



Demeter Project

[Our Pathway](#)

TastEd



Practice Title: *TastEd and Maths on a farm*

Country: *UK*

School: *Washingborough Academy*

Grade: *Age 6 to 11*

Teachers: *Louise Foster, Beth Street and Katie Cropper*

Testing Period: *April 2021 to June 2021*

We would like to explore elements of TastEd and Maths on a Farm along side each other to encourage co-operation in order to develop the children's well-being and exercise.

Focus: *Co-operation, well-being and exercise joining TastEd and Maths on a Farm.*

We started with the Agenda 2030 (Goal 4 - Quality Education and Goal 12 - Sustainable consumption and production). This led us to think about the School Subjects and we would mainly cover Literacy, Maths (Measures), Science and PHSE. Co-operation and Critical Thinking will also be important (Transdisciplinary goals) which would lead to Literacy and Mathematical competencies being a focus too.

Who is taking part?



During this project, we will be involving children from Year 1 (aged 5) to Year 6 (aged 11) to provide a full spectrum of how these strategies support and develop children's well-being, health and learning.

Learning Outcomes



Science

- *To describe the importance for humans to get the right nutrition from what they eat*
 - *To recognise the impact of diet, exercise and lifestyle on the way their bodies function*
 - *To plant our own crops (micro herbs) and ensure that they have the essentials to grow*
-

PHSE

- *To co-operate with others*
 - *To encourage children to eat more fresh food, improving health and well-being*
-

Literacy

-
- *To use appropriate language to make predictions, record observations and discuss results/conclusions*
 - *To use high quality vocabulary to describe senses (taste, smell, sight, touch, hear) and compare different micro herbs*
-

Maths

-
- *Measure and record the height of the micro herbs*
 - *Measure and record the amount of water used*
 - *Interpret and construct block diagram (KS1), bar chart (LKS2) and line graph (UKS2) to show the height of the herbs over time*
 - *Look at the data and make comparisons from the graphs regarding growth and taste*
-

Geography

-
- *To identify and locate the countries on a map of the world and Europe*
 - *To identify and locate the capital cities of the countries*
-

What is our outcome?



-
- *To be more confident in making healthy choices.*
 - *To understand the impact of eating healthily.*
 - *To learn a new way of growing fresh crops.*
 - *To learn about a variety of micro herbs.*
-

Overall: *We would like to encourage the children to eat more fresh food, improving health and well-being as well as discovering a new way to grow delicious crops.*

Our Journey



Lesson 1 - First impression

WHAT
DO
YOU
THiNK?



Before we introduced our project, we asked all of the children to complete their first impression sheet.

KS1: First impressions



27. April 2021

Demeter Project - First thoughts

Draw here: What does a farmer look like?



Write here: What does a farmer do?

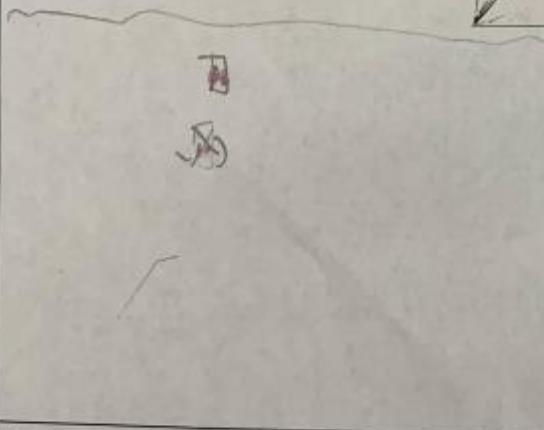
Plant seeds.

look after the soil.

Plant flowers.

look after animals.

Hydroponics - Draw or write here what you think this is



Write here: What does a plant need to grow?

soil.

seed.

water.

tempercher.

Draw or write here: How do we get food on our plate?

pick inn



TastEd



27. April 2021

Demeter Project - First thoughts

Draw here: What does a farmer look like?



Write here: What does a farmer do?

Gather the care of plants.

Gather the care of

animals.

Hydroponics - Draw or write here
what you think this is



Write here: What does a plant need
to grow?

Water Sun and soil

and time.

Draw or write here: How do we get food on our plate?

Plants

Plants



2 - KS1 also thought about what plants needed to grow.



27- April 2021

Demeter Project - First thoughts

Draw here: What does a farmer look like?



Write here: What does a farmer do?

He plants vegetables
and chops with a
tractor.

Hydroponics - Draw or write here
what you think this is



Write here: What does a plant need
to grow?

soil water are
and
sun light.

Draw or write here: How do we get food on our plate?





27- April 2021

Demeter Project - First thoughts

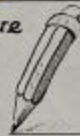
Draw here: What does a farmer look like?



Write here: What does a farmer do?

a Farmer
plants good
and they
look after
animals,

Hydroponics - Draw or write here
what you think this is



Write here: What does a plant need
to grow?

water sun
and the
it lemp it ch
late ure.

Draw or write here: How do we get food on our plate?

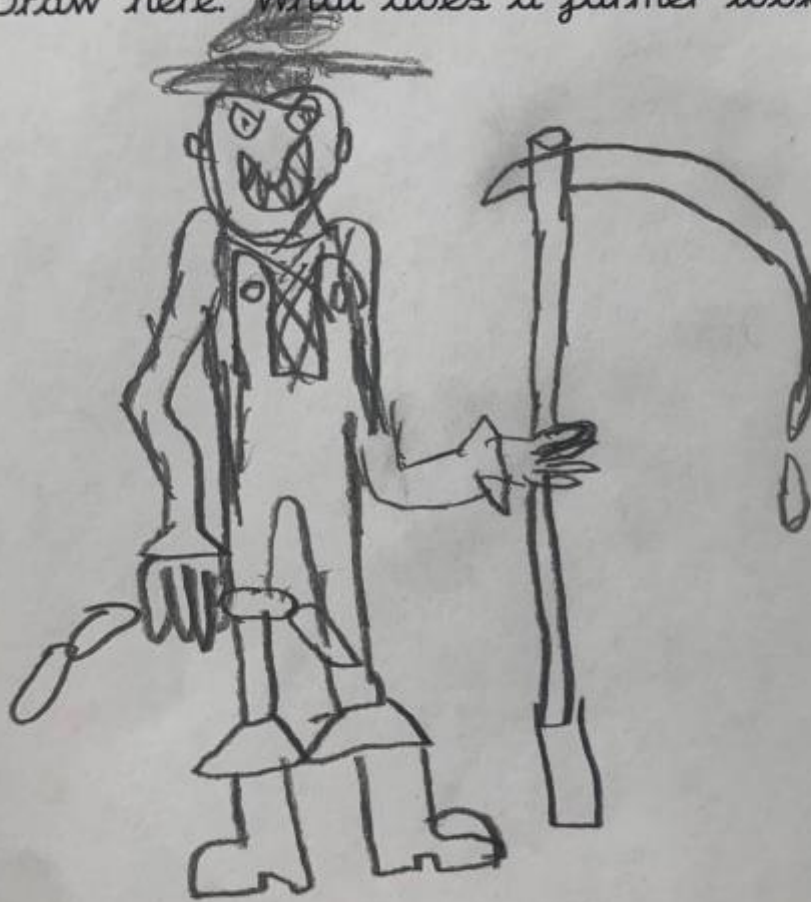


lasted



Demeter Project - First thoughts

Draw here: What does a farmer look like?



Hydroponics - Draw or write here
what you think this is

5 - In the first lesson, LKS2 thought about our impressions of farmers. We drew a picture to show what we thought farmers looked like and we wrote about what we thought they did.



6 - We enjoyed sharing our thoughts about farmers with our friends. We then learnt about hydroponics.

Hydroponics comes from Latin words. 'Hydro' means water and 'ponos' means labour.

Next, we planted our first set of micro herbs.

-
- "A farmer is a person who looks after animals."
 - "I know a farmer harvests crops and food for us to buy from the shop."
 - "A farmer grows plants and apple trees."
 - "They grow vegetables or raise animals."
-



22- April 2021

Demeter Project - First thoughts

Draw here: What does a farmer look like?

Overalls, wellingtons, hat and a hair bobble.



Female or male

Write here: What does a farmer do?

A farmer help with getting food with animals. Harvesting fruit and vegetables for everyone.

Hydroponics - Draw or write here what you think this is

I think hydroponics is something which helps plants grow.



Write here: What does a plant need to grow?

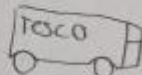
They need dirt, seeds, water, sun and maybe plant food. Maybe some horse manure.

Draw or write here: How do we get food on our plate?

harvest



Sold!

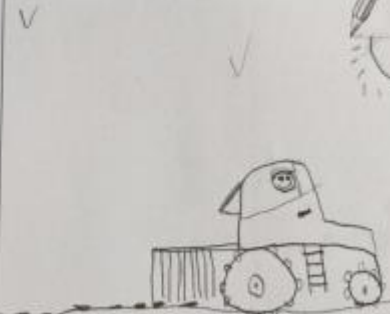


Eat!



Demeter Project - First thoughts

Draw here: What does a farmer look like?



Write here: What does a farmer do?

Farmers grow many crops
to feed humans and
get some animals on
the farm they will
plant using a tractor
then use a harvester
to harvest.

Hydroponics - Draw or write here
what you think this is



Write here: What does a plant need
to grow?

get started is we plant
it using a seed
and they need
sun and water from
rain or the sprinkler

Draw or write here: How do we get food on our plate?



Demeter Project - First thoughts

Draw here: What does a farmer look like?

normal person!



Write here: What does a farmer do?

A farmer either looks after crops until they are ready to pick or they look after animals for dairy or meat.

Hydroponics - Draw or write here what you think this is

I think it is a machine that grows plants electrically

Write here: What does a plant need to grow?

A plant needs light water and a good space to grow.

Draw or write here: How do we get food on our plate?



Demeter Project - First thoughts

Draw here: What does a farmer look like?



Write here: What does a farmer do?

A farmer grows crops
and then harvests them after
months and sometimes years

Hydroponics - Draw or write here
what you think this is



Write here: What does a plant need
to grow?

Sunlight, Soil and water

Draw or write here: How do we get food on our plate?



Demeter Project - First thoughts

Draw here: What does a farmer look like?



Write here: What does a farmer do?

A farmer plants and grows vegetables and raises animals until they have to become meat.

