CLIMATE CRUMBS

HOW TO TALK ABOUT CLIMATE WHEN GROWING (CCG)

The cells in grey are potential discussion questions that can be raised during each stage of your growing sessions. We have additional activities included in some sections that can be used to expand on discussions on climate action.
Accompanying this document is the companion sheet: '*How to talk about climate when cooking'*, a fact sheet with key climate beliefs and an appendix with additional activities.

	Before (a)	**During (b)**	**After (c)**
Going outside (1)	What do you expect to see? What is needed for growing?	What is the quality of the air? How many trees/plants? What types? What litter is there? What insects can you see? Is there light/shade/shelter/water? Where do you think is good for growing? Why?	Any differences from what you expected? What did you notice? How has what you've seen differ from last week/last month/last year/last decade? How do you think things will grow in different areas?
	Activity: What do plants need to grow? Sunlight, water, ground, shelter, correct temperature. Try growing the same type of plant e.g. cress, missing some of these (in a dark cupboard, on a radiator, no water, etc). Do they grow? What if they have too much of one thing or another? *Links to climate change, increased rainfall, wind, droughts, heatwaves etc*	**Activity: What is outside?** Close your eyes and listen - what can you hear/feel? What is human-made, what is 'natural'? What effect do humans have on our outside space? Draw a map of the sounds you can hear. *Links to human effect on the environment.*	**Activity: How have things changed?** How does what you see differ to what the adults in your family would have seen? What about their parents? Look at old maps/photos of the area, collect stories from community members, compare then and now. *Links to habitat destruction, loss of pollinators (insects), fewer birds, more cars, poorer air quality.*

Selecting plants/seeds (2)	What plants grow in our area/town/country? What did we used to grow and what has changed? What do we eat and where does it come from? Can we grow it? How and why do we save seeds? Is it easier to grow from seeds or seedlings?		
	Activity: What grows near us? Look at what people have growing near them, edible and inedible (remember that flowers are excellent for pollinators too!). Look at what grows in Glasgow, Scotland, UK, Europe. Create a map of things grown in the area OR look at supermarket fruit and veg packaging and map where everything is grown. *Links to carbon footprint, food miles.*	**Activity: What makes a healthy seed?** Find out whether your seeds are "viable" (likely to grow successfully) or not. Put seeds (medium to large sized) into a jar of water. Viable seeds will sink, dead seeds float. Seeds can fail because they were not fertile or fully developed, they are defective. They may have been stored too long or damaged by fungal or insect attack. *Links to lack of pollinators (pesticide use/habitat destruction), unpredictable weather (spoiling seeds before safe storage)*	
Digging (3)	What is soil? What makes healthy ground? Where does soil come from? What kind of planting works for us? (In ground, raised beds, no dig etc)	What types of soil do we have? What lives in the soil, and are all those living things useful?	What did we see? What can we do to make the soil better?
	Activity: Does soil store carbon? Think about what "life" is made of - things on earth are carbon-based. Plants take in carbon dioxide from the air, then when they	**Activity: What is your soil like?** Soil testing by feel: https://www.the-compost-gardener.com/soil-texture-testing.html	**Activity: Soil food web** What things live in the soil (what did we see/have heard of - https://en.wikipedia.org/wiki/Soil_food_web

	die and rot into the ground their carbon gets held in the soil or washed further down into the earth. How is this cycle interrupted if we remove the whole plant? Or dig deep into the soil? *Links to carbon cycle, carbon capture, no-dig agriculture*	OR What living things are in your soil? Dig a small hole in the ground and observe for 5 minutes. Do you see any insects? Worms? Mites? Try in a few different places. What are the differences? *Links to biodiversity, human impact on soil health and therefore plant/human health*	#/media/File:Soil_food_webUSDA.jpg)? Connect them with bits of string based on what needs what to survive. What happens when you get rid of one of the elements of the web? How does climate impact on those elements? *Links to biodiversity, food webs.*
Watering (4)	Where does our water come from? Is tap water "pure"/what does water contain? What is needed for plants?	When should we water and why? Does it matter what water we use? Should we save water?	How can we improve water for our gardens? Do we save rain water? Should we? What are good ways of storing water in our outdoor spaces?
	Activity: Isn't rain water enough? Think about where we get our water from. What would happen there was too much or too little rain? When does our rain fall, and does it match up with when plants need the water? Look at weather data and match up with your knowledge of growing. *Links to water cycle, water saving and severe weather*	**Activity: How quickly can your soil absorb water?** Dry soil won't absorb water as quickly as damp soil! Get a small plastic tube, push half-way into the ground and fill with water. Time how long it takes for the water to drain into the soil. *Links to why droughts are followed by flash flooding (extreme weather)*	**Activity: How would you save water?** Invent (either with drawings, models, or just by telling) how you make the best use of rain water for growing. *Links to water saving, innovation, future technologies*
Picking and harvesting (5)	What time of year do we associate with different foods? (e.g. halloween = pumpkins, summer = strawberries) What do we mean by seasonal fruit and veg? Do we need to pick ALL the produce?	What can be saved, what needs to be picked, what can be left on the plant?	What went well with your growing season? What would you like to change? What is needed to prepare the ground for next season? Which plants regrow? Is the soil healthy? Are there other things we can do to improve on this year's growing?

	Activity: What is in season? Create a calendar of fruit and veg we associate with different times of the year. Does this match up with what we can grow? Look at what is growing well, what isn't yet ripe, but also what is in the shops. *Links to shorter supply chains, lower carbon footprint.*		