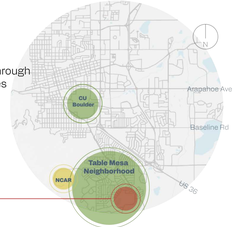
Logan Shockey / AJ Johnsen / Theo E Johnson Mencimer

Creating student and instructor agency through garden therapy and interactive landscapes



Fairview High School

Increase of **suicidal thoughts**

42% of High Schoolers feel persistently sad or hopeless
- CDC 2021

+ Social Interaction
+ Attention Span
- Reduced Stress

Adding green space is an **intervention**

The above cycle resembles the wide variety of positive feedback loops responsible for poor mental health such as anxiety and depression.

sensory experiences

sensory trail - why, what, how?

To expose students to green interventions, a sensory trail is proposed in order to engageusers in **hands-on connections** with natural elements.

One of the greatest benefits to a sensory trail is that it can be **inexpensive and low maintenance.**

Top Left: Environmental Design students perform Fall maintenance on one of CU's pollinator gardens. This maintenance is required only a couple of times per year.
Bottom Left: Summer-blooming plants in a local Denver garden.

Benefits

Education + Critical thinking

Improved wayfinding

Make memories + Build connections

Stress relief + Restored attention span

Sense of belonging + Awe for nature

nature-based education

Using movable wooden pieces, students and staff have increased agency to arrange seating and play/exercise furniture. This "light-touch" approach to Fairview's design maintains access to natural elements and prioritizes sustainability.

indigenous knowledge

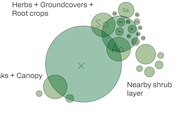
Through maintaining flexible gardening spaces, students and staff can learn the value of ecological biodiversity and community-based activity.

Education on Indigenous knowledge systems creates a further sense of appreciation and awe for our local ecology, as well as creating projects that students can use to nurture a sense of belonging.

Please see our complete plant list for more information on plant name abbreviations listed below.

Crop Rotation

Forest Farming



Intercropping

Marigolds act as a natural pest repellant for tomato and basil.

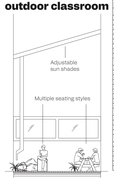
Pasqueflower *Pulsatilla patens*
medicinal, pollinator support, visual

Cover crops such as field peas and white clover improve soil nutrition.

collaboration spaces

Work and play spaces for a strong community

outdoor classroom



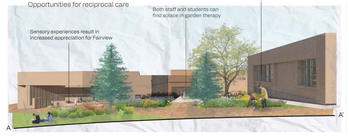
The planting plan shown below is intended as an example of plantings surrounding Fairview, please see our complete plant list for more information on vegetation selections for this site.

Number	Scientific Name	Common Name
	Sassafras Flowers and Grasses	
Ag	Agrostis nebulosa	Cloud
Ar	Aristida purpurea	Purple Threeawn
Bc	Bouteloua curtipendula	Sideoats Grama
Bd	Bouteloua dactyloides	Buffalo Grass
Bg	Bouteloua gracilis	Blue Grama
Cc	Carex cherokeensis	Cherokee Sedge
Cd	Carex duriuscula	Drought Sedge
Ch	Carex hoodii	Hood's Sedge
Ce	Carex eleocharis	Knox Whitetop
Cf	Carex filifolia	Threadleaf Sedge
Cm	Carex microchaeta	Mesa Sedge
Cp	Carex praegracilis	Clustered Field Sedge
Ea	Elymus arizonicus	Arizona Wildrye
Ec	Elymus canadensis	Canada Wildrye
Ef	Elymus elymoides	Bottlebrush Squirreltail
Hc	Hesperostipa comata	Common Needlegrass
Hn	Hesperostipa neomexicana	New Mexico Feathergrass
Hr	Hesperostipa curvula	Curly Needlegrass
Pa	Panicum virgatum	Switchgrass
Pc	Pascopyrum smithii	Western Wheatgrass
Pg	Piptochaetium pungens	Sleeper Oat
Sc	Schizachyrium scoparium	Little Bluestem
Sh	Sporobolus heterolepis	Prairie Sandreed
	Forbs	
Ac	Achillea millefolium	Yarrow
Ad	Agastache rupestris	Sunset Hyssop
Ag	Allium geyeri	Geyer Onion
Ap	Anemone patens var. multifida	Pasque Flower
Ar	Artemisia ludoviciana	Prairie Sagewort
Ba	Baptisia australis	False Indigo
Bp	Bouteloua parryi	Parry's Grama
Cc	Coreopsis lanceolata	Lance Coreopsis
Cg	Coreopsis grandiflora	Tickseed
Cm	Chamaecrista mexicana	Mexican Cassia
Dp	Dalea purpurea	Purple Prairie Clover
Ep	Echinacea purpurea	Purple Coneflower
Gb	Gaillardia aristata	Blanket Flower
Gl	Geum triflorum	Prairie Smoke
Hb	Helianthus maximiliani	Maximilian Sunflower
Hp	Helianthus pumilus	Stiff Sunflower
Lc	Liatris punctata	Dotted Blazing Star
Lp	Lupinus perennis	Wild Lupine
Mf	Monarda fistulosa	Wild Bergamot
Pb	Penstemon barbatus	Beard Tongue
Pm	Penstemon strictus	Rocky Mountain Penstemon
Pp	Penstemon pseudospectabilis	Desert Penstemon
Rm	Ratibida columnifera	Mexican Hat
Sc	Symphyotrichum ericoides	Heath Aster
Sl	Symphyotrichum laeve	Smooth Aster
Sr	Symphyotrichum oblongifolium	Aromatic Aster
Tc	Tradescantia ohiensis	Ohio Spiderwort
Tr	Thermopsis rhombifolia	Prairie False Lupine
	Shrubs	
Ac	Amorpha canescens	Leadplant
Ch	Chamaebatiaria millefolium	Fernbush
Cm	Cercocarpus montanus	Mountain Mahogany
Ff	Fallugia paradoxa	Apache Plume
Rg	Rhus trilobata var. trilobata	Skunkbush Sumac
Rt	Rosa woodsii var. ultramontana	Wildrose Rosebush

