought processes." - Dr. J. Ratey



Dr. J. Ratey, <u>Spark: The</u> Revolutionary New Science of Exercise and the Brain

Questions for us to consider: Other than PE and recess how much physical activity are our students getting in other classes & outside?



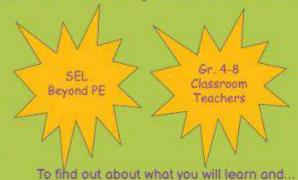
GREEN EXERCISE: Gateway to Social Emotional Learning

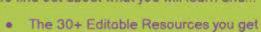


### Green Exercise: The Gateway to Social-Emotional Learning









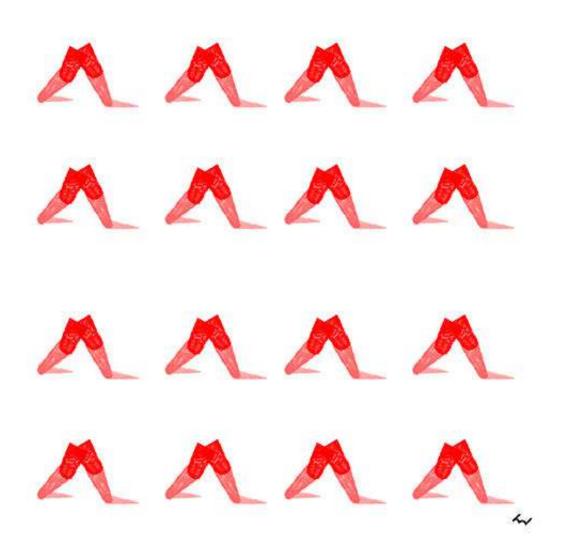
How reading, writing, math, technology & science standards connect to GrEx-SEL

Certificate

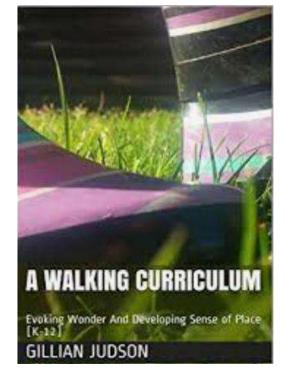
Completion

- How it helps you, your students, staff & family
- Details of the 3-modules
- Investment Breakdown
- How to get started and more ...

https://bit.ly/3MlkcbL







# A Walking Curriculum

### by Gillian Judson

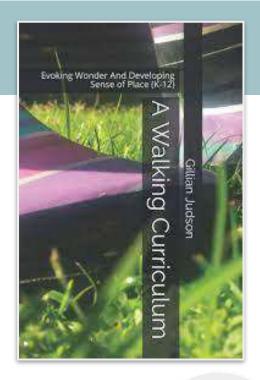
### Podcasts:

- Talking Imaginative Ecological Education with Gillian Judson and a panel of 8 Educators, November 2021
- Earthy Chats: Imaginative education and the Walking Curriculum,
   February 2021
- Gillian Judson on Being a 'perfinker", 2018
- Podcast: Exploring the World of Imaginative Education, 2016

### Resources

- Walking Curriculum Website
- Walking Curriculum Journal

Click here to Capture Your Learning





# Walking activities are designed to

- engage the body, emotions, and imagination in ways that can increase familiarity with the local and natural contexts of school and learning;
- increase attention to detail, particularity and their connection with place;
- connect Place-based learning activities with cross-curricular goals;

serve as examples for your own, place inenired teaching ideas.

# WHAT DOES IT MEAN TO "SPIRAL THE MATH CURRICULUM?"

In a nutshell, to spiral the Ontario Math Curriculum simply means that you are **continually reviewing previously taught material** *versus* teaching one unit at a time.

Consistently reviewing strands allows students to tackle math with confidence because if they don't master a skill the first time it is taught, they still get ample chances to practise their skills!!



Number Walk—What numbers can you find outside? Example: I see 3 trees. I see four tires. Collect & Organize: Do a tally of the numbers you find. Try to get the numbers 1-9.













HELPS TO MAINTAIN WEIGHT



04

**INCREASES YOUR ENERGY LEVELS** 













OF THE LUNGS



**BODY'S ACCESS** 

TO VITAMIN D













CANCER















**BONES AND** 

MUSCLES









SPARK CREATIVITY

BLOOD PRESSURE **IMMUNE SYSTEM** 

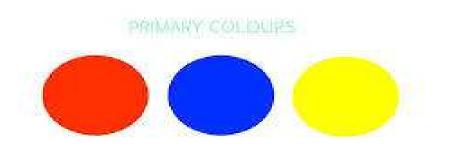




Colour Walk—What primary colours (red, yellow, blue) can you find outside?

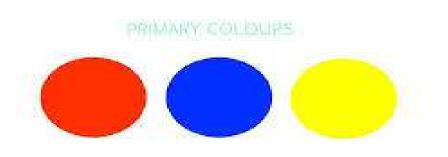
Collect & Organize: Do a tally of the colours you find. How many of each kind?





- Colour Walk—What primary colours (rouge, jaune, bleu) can you find outside?
- Collect & Organize: Do a tally of the colours you find. How many of each kind?

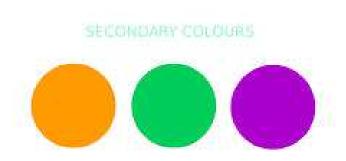




Colour Walk—What secondary colours (green, orange, purple) can you find outside?

Collect & Organize: Do a tally of the colours you find. How many of each kind?

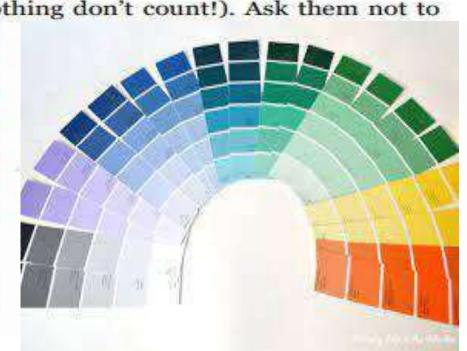




RAINBOW CHIPS: This is a fun and easy activity that gets participants looking closely at things around them, and hones their observation skills. Collect a selection of paint chips from your local paint store, ensuring that you get a good range of colours and shades. Cut up the chips if they are in strips, and place them in a bag. Hand each participant a "rainbow chip", telling them that every colour of the rainbow exists in nature all around us, and send them off to match their chip colour as closely as possible with something natural (human-made items like garbage or clothing don't count!). Ask them not to

pick their matched item if it is alive, but to show it to someone close by. Offer some hints: turn leaves and stems over to see colours beneath, look closely at rocks and pebbles, lichen, tree bark and sap. Once they have found a match, give them another colour chip to match, or a whole strip of paint chips of similar shades to match.

Critical Questions: What surprised you the most about this activity? What colours were hardest to find?



Sizes Walk—What objects can you find outside that are big? What objects can you find outside that are small? Collect & Organize: Do a tally of the objects you find. How many of each kind?