Hydroponics - Draw or write here what you think this is



Write here: What does a plant need to grow?

water, soil or manure and water

Draw or write here: How do we get food on our plate?

cook, prepare and serve.

Demeter Project - First thoughts

Draw here: What does a farmer look like?



Write here: What does a farmer do?

They make food and plants
them and pick them and
look after animals

Hydroponics - Draw or write here
what you think this is



Write here: What does a plant need
to grow?

water and the sun for
photosynthesis.

Draw or write here: How do we get food on our plate?







The children already thought about farmers and hydroponics. We then learnt about the hydroponics farms in London, underground.



We then planted the seeds for our first set of micro herbs.



13 - Planting their seeds.



14 - Planting their seeds.



15 - Planting their seeds.



16 - Planting their seeds.



17 - Planting their seeds.

Lesson 2 - Making comparisons



We watched our 'Farmer Time' videos and compared different types of farmers, the crops they grow and the machinery they use. We also learned about hydroponic farming, what this means and what its benefits are.

<https://www.youtube.com/watch?v=uKGZp5ftpoE>



<https://sway.office.com/nBthiljFFbHtFNKi#content=qZMiYglATTvZcq>

18 - One of our videos from our farmers.



<https://sway.office.com/nBthIjFFbHtFNKi#content=mKQsrcMvzUuFpl>

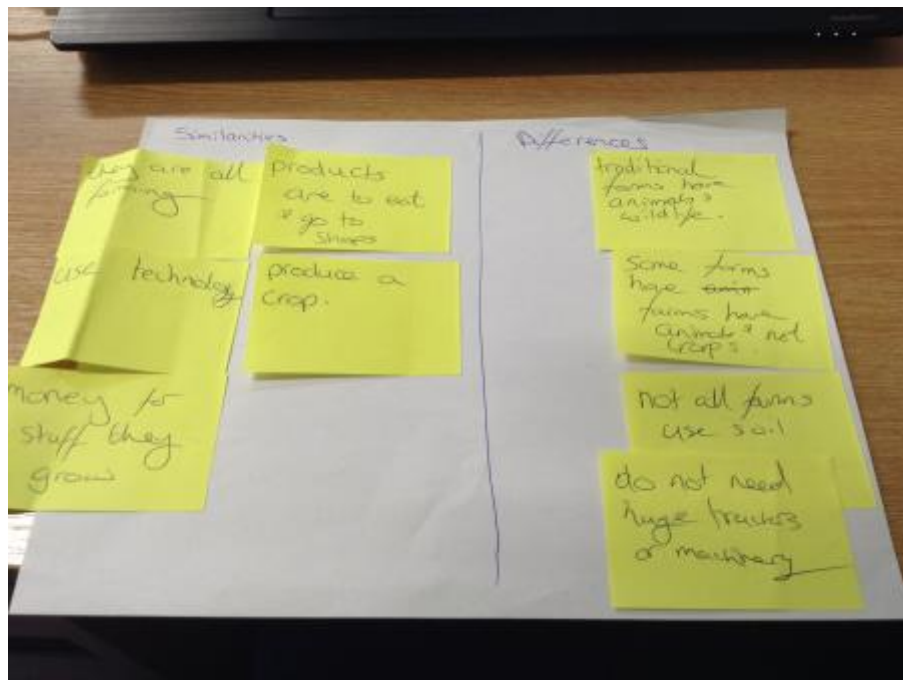
19 - Our second video from our farmers.



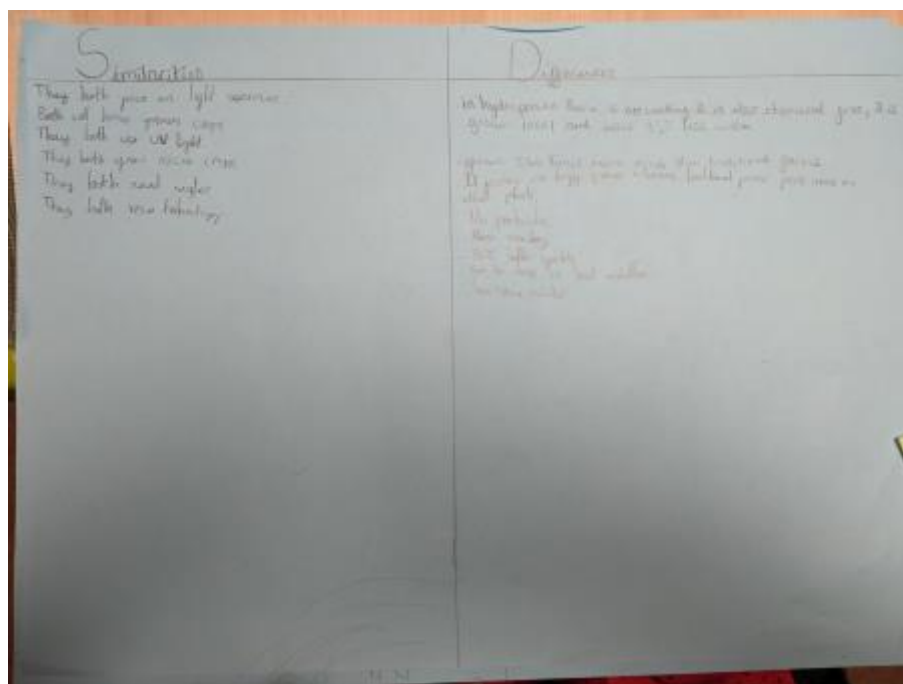
20 - KS1 children working in groups to compare traditional farming to hydroponic farming.



21 - KS1 children working in groups to compare traditional farming to hydroponic farming.



22 - LKS2 comparisons.

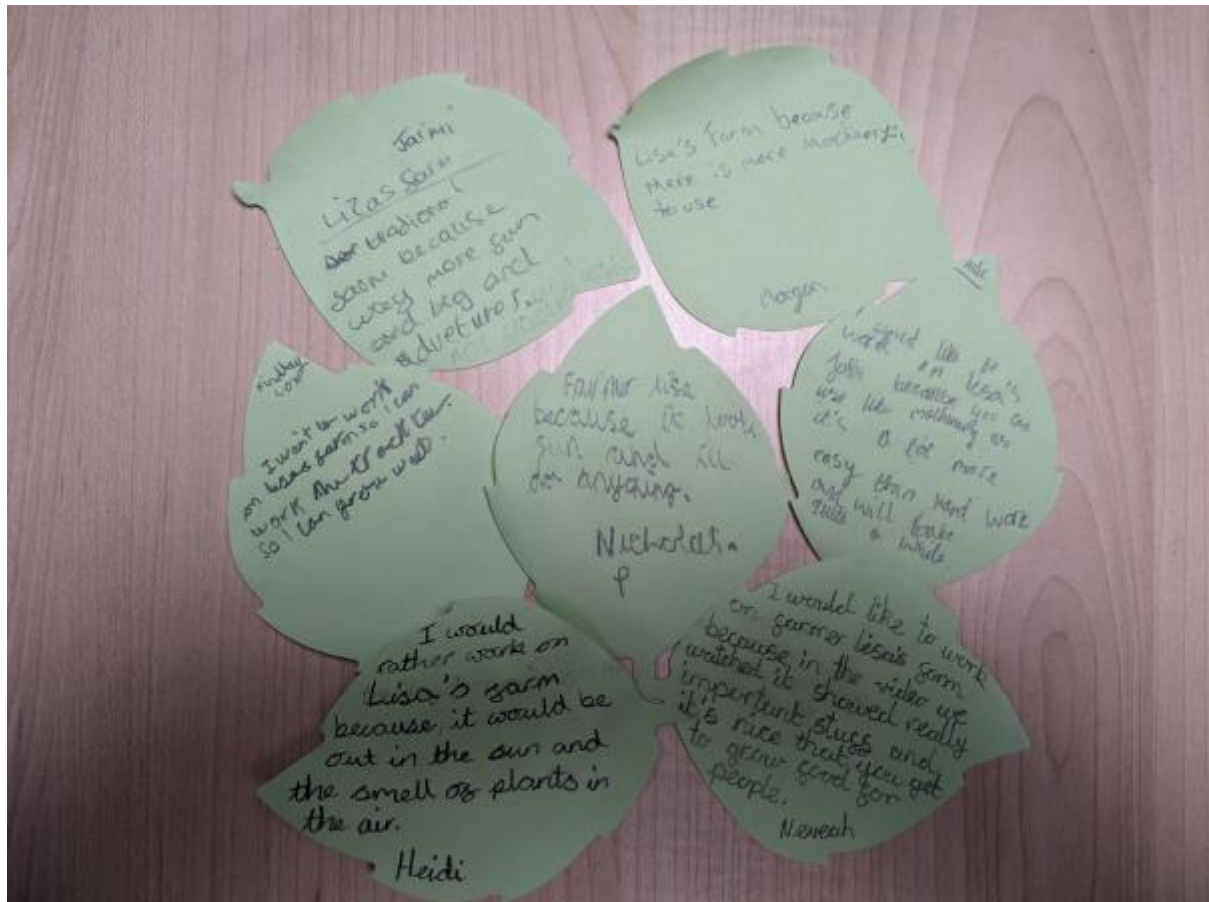


23 - UKS2 made comparisons too.