planting plan

garden therapy

Opportunities for reciprocal care



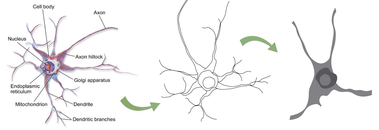
pathway design

Pathway design is inspired by the theme of improving mental health.

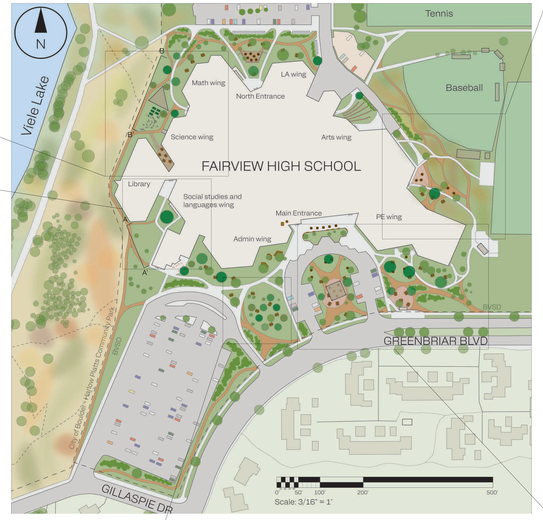
Neural networks are responsible for communication between brain cells, sending signals in response to **sensory input.**

Our sensory trail is abstracted from connecting axons in the cerebral cortex, making Fairview students the serotonin traveling from neuron to neuron.

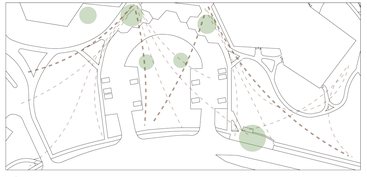
To the right, diagrams display the abstraction and implementation of this neural network.



proposed site plan



A calming grove placed in front of the school doubles as a food forest. Calm areas are placed along the sensory trail in consideration of those that suffer from over-stimulation and trauma-induced stress.



Available Seating

Desire Lines observed through student circulation

Students and staff have a strong desire for increased seating, shade, and wayfinding surrounding Fairview. Our proposed design responds to these desires by considering student circulation throughout the schoolyard.

sensory trail plan and perspective sketches

The East side of Fairview provides an opportunity to create increased awe and appreciation for the site.

Garden beds, grading changes, and raw materials are combined to contrast the building's infamous brutalist aesthetic while managing stormwater and creating areas where students can have fun!

This portion of our path system is ADA accesible, but is also available for biking and skating.

visual puzzles

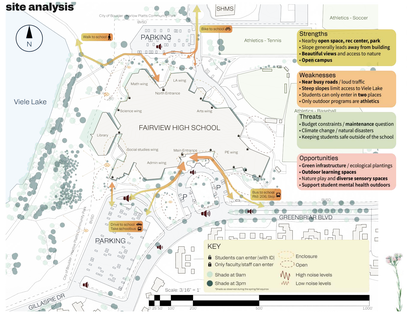
Proposed in this design is a set of visual puzzles intended to provoke students and staff to think more critically about their environment.

Visual cues have been paired with a wing of the school and can be placed on signs or rocks along our path in order to serve as wayfinding elements and mechanisms for "mental accomodation"; events in which a user makes a new realization about their environment, increasing sense of awe and belonging to one's surroundings.

Sensory Trail

Seating opportunities are increased through the placement of raw materials and picnic benches. Increased seating and gathering areas reduce hierarchy and social anxiety in large student groups.

site analysis



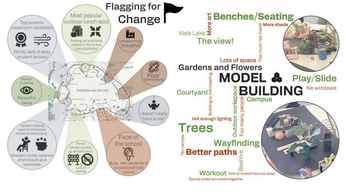
community engagement

In multiple rounds of community engagement, we gained a better understanding from Fairview students and staff as to what they value most in their school environment.

In a flag placement activity, students walked around the school marking important features and changes they'd like to see made.

In a model building exercise, students created abstract representations of desired changes and considerations to be made by our design team.

Students and staff care most about **seating, circulation, and enjoying their surroundings!**


Flagging for Change
Most popular outdoor lunch area
Viele Lake
The view!
Benches/Seating
More shade
Lots of space
Gardens and Flowers
MODEL BUILDING
Campus
Play/Slide
No windows
Courtyard
Not enough lighting
Trees
Wayfinding
Better paths
Workout
Face of the school
Doesn't reach students
Trash
Recycling
Compost
Bathroom
Outdoor learning space
Food forest
Sensory area
Wayfinding
Outdoor classroom
Pollinator garden
Seating
Shade structure
Bike parking
Bike repair station
Water fountain