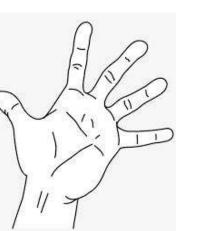


**Body Walk**—What objects can you touch outside that are bigger than you? What objects can you touch outside that are smaller than you? Collect & Organize: Do a tally of the objects you find. How many of each kind?





Hand Walk—What objects can you touch outside that are bigger than your hand? What objects can you touch outside that are smaller than your hand? Collect & Organize: Do a tally of the objects you find. How many of each kind?



















































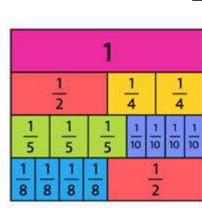




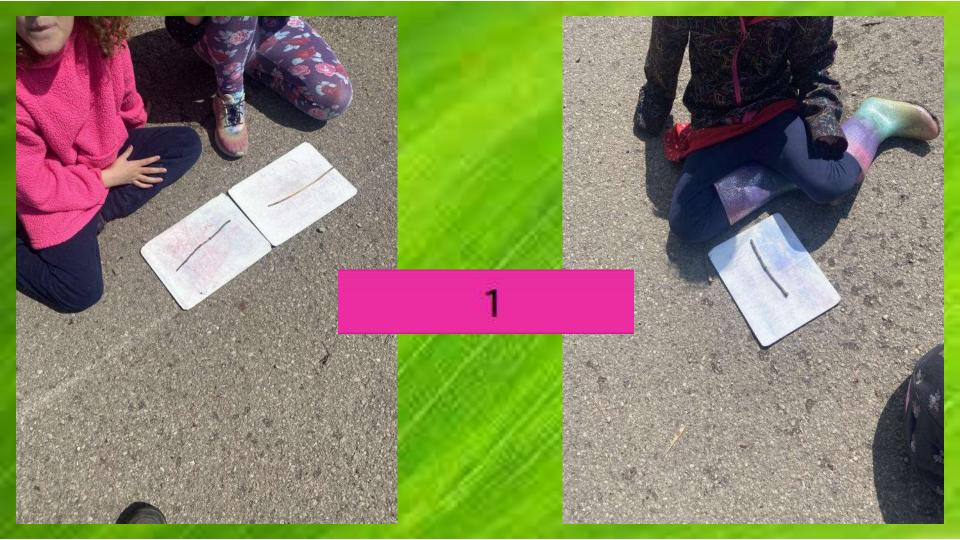
Fraction Walk— Find a stick that is between 10-20 centimetres in length. Find two halves. One quarter, three quarters.

Collect & Organize: Place your sticks on your board to show the different parts of the whole.

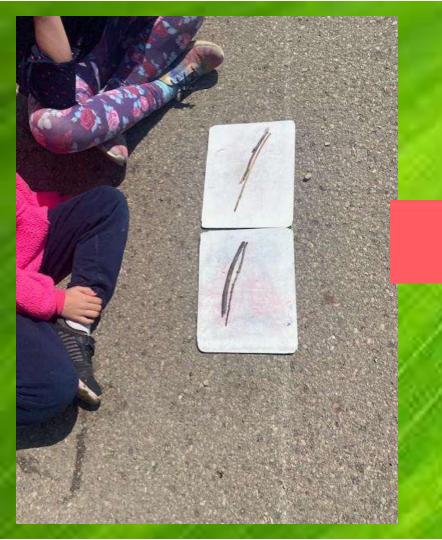










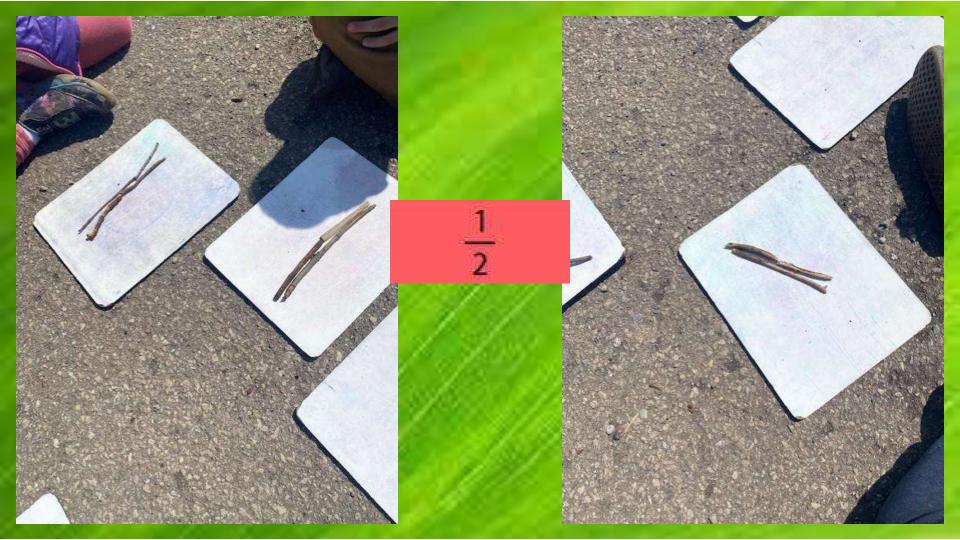








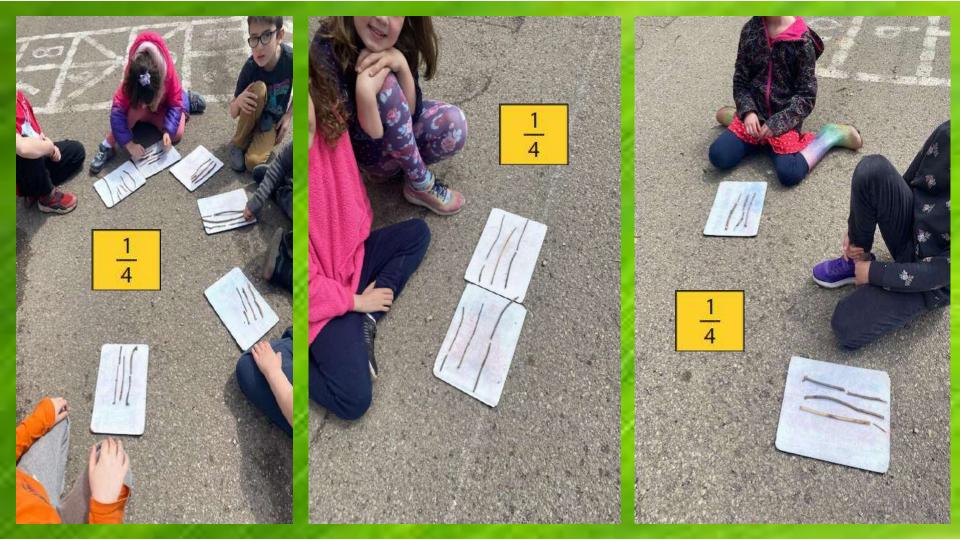
















(Adapted from one of our most popular resources: Follow the Leader, 2011, CIRA Ontario)

Objective - To quickly add the fingers shown by the players.