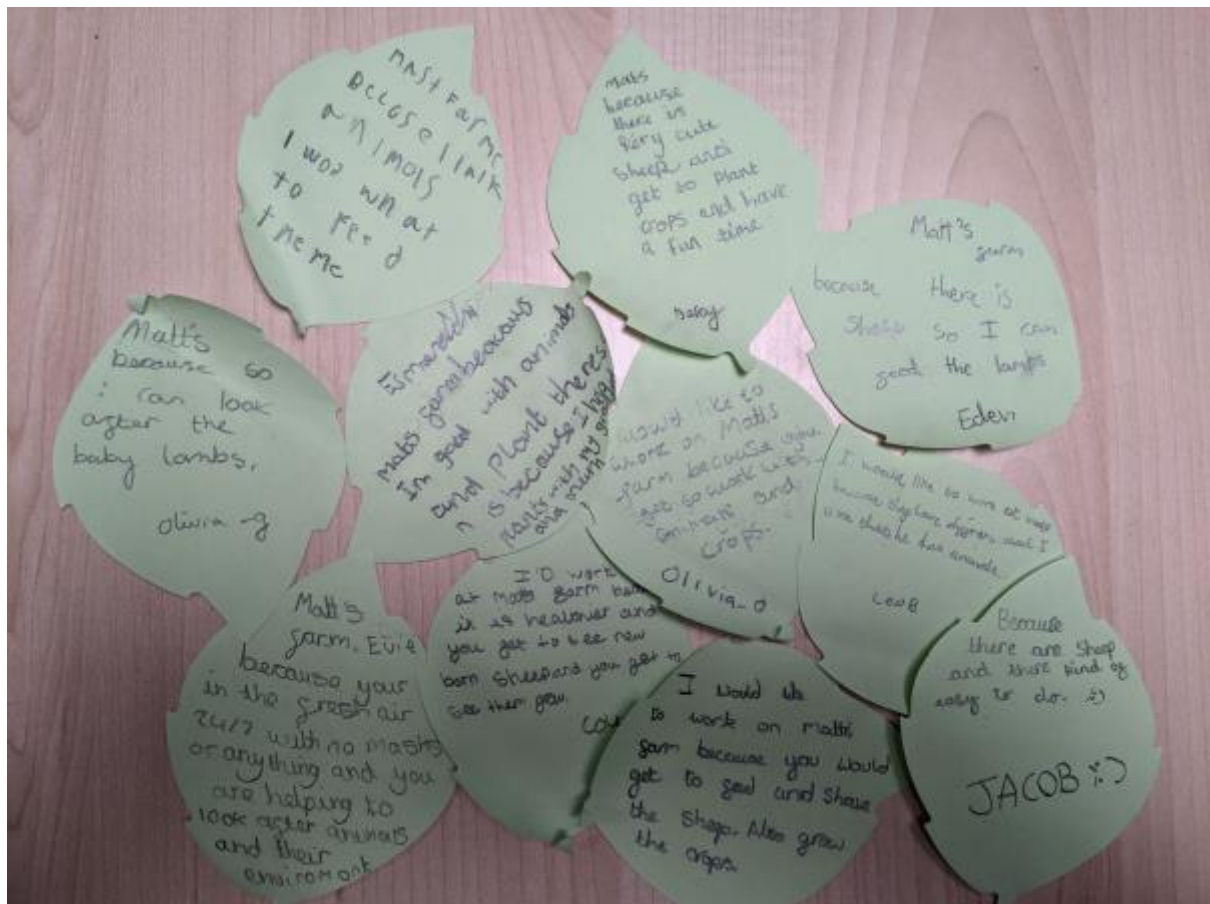
"I would like to work on the micro herb farm because it's easy."

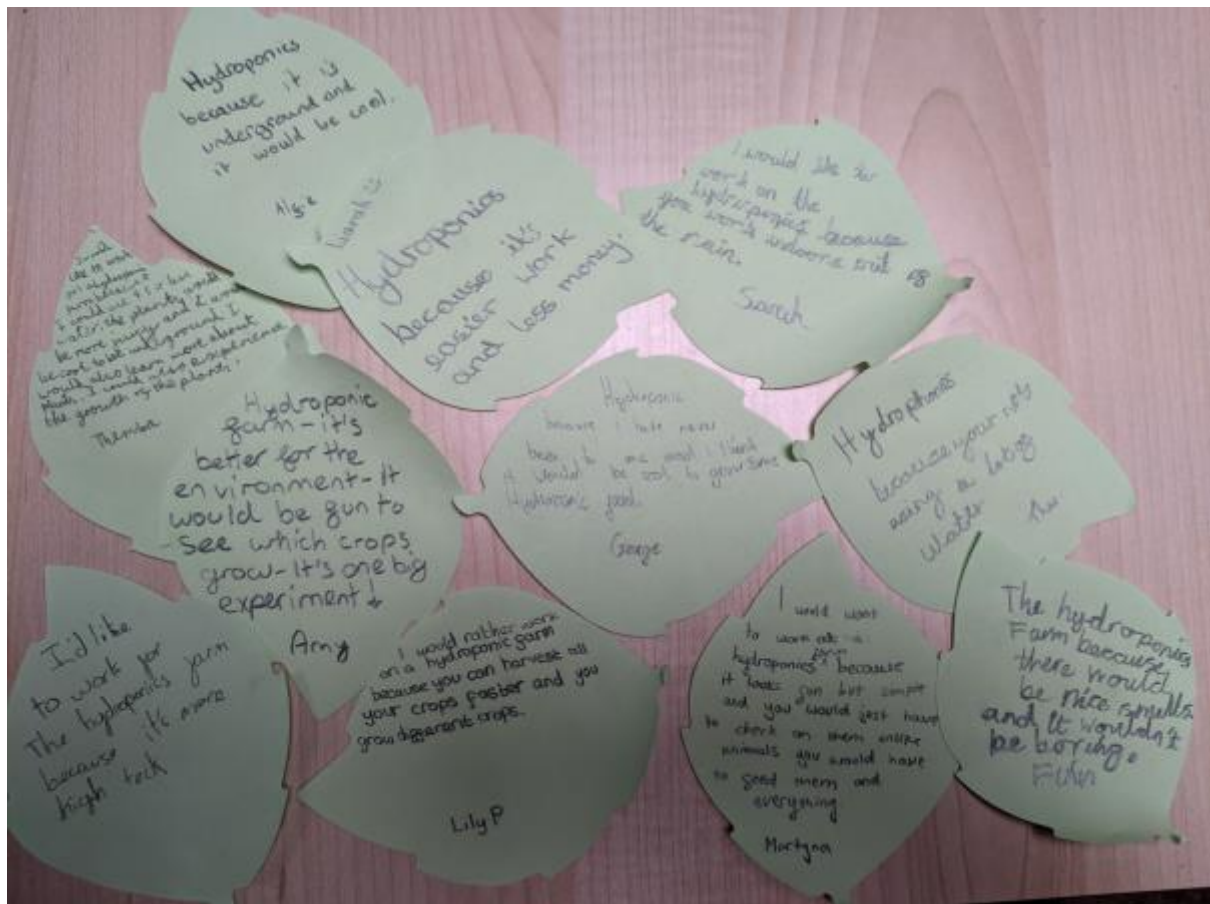
"I would be in the underground one because it is a whole new way of farming with technology."

"Micro herbs because it looks interesting."



26 - UKS2: Farmer Lisa at Goosemeadow farm.





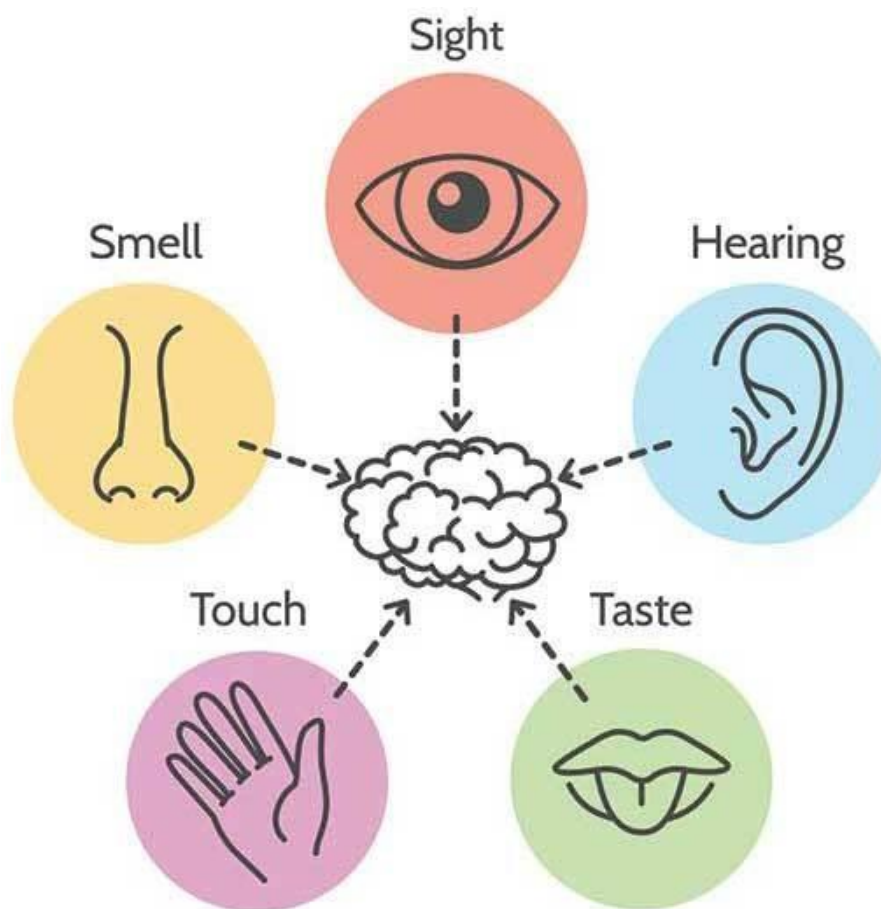
28 - UKS2: A Hydroponic farm



<https://sway.office.com/nBthijFFbHtFNKi#content=WwW0uuQHVZjN3d>

29 - Would you rather work on a hydroponic farm or a traditional farm? Why?

Lesson 3 to 5 - Using our senses



Key Stage 1 TastEd sessions





Sight: "little trees"

Touch: "soft and wet and fluffy"

Smell: "eggs and grass"

Hear: "swishy"

Taste: "radish and grass"







Sight: "it looks like little flowers"

Smell: "fresh"

Touch: "soft"

Hear: "crunchy"

Taste: "bitter"

Lower Key Stage 2 TastEd sessions

During this lesson, we checked the growth of our first micro herb and used our senses to explore it.

Mulberry had grown Radish Sangria and Sycamore had grown Amaranth Red Army.











30 - Radish Sangria



31 - Amaranth Red Army



Hear: "Silence" "Like the wind passing by" "I hear whoosh."

Smell: "Like pages from a new book." "Like wet grass on a Winter's day." "Like a wet field."

*Touch: "Stem feels like an elastic band." "Feels waxy and smooth." "Leaves are as smooth as silk."
"Leaves feel like wet grass."*

Taste: "Divine" "Spicy and tangy" "Fiery" "Like pepper"

"It tastes like spinach." "Like herbs on a salad." "Minty grass" "Grassy and dry"

Mulberry explored Mustard Frills.



