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Housekeeping details

- Treaty 6 acknowledgement
- If you have a question or an answer to one of my questions, please type it into the chat
- Please let me if there are audio or video issues ☺



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Brief introduction

- Front yard food forest (2011)
- Beekeeper (2014)
- Master Composter Recycler (2015)
- Sunshine Garden Coordinator (2018)
- Chicken wrangler (2017-2019)



- Biological Sciences instructor at NAIT (2004)
- Physics Chair (2018)
- Starting a doctorate in Educational Leadership at Western University in Sept

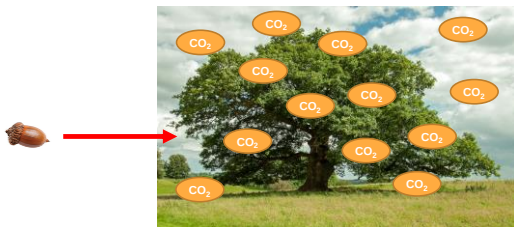
jocelyncrocker@gmail.com

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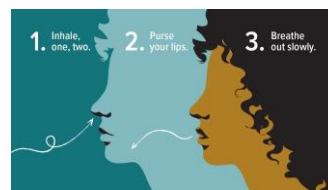
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Where do plants get the building blocks (molecules) they need to grow?



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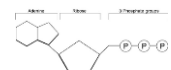
Why do we need oxygen to live?



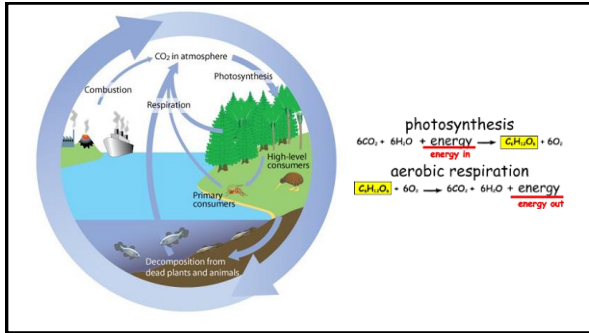
Glucose (from food) + Oxygen

mitochondria is the powerhouse of the cell

ATP (cellular energy)



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Home Gardening Carbon Cycle

Photosynthesis – carbon capture by plants from photosynthesis

Decomposition – carbon release by decomposers (worms, fungi, bacteria)



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Home Gardening Carbon Cycle: Activities to decrease carbon output

- Compost/leave as much of your organics as you can
- Source or grow your plants as close to home as possible
- Prioritize hand-powered tools



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Composting methods

Bin composting (outdoors)



Leaf mold piles (outdoors)



Vermicomposting (indoors)



Chipping/mulching (outdoors)



Grasscycling (outdoors)



Bokashi composting (indoors)



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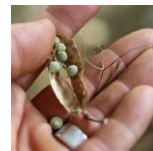
SHORTEN YOUR FOOD CHAIN



The same ideas apply to sourcing your plants AND dealing with yard waste!



Seed saving



Save seeds from your best plants (but wait until fruit is fully ripe!)



Ensure seeds are fully dried



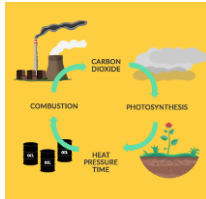
Place in labelled envelopes & store in cool, dark place

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Burning vs throwing away yard waste

Fossil fuels = long term carbon capture



Yard waste = short term carbon capture

- Choose your own carbonventure:
- Composted at home (CO_2)
 - Burned (CO_2)
 - Trucked to composting facility ($\text{CO}_2 + \text{CO}_2$)
 - Trucked to landfill (CO_2 , methane)

Ideally burn for a reason (heat, cooking)

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Prioritize hand-powered tools (if you can)



Hand-powered



Electrical (coal-powered)



Gas-powered

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Type in the chat: what are other methods you've used to reduce your carbon output?



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Home Gardening Carbon Cycle: Activities to increase carbon capture

- Grow! Grow! Grow!
- Nurture your soil
- Create biodiverse yards
- Support pollinators



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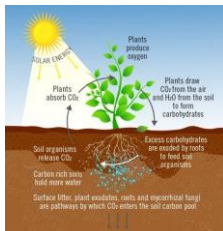
Nurture your soil microbes & fungi

Prevent compaction

Amend/feed the soil with minerals, nutrients, organics, inorganics

Mulch to retain moisture

Rotate crops



Disrupt the soil as little as possible (avoid rototilling, vigorous digging)

Avoid acid/base extremes

Avoid pesticides & herbicides

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Building biodiversity in your yard

Choose native plants



Choose perennials over annuals



Grow food instead of lawns



Support pollinators



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Supporting (native) pollinators

Embrace dandelions



Order mason bees



Plan blooms for the whole season



Install pollinator habitat



Bee-come a beek



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Grow your own or buy local food

Visit a farmers' market



Join a community garden



Grow your own or source local seedlings



Support restaurants that use local food



Keep bees and/or chickens



Grow food instead of lawns



Support or join community-Supported Agriculture (CSA) initiatives



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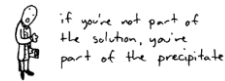
Type in the chat: what are other methods you've used to increase carbon capture?



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Caveats & Conclusions

- There is no single 'answer' (...except 42)
- Local food can be a privilege and is thus inaccessible to some
- Simple, individual actions have multiple, widespread benefits
- Local food nurtures communities, communities nurture local food, and this nurtures all of us



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Community-Building Resources

- [Alberta Native Plant Council](#)
- [Alberta Native Bee Council](#)
- [City of Edmonton Beekeeping Guidelines](#)
- [City of Edmonton Hen Guidelines](#)
- [City of Edmonton Master Composter Recyclers](#)
- [Operation Fruit Rescue Edmonton](#)
- [Edmonton Permaculture Guild](#)
- [Edmonton local food map](#)
- [Find a nearby CSA](#)
- [Find a Community Garden](#)
- [Find a nearby farmers' market](#)
- [Edmonton Seedy Sunday](#)
- [Edmonton Native Plant Society](#)

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