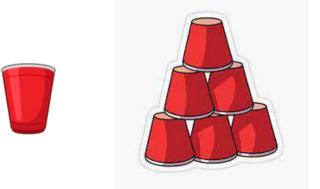
Equipment - None.

## How to Play:

- 1. In pairs, players assume a "sumo-stare" with their opponent with their hands behind their backs.
- One player says, "set," and when the opponent says, "shoot," both players throw their hands in front to reveal their numbers.
- 3. Players quickly add up all the shown fingers.
- The first player to be correct finds another winner, while the "loser" runs to other side and back to challenge someone else.

## Variations:

- Change the operation to multiplication or play with three players in a "ready-set-shoot" triangle.
- Change the physical challenge such as running, jumping jacks, or a thirty second plank pose.
- Play this game while players are dribbling a basketball. With their free hand, they play "set-shoot" with other teammates; whether they win or lose, they dribble away to play someone else.
- Want to keep score? Each time someone wins, they get a marker from the leader (e.g., clothespin or popsicle stick), and the player with the most markers at the end of the game wins.



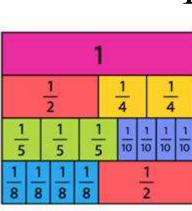




Fraction Walk— Find a stick that is between 5-10 centimetres in length. If this piece is a quarter, find the whole piece. Or find half.

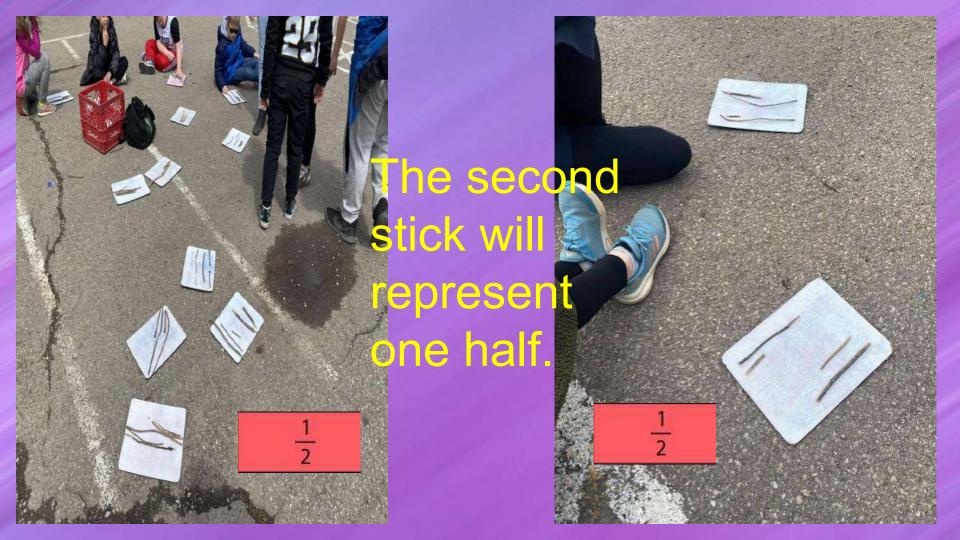
Collect & Organize: Place your sticks on your board to show the different parts of the whole.

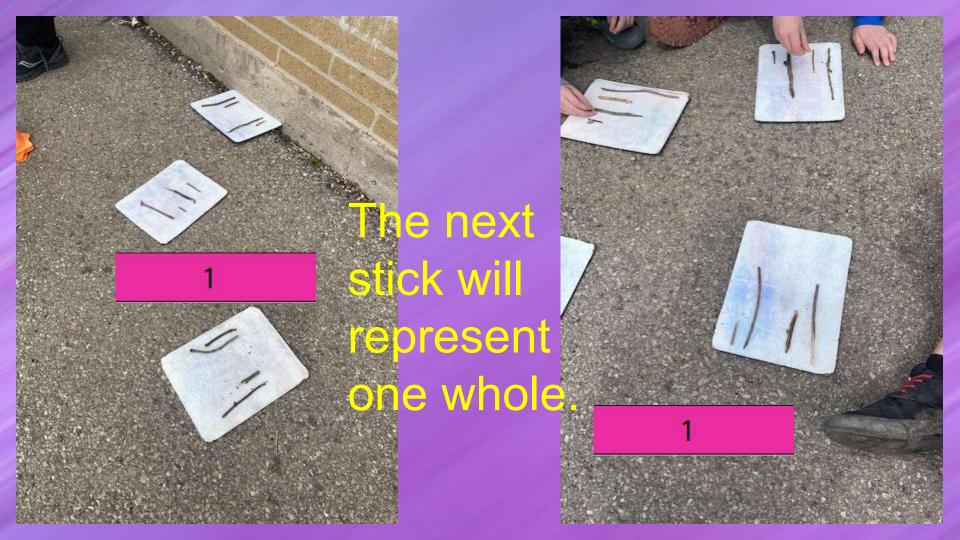
















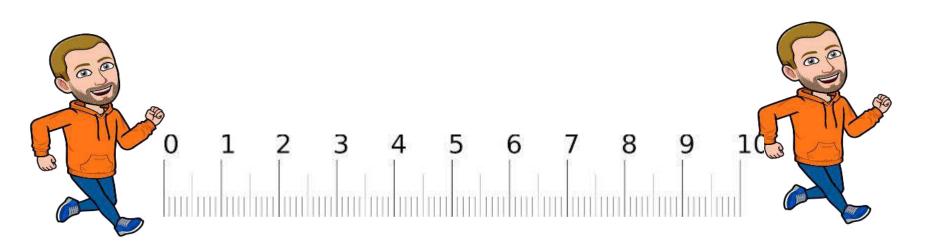






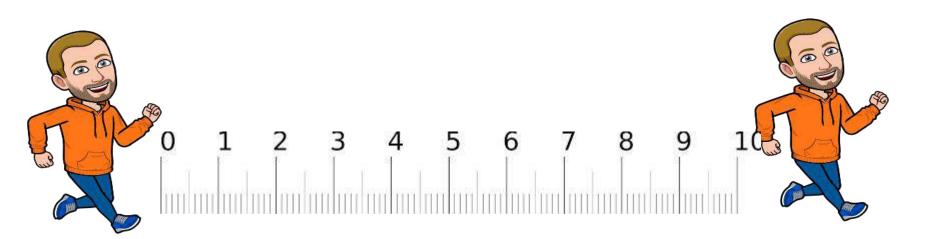
# **Step Count Walk**—What objects can you find outside that are about 5 steps apart? 10 steps? 25 steps?

Collect & Organize: Make a list of the objects you find or draw the objects you find.