Sight: "Stem is like silk from a spider's web" "Together it looks like a bouquet" "Old emerald green grass" "Leaves are in the shape of mini love hearts"

Touch: "Potato skins – squelchy and oozy" "Fresh wet grass" "Like a rubber band" "Leaves are dry and rough"

Smell: "Rotten old broccoli" "Left over banana skin"

Hear: "Thin air" "Teeth chattering"

Taste: "Spicy potatoes" "Zesty" "Raw potatoes after being washed" "Cold wraps from fajitas"

Sycamore explored Micro-Leaf Spilanthes which are also known as the "Toothache Plant"









Sight: "Emerald green" "A clover" "Wet like cress"

Smell: "Fresh green peas" "Fresh plants" "Minty and strong"

Touch: "Thick string" "Petals of plants" "As soft as my carpet"

Hear: "Rough sounds of the seaside" "Rustling noises" "Shaking and a snap"

Taste: "Mint ice cream" "Peaches" "Like onion and garlic"

Mulberry explored Lemon Basil and used their senses.



Sight: "Green as a lush tree" "Like a pea green helicopter" "Like sticky weeds" "Like a clover" "Stem looks like seaweed" "Rubber leaves split in half" "Like emerald green, luscious grass"

Hear: "Waterfall" "As silent as a secret room" "Like burnt pasta" "Salt hitting the pan" "Hail pattering down on my tongue"

Taste: "Sour lemon" "More basil than lemon" "Minty and fresh" "As minty as a fresh packet of chewing gum" "Bitter"

Touch: "Like my teddy as it came out of the wash" "Like rubber" "Damp" "Weeds in the garden" "Thin air" "Soft as butter"

Smell: "Fresh lemon from the shop" "Onions like from a farm" "Like wet grass after a rainstorm" "Lime juice" "Smells like wet lemon grass" "Zesty lemon" "Basil"

Sycamore explored Broccoli and used their senses.











Sight: "dark green and like vines" "clumpy grass" "lime green clovers" "like the farm grass" "emerald green leaves"

Smell: "like broccoli" "like a wet dog" "very strong" "like plants in the polytunnel" "like overcooked eggs" "like a damp farm"

Touch: "smooth, wet and silky" "bumpy" "as soft as my shampoo" "sticky" "as wet as the sea" "slimy"

Hear: "wind howling" "waves" "silent and a bit of a rumble"

Taste: "like broccoli" "old grass" "wet and salty" "like onions"

Upper Key Stage 2 TastEd sessions







*We did it! We grew micro herbs without any soil. Using our senses, we tasted 'micro green broccoli'.
We used our senses before tasting it and we described each one.*

Sight - stem like seaweed

Smell - zesty lemon and weeds in the garden

Touch - damp rubber

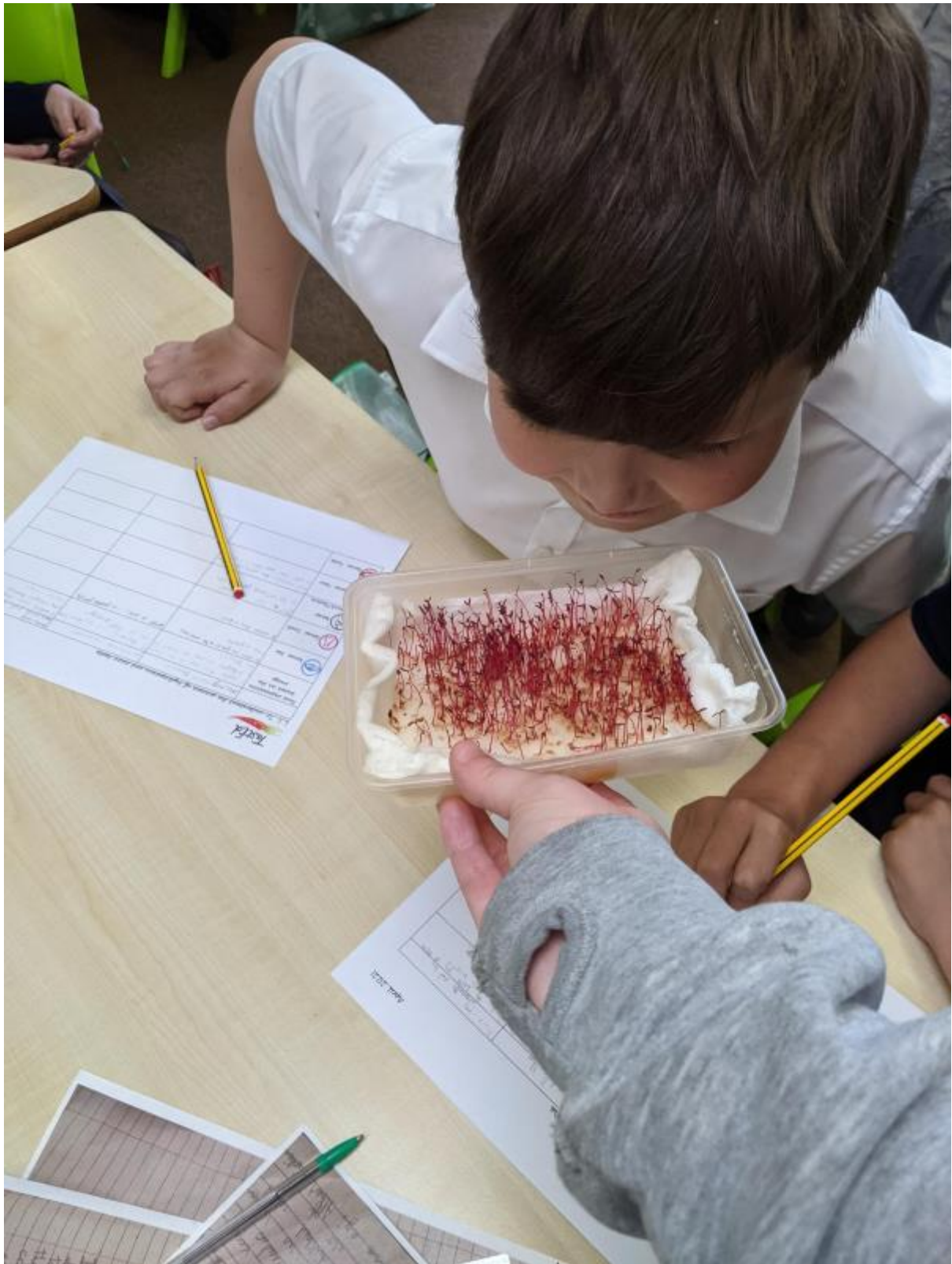
Hear - as silent as a secret room

Taste - sour lemon and minty and fresh









We have grown 2 more herbs. Red amaranth army and basil dark opal.

Sight - Like a spindly web

Touch - Silky smooth needle

Hear - Crunch of autumn leaves

Taste - Pulls apart with hero force as it releases the taste of everything & nothing at the same time

Smell: Enticing fairy tale of sugar & spice











Our final 2 herbs that we grew using the hydroponic method were spilanthes (toothache plant) and coriander.

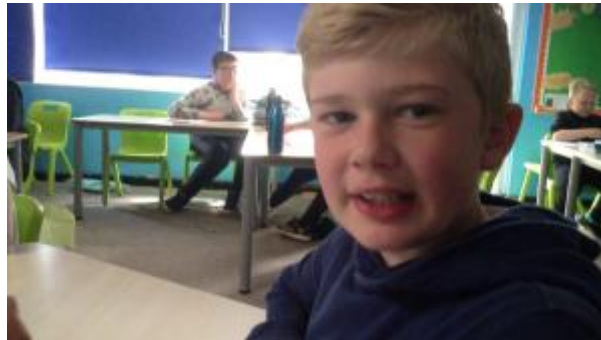
Sight: Looks like emerald green baby sea weed coming out of the ocean depths.

Smell: Like a mint leaf.

Touch: It feels like the soft rapeseed off of a river on a freezing day.

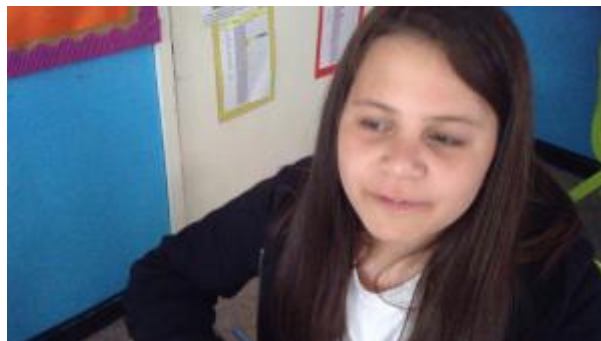
Hear: I can hear the wave from the ocean quickly going onto the sand.

Taste: Piercing flavour that speers the tongue. Floods the mouth with a flavour that could life a car.



<https://sway.office.com/nBthljFFbHtFNKi#content=yNL49RWREpazsq>

32 - Tasting the micro herbs



<https://sway.office.com/nBthljFFbHtFNKi#content=EBKXmVeBLo2dRv>

33 - Tasting the micro herbs

Our working document senses sheet - Documentation collected








27. April 2021

TastEd

1.1. To understand the process of hydroponics and micro herbs

| | half red Russian | radish sorrel | goat cheese |
|--------------------------------------|-----------------------------------|--|---|
| First impressions based on the image | beetroot splitch | | |
| Sense: See | cabbage beetroot splurge glass | rain forest, hole, incredibly, radish | tree rising above vines jungle |
| Sense: Smell | good delish Bad | beetroot peppers cabbage radish | cucumber class fresh tooth past |
| Sense: Touch/Texture | smooth hard | rubbery smooth wet radish | rubbery unbreakable Rugs Flexible Wet |
| Sense: Hear | crunchy loud | crunch loud | loud crunchy |
| Sense: Taste | crunchy good delish Bad | not peppery good boring slather wet | delectable bad spicy good |






L.F. To understand the process of hydroponics and micro herbs

| | | | |
|--|--|--|----------------------------|
| First impressions based on the image | Bamboo It will grow into lots of green leaves really green | tooth ache a forest ants a forest son ants | curled leaf I it's lots |
|  Sense: See | | | |
|  Sense: Smell | dirt soil | nothing wks | grass |
|  Sense: Touch/Texture | wet leaves soft | soft and leasy | soft |
|  Sense: Hear | swishing | crunchy | crunchy |
|  Sense: Taste | weeds | grass | yucky throw |