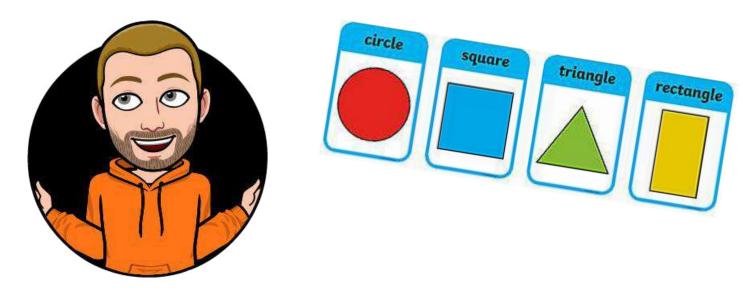


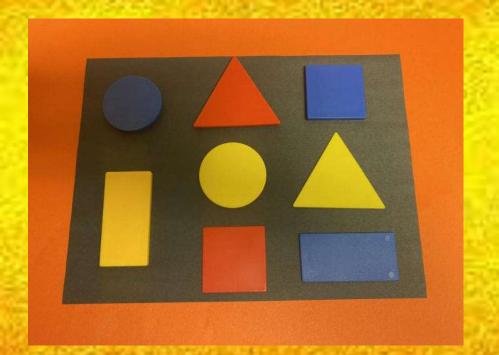
# Step Count Walk—What objects can you find outside that are about 10 steps apart? 25 steps? 50 steps?

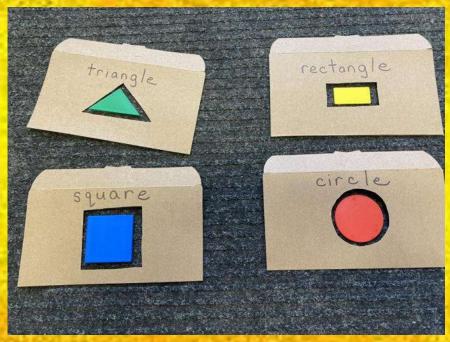
Collect & Organize: Make a list of the objects you find or draw the objects you find.



Shapes Walk—What geometric shapes (circles, squares, rectangles, triangles etc.) can you find outside? Collect & Organize: Do a tally of the shapes you find. How many of each kind?







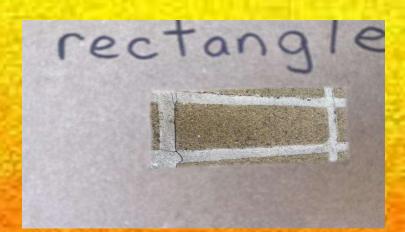






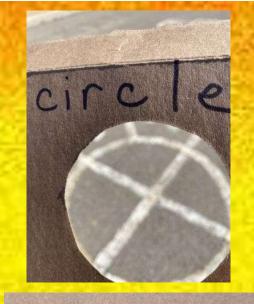








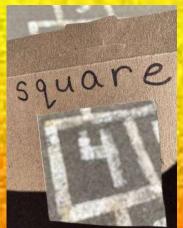














Lines Walk—What lines (straight, curvy, zig-zag, thick, thin etc.) can you find outside?

Collect & Organize: Do a tally of the lines you find. How many of each kind?



Types of Lines

horizontal		≷M≷ zig zag	curves
curly	(Spiral	thick thin	△ □ O shapes O
//////////////////////////////////////	cross hatching	rapple of radiating	dista and scambring











## Tips and Tricks Painting the Snow



Worm Walk—What worms (straight, curvy, thick, thin etc.) can you find outside? Collect & Organize: Draw the shape of the worms you

find.







## Rain Drops Cephea



## Beyond the Walls: Activities for the Outdoors

Activity Name: Rain Drops

Division: Primary Setting: Curricular Season: Spring

Activity Goal:

Participants practice sending an object into an open area using an implement and fielding an object to score points in an engaging spring outdoor activity.

For participant safety, please review the contents of the Beyond the Walls: Safety Considerations page for information on Safety Standards, Spring Safety Considera and Outdoor Playing Areas and Surfaces.

### Equipment:

- 1 bat (baseball/softball, cricket that is size appropriate for primary age participants) per group
- 1 batting tee (large pylon) per group
- 1 small ball (e.g., foam ball, tennis ball) per group
- Buckets for fielders (e.g., small pail, upside down pylon)



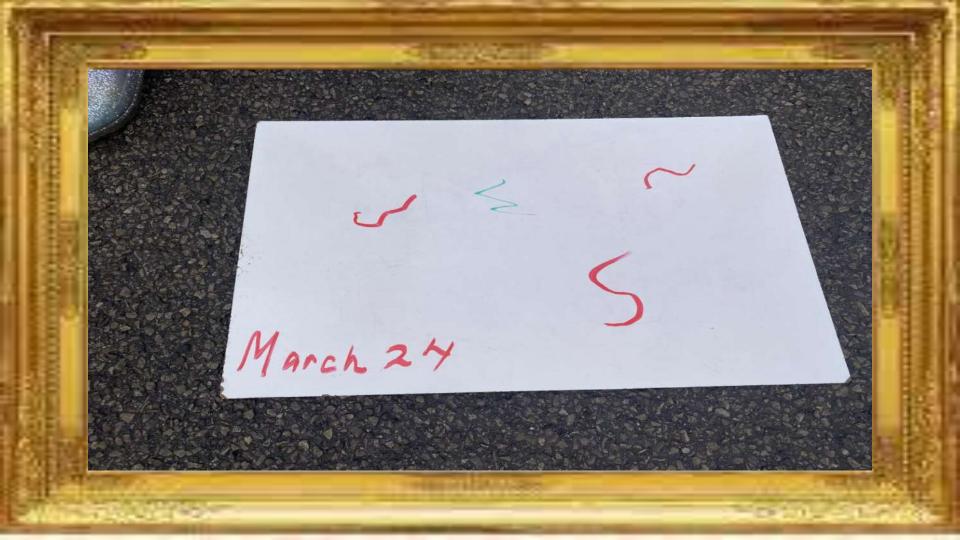


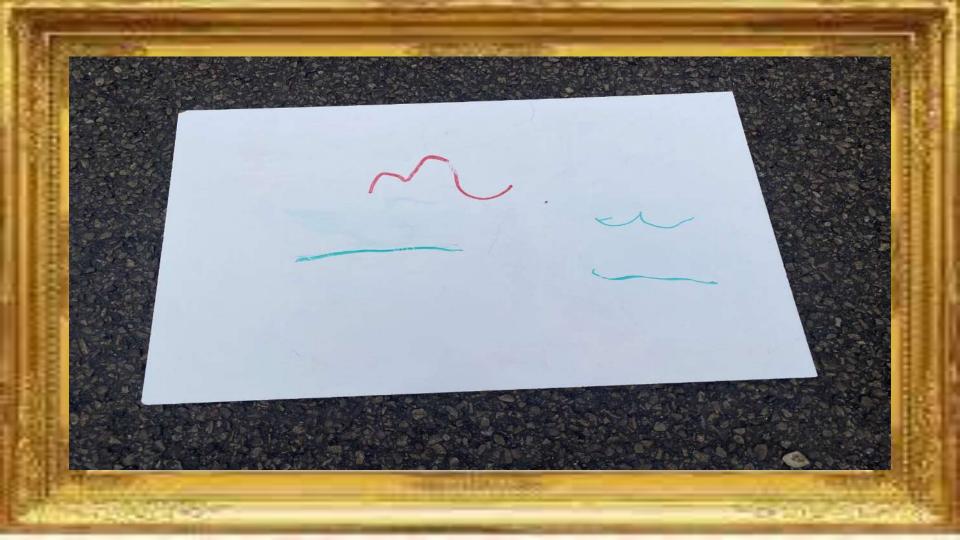
















What do you notice? Turn and talk to a friend.



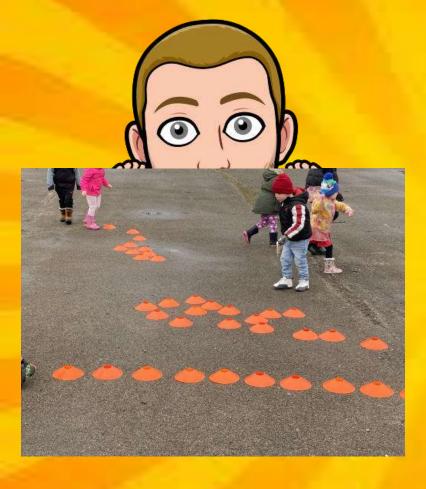


Show me some ways you can move around the worms.











Greater or Less Than Walk—What objects can you find outside that are greater or less than 10 centimetres long? Collect & Organize: Make a list of the objects you find or draw the objects you find.



Greater or Less Than Walk—What objects can you find outside that are greater or less than 50 centimetres long? Collect & Organize: Make a list of the objects you find or draw the objects you find.





Measurement Walk—What objects can you find outside that are between 10 and 50 centimetres long? Collect & Organize: Make a list of the objects you find or draw the objects you find.

Measurement Walk—What objects can you find outside that are about 10 metres apart?

Collect & Organize: Make a list of the objects you find or draw the objects you find.





Measurement Walk—What objects can you find outside that are between 10 and 20 metres apart? Collect & Organize: Make a list of the objects you find or draw the objects you find.







#### Measure and Move

Materials: One ruler/group of two to four kids, one calculator/group of two to four kids (optional).

#### Directions:

- Trainer calls out the name of an object that can be found in the classroom and is accessible (e.g., width of textbook, desk length, height of whiteboard, etc.).
- Each group must locate the object and measure it in centimeters, inches, or feet (as requested by the trainer).
- Groups will then be asked to perform a fitness skill (e.g., crunches/sit-ups, high knees, walking lunges, push-ups) equal to the number of centimeters, inches, or feet the object measures.

#### Variations/Challenges:

 Trainer can challenge groups to calculate the area or volume of objects (suggestion is to have kids reference their math book for appropriate formulas).



# Measurement Walk—What objects can you find outside that are about 1 metre tall? Collect & Organize: Make a list of the objects you find or draw the objects you find.





### Measurement Walk—What objects can you find outside that are about 10 metres tall? Collect & Organiza: Make a list of the object

Collect & Organize: Make a list of the objects you find or draw the objects you find.





(Sur)Faces Walk—Look for "faces" of all kinds. What (sur)faces do you encounter on the walk? What do you notice about the (sur)faces? Senses: What do the surfaces feel like? How do they feel different to the touch of a finger? How do they feel to the touch of your forearm instead of your finger?







Arrays Walk—What objects can you find outside to create an array?

Collect & Organize: Make an array with t

Collect & Organize: Make an array with the objects you find.



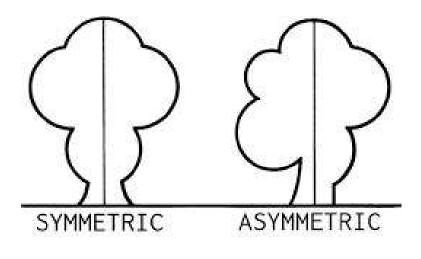




Symmetry Walk—What objects can you find outside that are symmetrical?

Collect & Organize: Make a list of the objects you find or draw the objects you find.







Where do

#### you see





symmetry?

#### Where do





you see

#### symmetry?



Where do you see rotational symmetry?



#### Where do you see



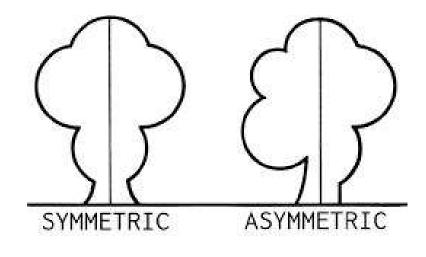
symmetry?



**Asymmetry Walk**—What objects can you find outside that are asymmetrical?

Collect & Organize: Make a list of the objects you find or draw the objects you find.



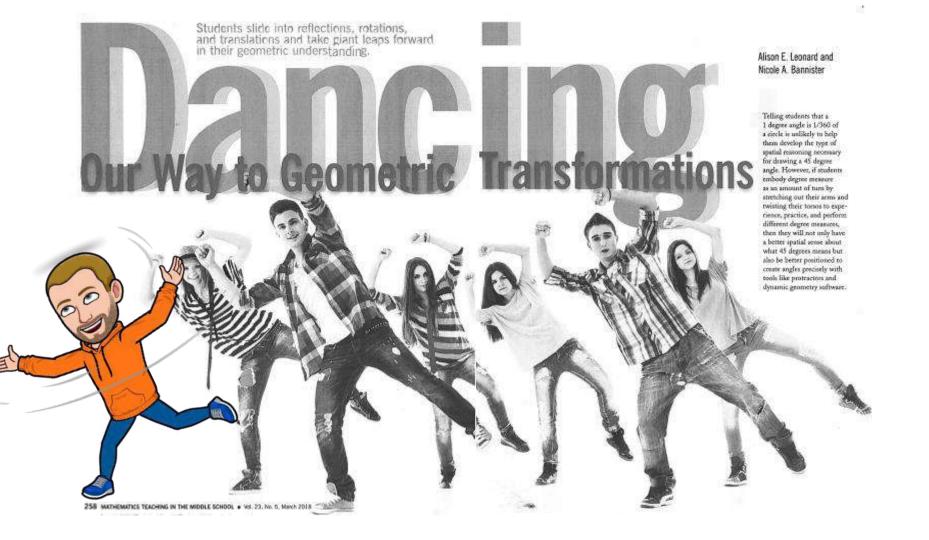












Location Language Walk—What location language (near, close, far, between) can you find outside? Collect & Organize: Do a tally of the examples you find. How many of each kind?













What location language do you see in the pictures?







Location Language Walk—What location language (over, under, around, through) can you find outside? Collect & Organize: Do a tally of the examples you find. How many of each kind?











What location language do you see in the pictures?



What location language do you see in the pictures?

## Sound Walk—What objects can you hear outside that are quiet? What objects can you hear outside that are loud? Collect & Organize:

Make a list of the objects you find or draw the objects you find.

Motion Walk—Use as many of your senses as possible to complete this challenge. What is moving around you? What is on the move? Besides seeing movement, how else can you tell something is moving? Gesture & Intention: Using your body, try to repeat the movements you discovered. Are the movements easy or hard to

do/represent? Why?