22 April 2021

TastEd






1.1. To understand the process of photosynthesis and micro-herbs

| First impressions based on the image | Brussels | Asparagus | Leafy veg. Per leaf |
|--|----------------------------|-------------------|---------------------|
|  Sense: See | in the water, like a plant | like a plant, but | like a plant |
|  Sense: Smell | just fresh | like a plant, but | green |
|  Sense: Touch/Texture | egg and grass | green | grass & liver |
|  Sense: Hear | soft and wet and | soft | easy & soft |
|  Sense: Taste | slightly | naughty | crucifer |
| | radish and grass | bitter | mint |






1.1. To understand the process of hyponatremia and more herbs

| | Kale Red Russian | Kohlrabi | Songjin | Parley |
|--|--|-----------------------------|--|--------|
| Final impressions based on the image | green very light in color like a leaf it makes me think of | flower darker leaves | forest of trees leaves bark | |
|  Sense: See | leaves rocket like grass green flower front | | over green leaves thin, waxy leaves pink, parley green | |
|  Sense: Small | you expect broccoli | collared radish broccoli | fresh, slightly nutty light touch of cream | |
|  Sense: Touch/Tactile | grass tingly soft | rubbery wet smooth | smooth flexible soft | |
|  Sense: Hear | very grassy cream silence | crunchy mortar honey | crunchy also crunchy | |
|  Sense: Taste | bitter cream grassy cheese | spicy hot pepper | water strong mild | |

L1. To understand the process of hydroponics and micro herbs

| | Date: 6th May 2021 | Date: 20.05.21 | Date: 28.05.21 |
|--|--|--|--|
| Let's explore the micro-herbs that we have grown... | Name of the micro herb: <u>Assassins Red Army</u> | Name of the micro herb: <u>brothchic plant</u> | Name of the micro herb: <u>Broccoli</u> |
|  Sense: See | <u>Scarlet red leaves</u> | <u>little emerald green leaves</u> | <u>emerald green leaves</u> |
|  Sense: Smell | <u>as Sweet as candy</u> | <u>Fresh plants</u> | <u>wet grass</u> <u>smelling</u> <u>and the rain</u> |
|  Sense: Touch/Tactile | <u>as soft as grass</u> <u>as soft as grass</u> | <u>petals of plants</u> | <u>Wet and soft</u> |
|  Sense: Hear | <u>Silent</u> | <u>rustling noise</u> | <u>nothing</u> |
|  Sense: Taste | <u>Jetties robot</u> | <u>mint Ice cream</u> | <u>not salty</u> <u>Strong</u> |

L1. To understand the process of hydroponics and micro herbs

| | Date: 6 May 2021 | Date: 20 May 2021 | Date: 28 May 2021 |
|--|--|--|---|
| Let's explore the micro-herbs that we have grown... | Name of the micro herb: <i>Amaranth red army</i> | Name of the micro herb: <i>Toothache plant</i> | Name of the micro herb: <i>Broccoli</i> |
|  Sense: See | <i>ruby red</i> | <i>emerald green daisy</i> | <i>brassy green</i> |
|  Sense: Smell | <i>minky</i> | <i>as minty as a mint</i> | <i>like manekent</i> |
|  Sense: Touch/Texture | <i>really dry as dry as a desert</i> | <i>as soft as a pillow or a cotton bud</i> | <i>sticky</i> |
|  Sense: Hear | <i>like the wind passing by</i> | <i>windy</i> | <i>silence</i> |
|  Sense: Taste | <i>like heartys</i> <i>acrid salad</i> | <i>like an onion</i> | <i>strong broccoli</i> |






10.00

-100/100



May 2021

1. To understand the process of hydroponics and micro herbs

| | Date: 6 th May 2021 | Date: 20 th May 2021 | Date: |
|--|--|---|-------------------------------------|
| Let's explore the micro-herbs that we have grown... | Name of the micro herb: Amaranth red amaranth | Name of the micro herb: Tostache plant | Name of the micro herb: broccoli |
|  Sense: See | ruby, rosy red leaves | emerald green 4 leaves over | deep dark green rotten leaves |
|  Sense: Smell | sweet, candy | underground green plants | dirt and water |
|  Sense: Touch/Texture | as soft as a cushion feels rubbery | as soft as my carpet | a soft as my shampoo |
|  Sense: Hear | nothing, silents | crawling and a bit of silents | silents and a bit of rumble |
|  Sense: Taste | Spinige lettuce spray | peaches and a bit minty | raw and dry like a stone |

April 2021

TastEd

L.I. To understand the process of hydroponics and micro herbs

| | Micro- greens broccoli | Micro- leaf Epilanthos | Micro- leaf Amaranth Red Army |
|--------------------------------------|--|--|---|
| First impressions based on the image | My first impression is that it doesn't look like broccoli and it's too small to be broccoli. | My first impression is that it's going to make my eyes water and will taste to bitter. | My impression is that it will look like popcorn and go well with curry. |
| Sense: See | When I looked at the micro greens, it didn't look like what I expected, but it looks like a field of tiny green grass. | It looks like a novel beginning and a new sensation. | It looks like the best grass ready to be cut to make a rug. |
| Sense: Smell | It smells like the wet soil of the ocean on a sunny day. | It smells like a minty grass bath. | It smells like a wet green leaf after the rain. |
| Sense: Touch/Tactile | It feels like a soft, tickle on my skin but the most tickle thing. | It feels like the soft rapids of a river on a grassy day. | It feels like the softest pillow. |
| Sense: Hear | When it snapped, it sounded like a tiny bone being broken but like a gentle knock. | I can hear the wave from the ocean, quickly going onto the sand. | I could hear the whisper of a leaf rustling. |
| Sense: Taste | It tastes like the first thing I ever tasted but I liked the other one tastes like a salty gift. | It tastes like a sweet child after being grown. | It tastes like a new sensation. |

41 - UKS2 Senses sheet

April 2021

TastEd

L.I. To understand the process of hydroponics and micro herbs

| | Micro- greens broccoli | Micro- leaf Epilanthos | Micro- leaf Amaranth Red Army |
|--------------------------------------|---|--|---|
| First impressions based on the image | Looks like it is packed full of bursting, peppery flavour. Micro-leaf. A succulent green. | Piercing flavour that spears the tongue. | Delicious. A crunch as you bite into it. A satisfying sweet flavour floods the mouth. |
| Sense: See | A field of waving emerald. Mini sprouts of surprise. Tasting trees of green. | Minuscule baby girls. Green dots of life. Signs of love. | Like a spindly web garden of red. Golden tower like a hair. |
| Sense: Smell | Refreshing smell of the butterfly enclosure. Saltiness as the blues at sea at twilight. | Cucumber in a salad bowl. Mountain river rapids. | Enticing going tale of sugar and spice and everything nice. |
| Sense: Touch/Tactile | As brittle as the weakest race. Like a pop as you crush it. A sharp but unharmed pop. | Mandarin's build up of harmony. Stalks of leaves. | Majestic feel of life itself. |
| Sense: Hear | The rattle of leaves in an early morning sunshine. Gentle crunch as a murky bug. | Gentle snap of the circle of life. | Gentle pitter patter like miniscule feet. |
| Sense: Taste | An inspiring sensation. Some flavour seeps into your tongue like refreshing water. | Piercing flavour that spears the tongue. Floods the mouth with a flavour that could light a car. | Rolls apart with new force as it releases the taste of everything and nothing at the same time. |

The precise example of perfection and bliss

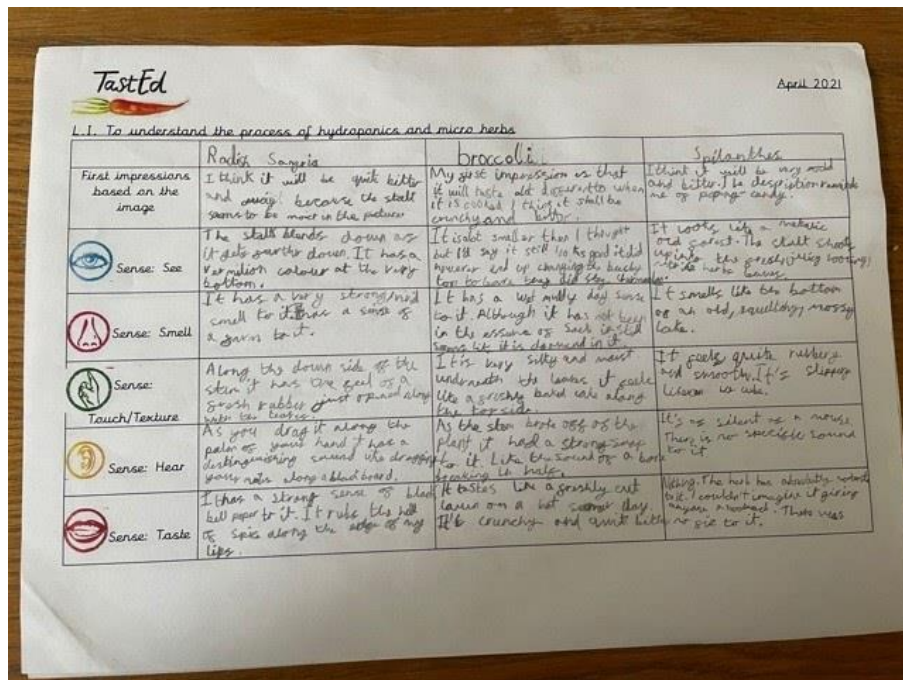
42 - UKS2 Senses sheet

| TastEd | | | |
|---|---|---|---|
| April 2021 | | | |
| L.1. To understand the process of hydroponics and micro herbs | | | |
| First impressions based on the image | Micro herb: Basil | Micro herb: Spinach | Micro herb: Aniseed |
| Sense: See | Looks like forest green clovers. | Looks like Emerald green baby sea weed coming out of the water surface. | Looks like a very tiny dill-like plant. |
| Sense: Smell | Smells like the water throwing in a perfect pickle. | Smells like mint leaves. | Smells like a mild car wash. |
| Sense: Touch/Texture | Feels like young clean meadow grass. | Feels like a clover from a grass sward. | Feels nothing different. |
| Sense: Hear | Sound like the leaves snap but really hushed. | Sounded like a hushed pop. | Sound crunch. |
| Sense: Taste | Tastes like salad. | Tastes like a mild watered bit of clover. | Tastes like mildy mint. |