### Move as if.....you are a.....









Texture Walk: How Place Feels (or Feeling Place). Begin in the classroom with a class brainstorm about ways to describe how things feel to the touch—smooth, bumpy, prickly, hot, cold etc. In groups students might be challenged to come up with as many adjectives as they can. Once a master list has been created ask students to head outside to explore. Their challenge is to find something that matches each descriptor on the list. Students record what they find that matches the adjective.

Patterns Walk—What patterns can you find outside? Collect & Organize: Make a picture of the patterns you find.





Patterns Walk Video



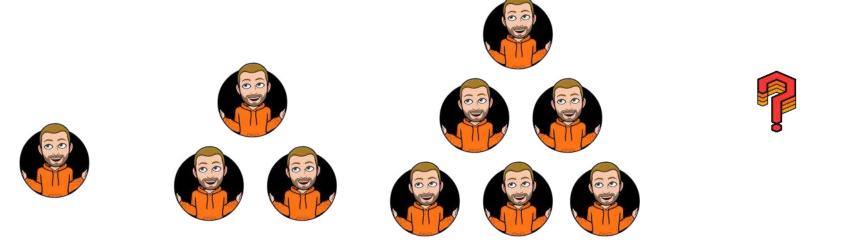








Patterns Walk—What patterns can you find outside? Collect & Organize: Extend, describe, and create repeating, growing, and shrinking number patterns.



The Hiding Place Walk: What good hiding places can you find? First, think about a hiding place for yourself. Next, identify the best hiding places for a raccoon, a mouse, or a spider. **Dramatic Tension:** A real life drama of "hide and go seek" is going on right now, all around us. Identify things that you think always try to hide. Why? It may be that the "hiders" are "prey" to other animals – they are likely to get eaten! Identify "prey" and "predators" – hiders and seekers.



The Growth Walk: What is growing on your walk? How do you know? What are the different ways in which growth appears to you?

Role Play: What's "growing on" in your schoolyard? Like a reporter, give a "breaking news" report about an example of things growing that you observed on your walk.

Probability Walk—As a group create a list of things that we may see or not see outside today? Use 5 ideas from our list or make your own list. Collect & Organize: Make a checklist of the things you see. Why do you think you did not see all the things on your list?









### **Aboriginal Traditional**



Ring the Stick

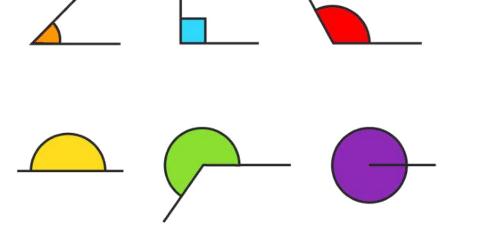
Sling Ball







# Angles Walk—What angles (acute, right, obtuse, straight) can you find outside? Collect & Organize: Do a tally of the angles you find. How many of each kind?



If you need to, use your protractor arms. A right angle is a great benchmark!