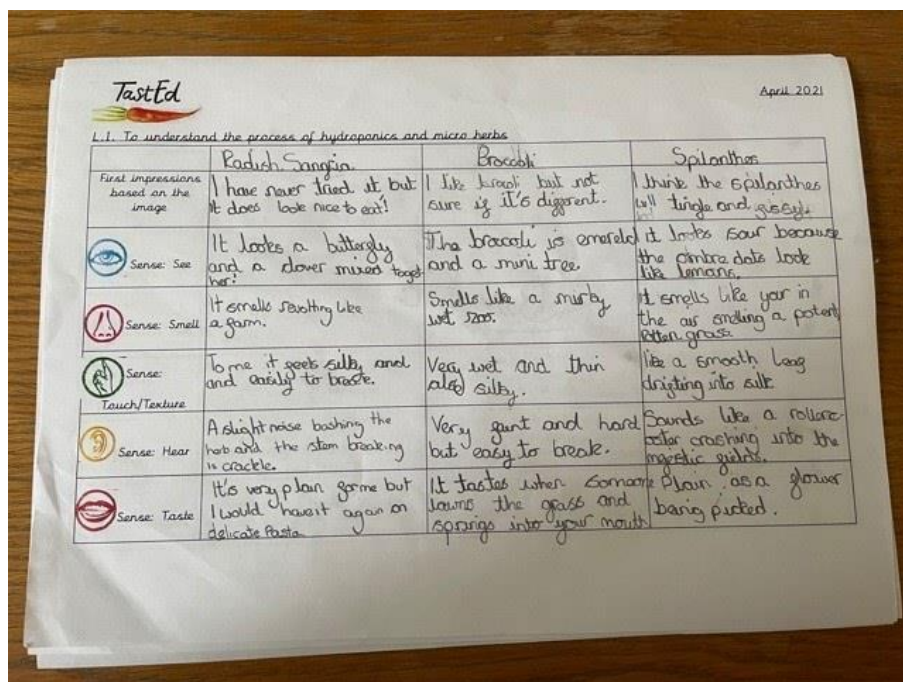
43 - UKS2 Senses sheet

| TastEd | | | |
|---|---|---|--|
| April 2021 | | | |
| L.1. To understand the process of hydroponics and micro herbs | | | |
| First impressions based on the image | Radish Sprouts | Spinach Broccoli | Spinesher |
| Sense: See | I would not eat it because I don't like veggie sprouts. | I don't like broccoli so I don't think I will like it. | Because it is the darkest plant I think it will be quite hard and sour. |
| Sense: Smell | I can see the small ones that remind me of a like scent, and the bigger ones. | It looks like a forest when they are all together. | It really dark green. Looks like an old, dried bush with some fresh leaves. |
| Sense: Touch/Texture | The small reminds me of my guinea pig's cage when they are tiny. | It smells like a rabbit hutch with wee in the bags. | It smells of dried garlic and vinegar. |
| Sense: Hear | A smooth, moist/sloppy when with hard leaves remind me of young leaves. | Smooth, rubbery with a soft, incredibly delicate skin. | Quite dry and hard. Also slippery. |
| Sense: Taste | I can't hear much but breaking the stem sounds like a pop like a paper cracker. | A very, very quiet snapping sound from the stem. Not much more to hear. | It sounds like nothing leaves in an autumn breeze with softness. |
| Sense: Taste | The stem is light and poppy. It's very spicy and crunchy. It has a nice taste. | The leaves don't taste much but disappear quick. The stem is slightly spicy. Tastes of grass from the soil. | Tough on my tongue. Sour, young and hard to swallow. Did not like the taste. |

44 - UKS2 Senses sheet



45 - UKS2 Senses sheet



46 - UKS2 Senses sheet



KS1 created block diagrams as a class based on which herb they liked the most.

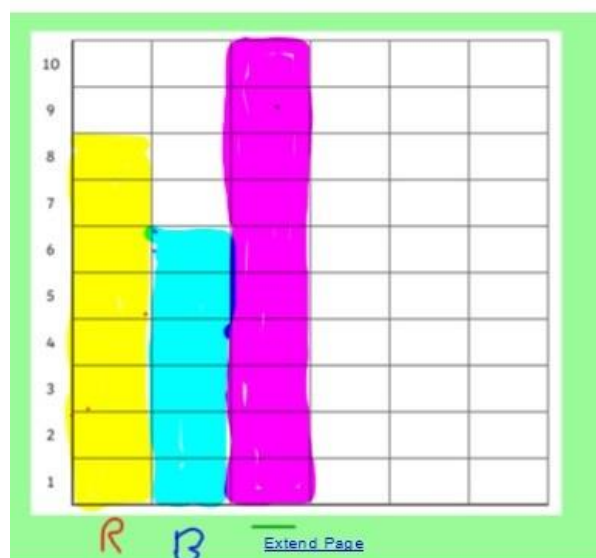
6.7 To show what we have learnt about hydroponics

Q3:

What were the nice herbs that we grew and tasted?
 Let's make a tally chart on our white board to record our results...

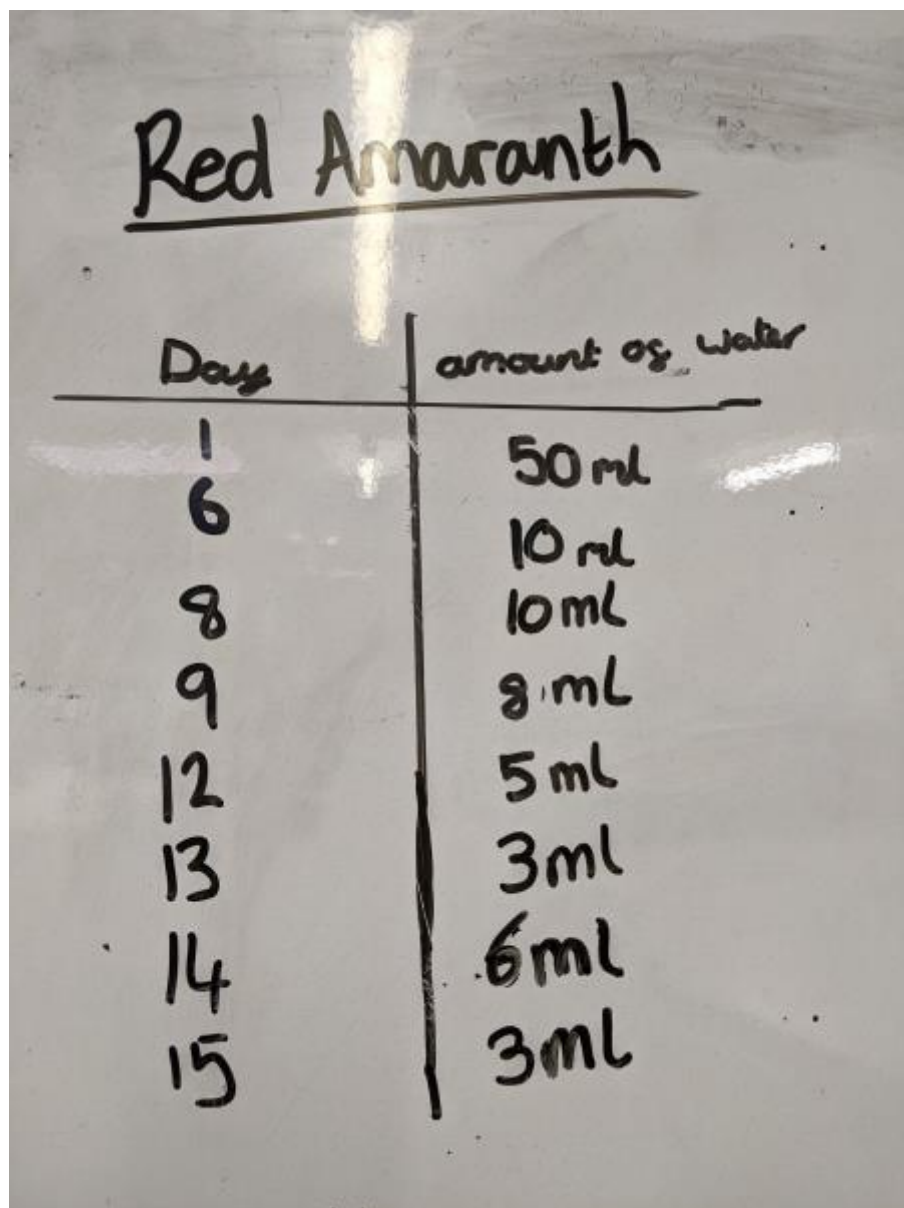
| | |
|-----------|--|
| Red army | |
| Broccoli | |
| Landcress | |
| | |
| | |

47 - Tally Chart



48 - Block Diagram

We tracked the amount of water used and the height the micro herbs grew. Here is our table of data.