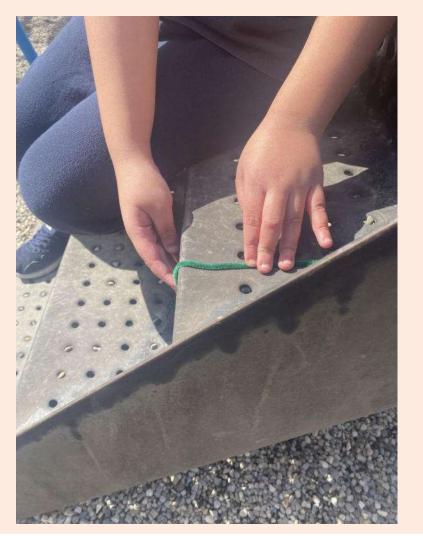






















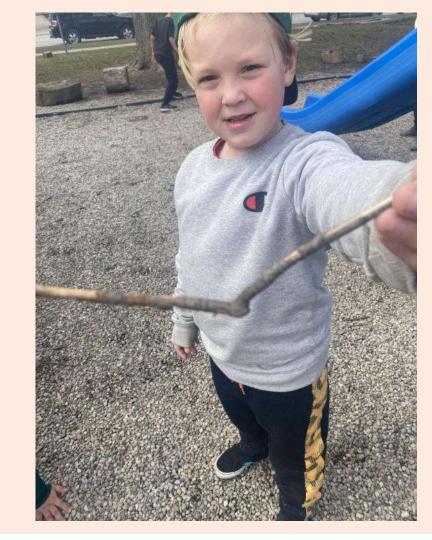












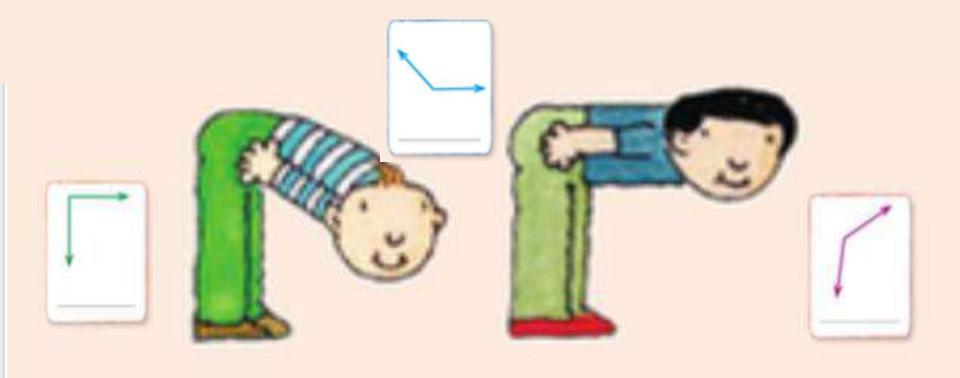


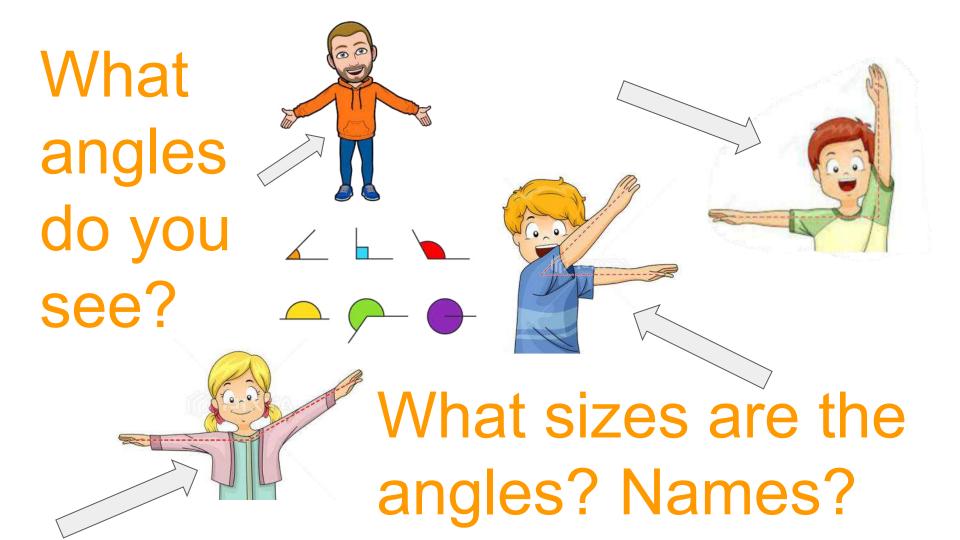






## What's Your Angle?











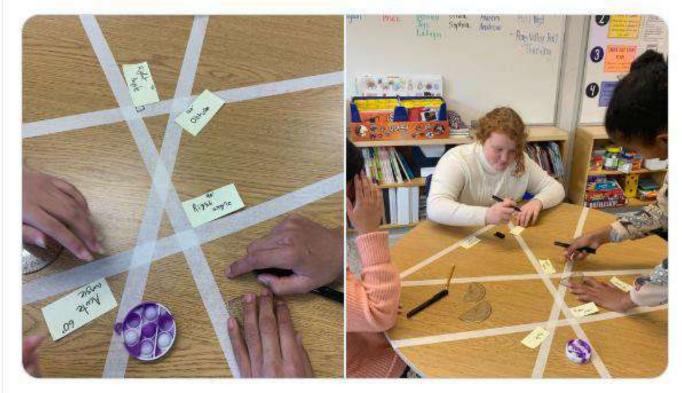








Great to get into classrooms and see this engaging hands on learning finding math angles.







### MATH

### **Angle Squats**

Materials: None

#### Directions:

- Kids perform squats with their feet and knees in particular angles. Trainers ensure knees should be over the feet when preforming this Burst.
- On cue, kids are asked to do a zero-degree squat with feet and knees parallel and close together. Repeat ten times.
- Kids are then asked to perform a squat with feet and knees turned out in a 45-degree position. Repeat ten times.
- Kids are then asked to perform a squat with feet and knees turned out in a 90-degree angle. Repeat ten times.

#### Variations/Challenges:

 Trainers can change the angles and incorporate a slight jump in the squats by changing the angle. For example, trainers can ask for a 45 degree to a 0 degree to a 90 degree in succession and repeat and change the pattern as needed.

### **Pairs Compass Walk**



- Form pairs.
- 2. One person identifies an object that is at least 10 metres away.
- 3. This person will then close their eyes, or put on a blindfold, and aim to walk in a straight line directly towards the object, stopping directly in front of it.
- 4. Meanwhile, the sighted person will walk silently behind their partner and prevent the latter from hitting any unforeseen obstacles.
- 5. Note the results of each attempt they make, observing accuracy, biases, etc.
- 6. Swap roles and repeat several times.

### **Tour Guide**

This is a great introductory activity. Students get in pairs and take turns guiding their blindfolded partner around the gym without running into anyone or anything. This activity enables students to practice and discover the best vocabulary words to use to guide their partner. Provide time for students to reflect and discuss with other students what words were successful for them.























### **Pairs Compass Walk**



- Form pairs.
- 2. One person identifies an object that is at least 50 metres away.
- 3. This person will then close their eyes, or put on a blindfold, and aim to walk in a straight line directly towards the object, stopping directly in front of it.
- 4. Meanwhile, the sighted person will walk silently behind their partner and prevent the latter from hitting any unforeseen obstacles.
- 5. Note the results of each attempt they make, observing accuracy, biases, etc.
- 6. Swap roles and repeat several times.

### **Group Compass Walk**



- 1. Form small groups.
- 2. One person identifies an object that is at least 10 metres away.
- 3. The group will then close their eyes, or put on a blindfold, and aim to walk in a straight line directly towards the object, stopping directly in front of it.
- 4. Meanwhile, the sighted person will walk silently behind their group and prevent the latter from hitting any unforeseen obstacles.
- 5. Note the results of each attempt they make, observing accuracy, biases, etc.
- 6. Swap roles and repeat several times.

### **Group Compass Walk**



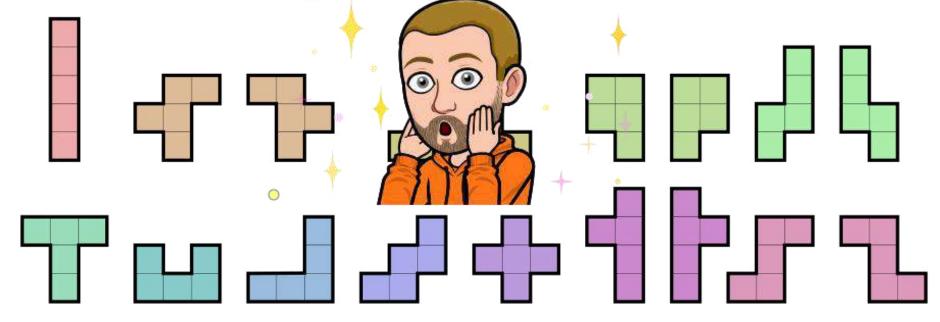
- Form small groups.
- 2. One person identifies an object that is at least 50 metres away.
- 3. The group will then close their eyes, or put on a blindfold, and aim to walk in a straight line directly towards the object, stopping directly in front of it.
- 4. Meanwhile, the sighted person will walk silently behind their group and prevent the latter from hitting any unforeseen obstacles.
- 5. Note the results of each attempt they make, observing accuracy, biases, etc.
- 6. Swap roles and repeat several times.

### **Leaf Walk**

Walk for 10 to 20 minutes. As you walk, collect at least 6 to 12 leaves and put them in a bag or box. It's okay to choose leaves from the same tree or bush. BUT, be respectful of property and do not pick leaves from plants or flowers in other people's yards. Take the leaves back to your home. Mix them all up in a bag. Next, each person that you walked with will reach into the bag and pick out a leaf. The leaf that you pick out is YOUR leaf. Take a few minutes to look at the leaf. Study its shape. Does it have any unique features? Does it look like it's been damaged in any way? Next, in your mind (or on paper) make up a fun and inspirational story about how your leaf came to be YOUR leaf. After you've gotten to know your leaf, put it back in the bag with all the other leaves and shake them up. Next, dump all of the leaves out onto the floor or table. Can you find YOUR leaf? How do you know that it is truly your leaf?

Collect & Organize: Do a tally of the leaves you gathered. Sort your leaves in 2-3 groups.

# PENTOMINO PATHUAYS



### **Interval Walking**

#### Set-Up

In a gym or long space, define the following terms:

- Single: one length of the gym
- Double: down & back (two lengths)
- Triple: down, back, down (three lengths)
- Quadruple: down, back, down, back (four lengths).

On each end of the gym, post a large sign showing the workout (see right). The idea is that students will walk two warm-up laps, then six singles (lengths of the gym) separated by short breaks, then four doubles, etc.. ...until they finish with 2 cool-down laps.

Each interval MUST be walked at maximum speed. The idea is to really create a wave workout, where heart rates go up and down, up and down.

#### Interval Walking Workout

- · 2 warm-up laps
- Stretch
- 6 singles
- 4 doubles
- 4 triples
- 2 quadruples
- 2 triples
- 4 singles
- · 2 cool-down laps
- · Stretch

www.peUpdatess

### Opposites Scavenger Hunt



### EGG CARTON Scavenger Hunt





This FREE 9 page scavenger hunt printable includes:

- colours
- colour names
- numbers
- number words
- textures (with pictures)
- textures (vocabulary builders)
- nature items
- and letters grouped in the special order for teaching letter recognition

Letter Walk—What alphabet letters can you find outside? Collect & Organize: Make a list of the letters you find.

The teacher or an older student will hide/place letters outside for the students to locate. Using a clipboard or dry erase board, students will record all the letters they find. Could have different coloured letters and different areas to search.



# Letter Walk—What alphabet letters can you find outside? Collect & Organize: Make a list of the letters you find.

The teacher or an older student will hide/place letters outside for the students to locate. Each student will be given 5-7 different letters to search for. Using a clipboard or dry erase board, students will record all the letters they find. Could have different coloured letters and different areas to search.





Word Walk—What Word Wall Words can you find outside? Collect & Organize: Make a list of the words you find.

The teacher or an older student will hide/place Word Wall Words outside for the students to locate. Using a clipboard or dry erase board, students will record all the words they find.



Word Walk—What Word Wall Words can you find outside? Collect & Organize: Make a list of the words you find.

The teacher or an older student will hide/place Word Wall Words outside for the students to locate. Each student will be given 5-7 different Word Wall Words. Using a clipboard or dry erase board, students will record all the words they find.



Hang two tags in each area, students will use the first letter to begin the words and the second letter will be used to end the words.

Beginning Letter

**Ending** 















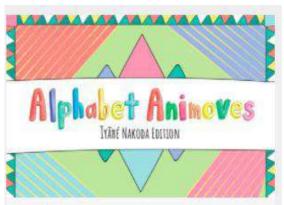
# Mindful Walking



## **Mindful Walking**

Use these walking meditations as a means to support your physical and mental health; combining mindfulness, being present in the moment and movement

### Be Fit For Life



#### AniMoves Indigenous Languages Edition

Use this deck of Alphabet AniMoves to help explore fun and creative movements while learning the Blackfoot, Cree and Stoney Nakoda names of animals. There...

LEARN MORE



#### Embedding Indigenous Teachings into Physical Education Lesson Plans

Incorporate Indigenous teachings into physical activity settings through fun, interactive lessons directed at Grades K-3. Created through a partnership with Miywasin Friendship Centre, Alberta Health...

LEARN MORE



#### Move & Play through Traditional Games Lesson Plans

Use these lesson plans to communicate the history & culture of traditional games & note how the skills and values are still important today.

LEARN MORE

### SHARE OUR PLAY

An Aboriginal Themed Tool Kit of Games, Activities, Crafts, Art Projects and Recipes for Children



# Explore, Observe, Engage

### Explore

- Take the time to walk, wheel or run through your home and school zones/communities
- Every trip is a new adventure, choose a new direction in your 2.4
- Take time to connect to the space

#### Observe

- Select one route from your explorer days and be an observer
- Use all of your senses
- What do you notice? What do you like? What could be improved?

### Engage

- Start with one initiative: how can you improve this space to make it safer, more bikeable, etc
- Who can help? Engage with community members (e.g., associations, municipalities, etc)
- Activities should challenge students to think critically about and act civically in the community

#### Shapes

- What shapes do you see?
- How many different shapes can you find?
- Can you spot any patterns?

#### **Evidence**

plore your work

 What signs of life, movement, weather, change, etc do you see?

#### Animals

- 220220000
- What animals do you see?
- How many?
- What are they doing?
- · Where are they located?

#### **Textures**

- What different textures can you find?
   Do you notice any patterns.
- Do you notice any patterns in where you find different textures?

#### Sounds

- · What do you hear?
- · What is making the sound?
- How many different sounds do you hear?

#### Senses

 What do you see, smell, hear, feel?

#### Colors

- What colors do you see?
- How many different colors can you find?
- Are there any patterns?

#### **Plants**

- What plants do you see?
- How many different plants do you see?
   How tall are the plants?
- How tall are the plants?

## Outdoor Play Canada

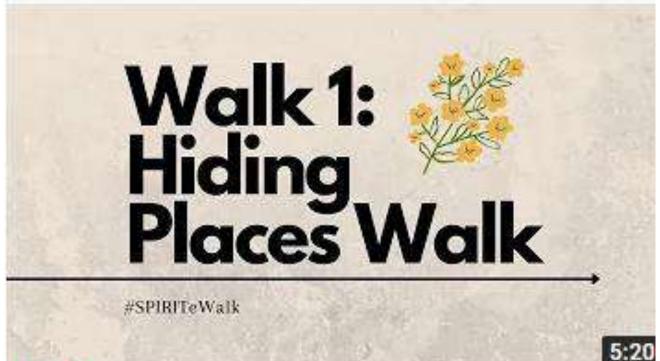




Visit dashbc.ca for more information and additional resources on outdoor classrooms



## Walk 1: Hiding Places Walk





Walk 1: Hiding Places Walk

Cassidy Friesen



Walk 2: Line Walk

Cassidy Friesen



Walk 3: Tracks, Print, Marks Walk
Cassidy Friesen



Walk 4: Discover Colour Walk

Cassidy Friesen



Walk 5: Pattern Walk

Cassidy Friesen



Walk 7: Lovely/Unlovely Walk

Cassidy Friesen

### jeff.vanwely@dsbn.org

## Walk 2: Line Walk

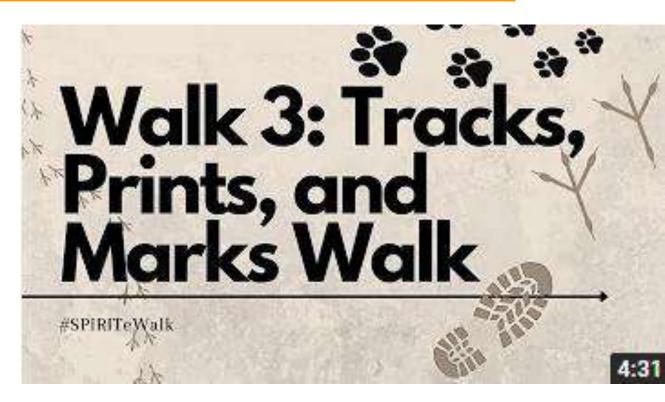
Can you find a human-made line?

Can you find a natural line? How were they made? Where do they lead? Do these two types of trails/lines ever connect or become one? Where do the lines lead too?



## Walk 3: Tracks, Print, Marks

# Walk



### How to Track Animals

#### How To Track Animals In The Woods



If you want to know how to track animals in the woods then get ready to embark on an exciting journey of excitement and discovery.

### 39 fun ways kids can play outside this



### Nature Awareness Questions

6 Excellent Nature Awareness Questions To Ask Outside



# A Great Story



## Rock Paper Scissors Reflection





## The Cone Flip Mixer