A handwritten table on a piece of paper. The title 'Red Amaranth' is written at the top and underlined. Below it is a table with two columns: 'Days' and 'amount of water'. The table contains 15 rows of data, with the first row having a blank cell in the 'Days' column. The water amounts are listed in milliliters (ml).

| <u>Red Amaranth</u> | |
|---------------------|-----------------|
| Days | amount of water |
| | 50 ml |
| 6 | 10 ml |
| 8 | 10 ml |
| 9 | 8 ml |
| 12 | 5 ml |
| 13 | 3 ml |
| 14 | 6 ml |
| 15 | 3 ml |

| Spilanthus | measurement |
|------------|-------------|
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 1mm |
| 7 | 1mm |
| 8 | 1mm |
| 9 | 2mm |
| 10 | 3mm |
| 11 | 5mm |
| 12 | 5mm |
| 13 | 7mm |

| (days) Lemon grass | Measurement |
|-----------------------|-------------|
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |
| 4 | 0 |
| 5 | 3 mm |
| 6 | 4 mm |
| 7 | 6 mm |
| 8 | 6 mm |
| 9 | 6 mm |
| 10 | 8 mm |
| 11 | 10 mm |
| 12 | 12 mm |
| 13 | 14 mm |

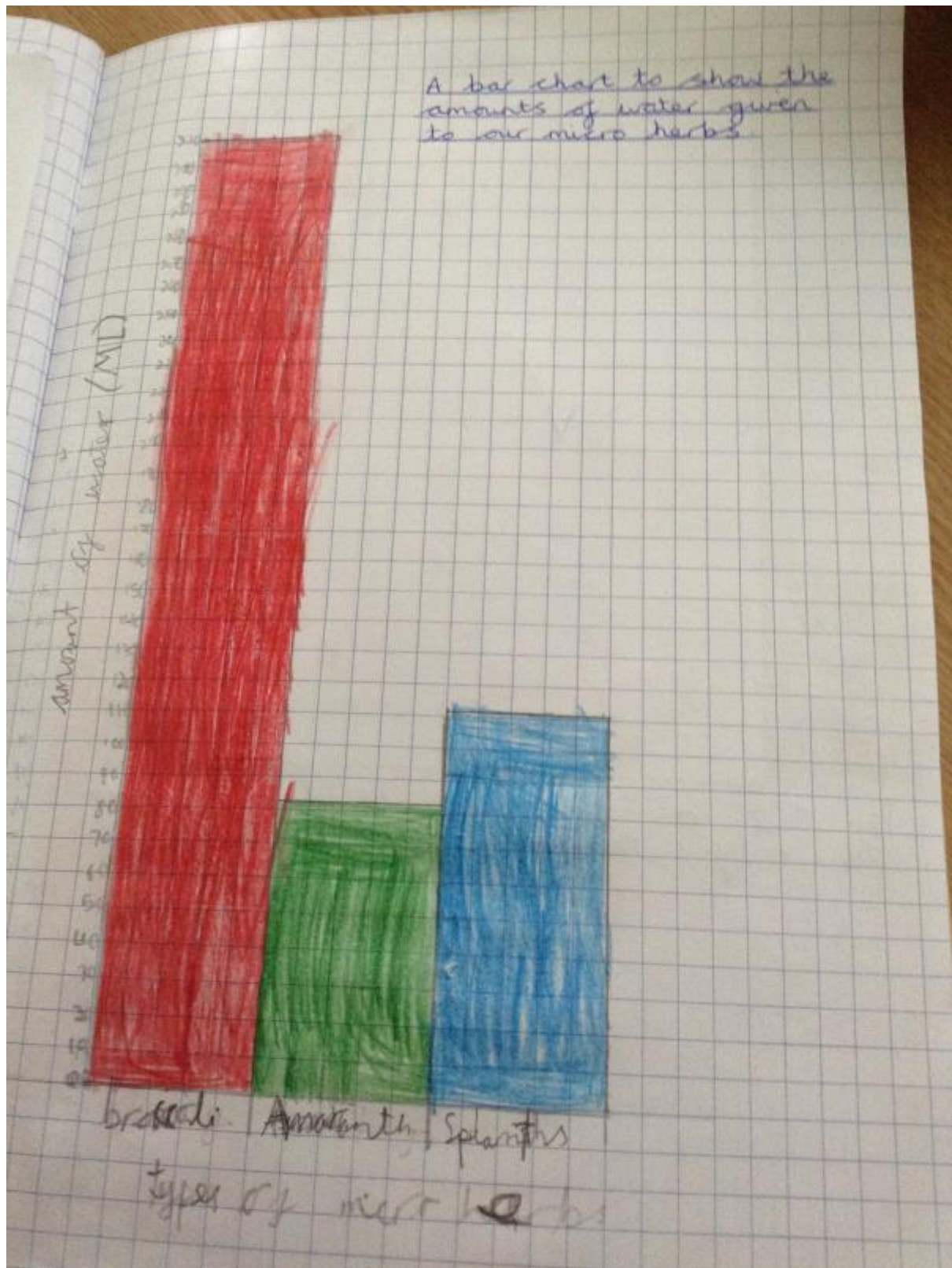
| Broccoli | Measurement |
|----------|-----------------|
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |
| 4 | 2 mm |
| 5 | 4 mm |
| 6 | 8 mm |
| 7 | 14 mm |
| 8 | 20 mm |
| 9 | 26 mm |
| 10 | 34 mm |
| 11 | 40 mm |
| 12 | 43 mm |
| 13 | 49 mm |

Broccoli

| Date | Water. |
|----------------------|--------|
| 6 th May | 60 ml |
| 10 th May | 20 ml |
| 13 th May | 80 ml |
| 19 th May | 80 ml |
| 25 th May | 80 ml |

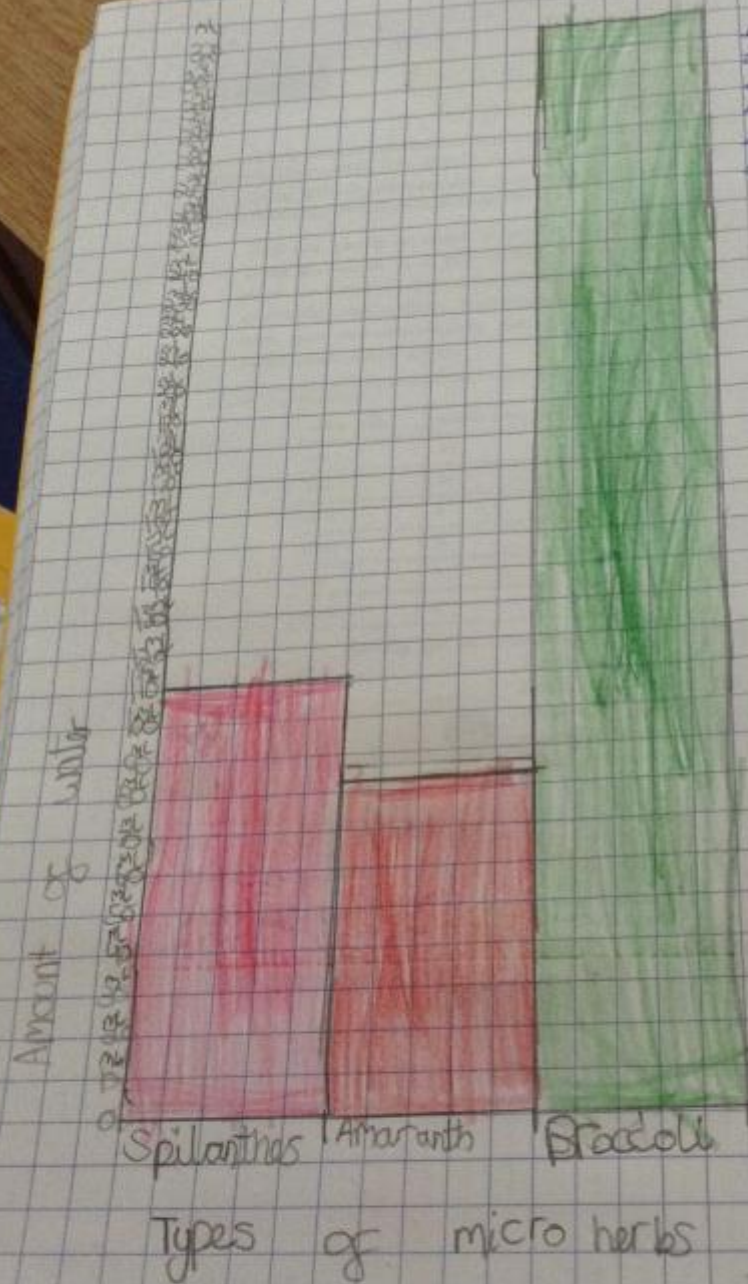
| Spilanthes | Amount of water |
|------------|-----------------|
| 1 | 80ml |
| 5 | 10ml |
| 7 | 7ml |
| 10 | 5ml |
| 11 | 9ml |
| 12 | 6ml |
| 13 | 10ml |
| 14 | 5ml. |
| 15 | 10ml |

LKS2 used the amount of water used on the herbs and created their very own bar graphs.



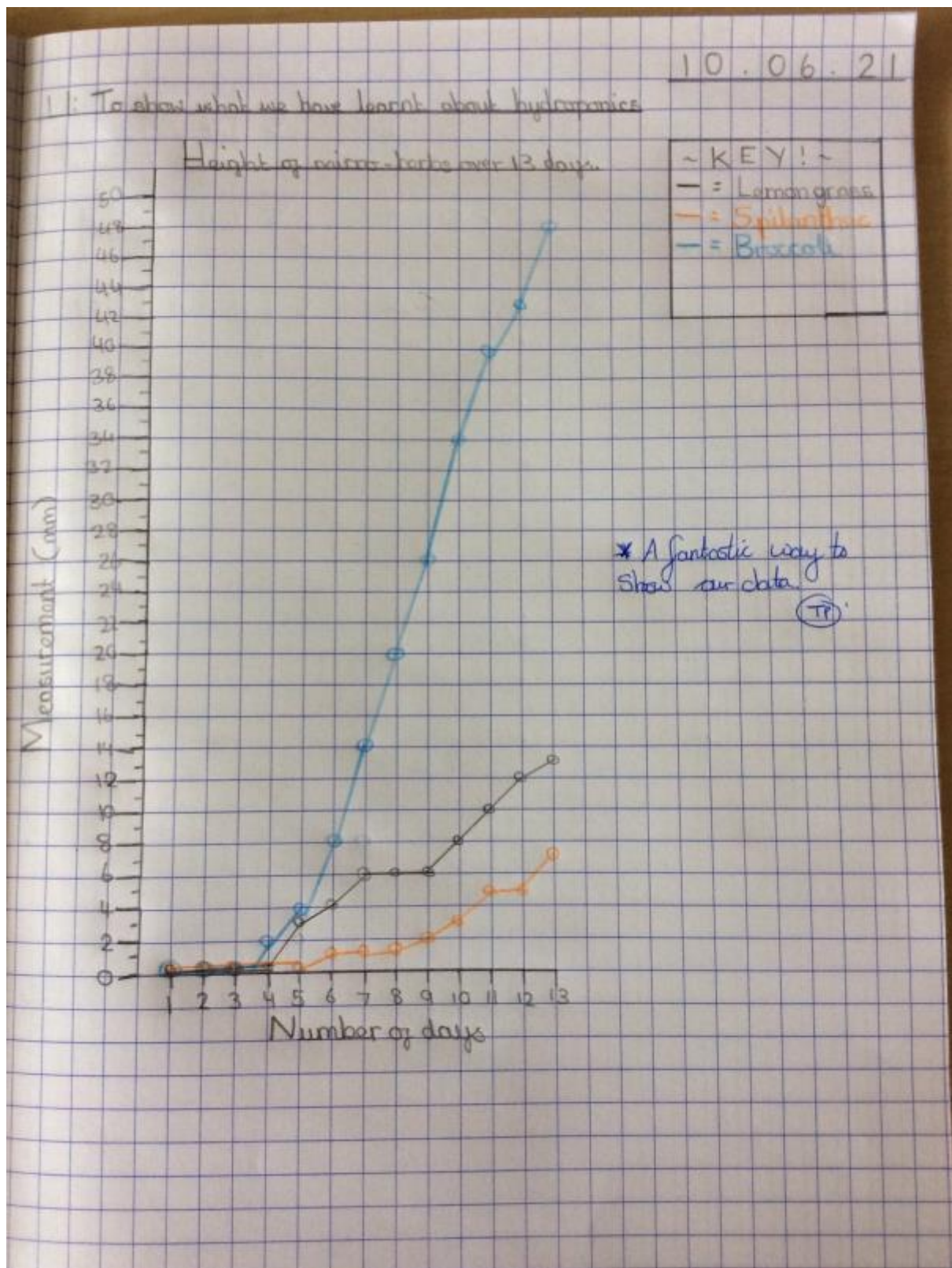
A bar chart to show amounts of water given to our micro-herbs





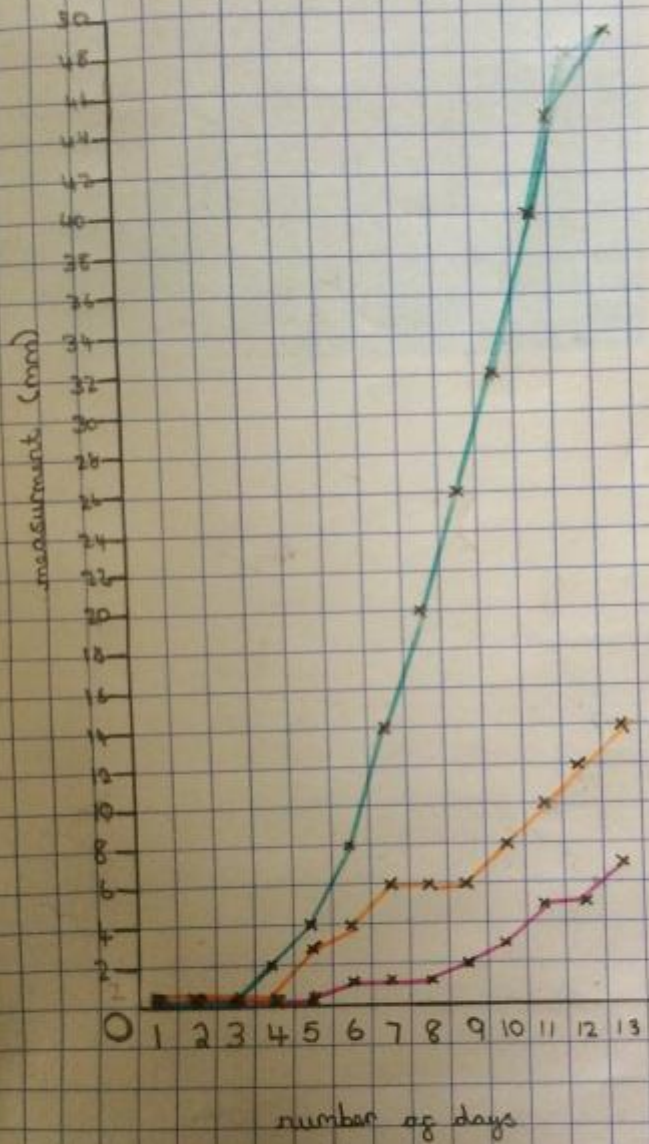
A bar chart to show the amounts of water given to our micro herbs.

UKS2 used the height of the herbs and created their very own line graphs to show their story.



17: To show what we have learnt about hydroponics

Height of micro herbs



* A beautifully presented graph
(1P)

— broccoli
— spilanthesis
— lemon grass

10.06.21
 L1: To show what we have learnt about hydroponics

Height of Microherbs

Day-

lemon grass

epilanthus

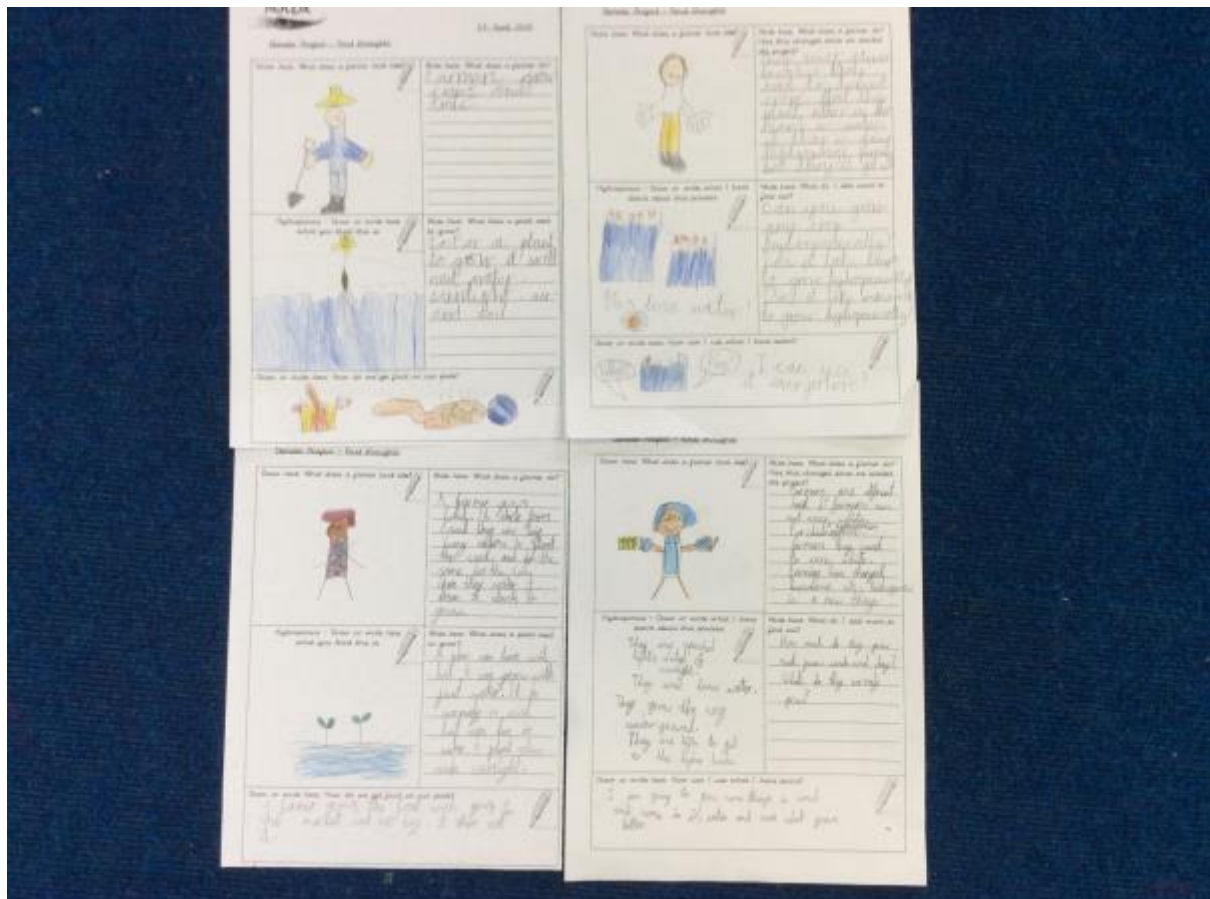
broccoli



* A fantastic way to present your data (TP)

Final thoughts - Documentation collected







11th June 2021

Demeter Project - Final thoughts

Draw here: What does a farmer look like?

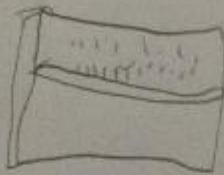


Write here: What does a farmer do?
Has this changed since we started
the project?

Some farmers grow
on farm and have
animals.

Some farmers
grow hydroponics

Hydroponics - Draw or write what I have
learnt about this process



Write here: What do I still want to
find out?

Is there a
hydroponic farm?

Draw or write here: How can I use what I have learnt?

I can grow them at home.





11th June 2021

Demeter Project - Final thoughts

Draw here: What does a farmer look like?



Write here: What does a farmer do?
Has this changed since we started the project?

4 for over plants good
get us and takes
care of cows
or pigs cows
sheep and hens.

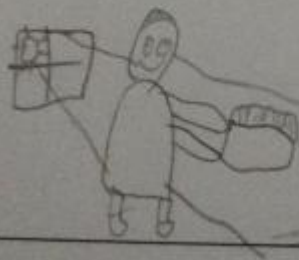
Hydroponics - Draw or write what I have learnt about this process



Write here: What do I still want to find out?

How is it
possible to
grow food
without soil?

Draw or write here: How can I use what I have learnt?



Demeter Project - Final thoughts

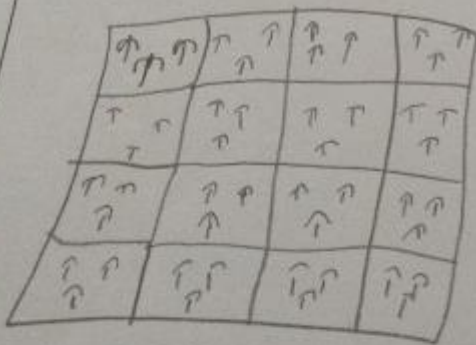
Draw here: What does a farmer look like?



Write here: What does a farmer do?
Has this changed since we started the project?

He or she can look after animals and grow, or just animals or just grow.

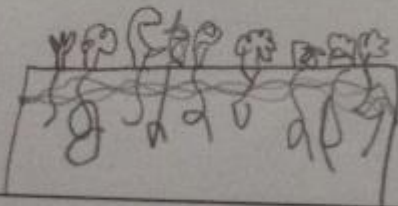
Hydroponics - Draw or write what I have learnt about this process



Write here: What do I still want to find out?

Can farmers grow by near a town or city.

Draw or write here: How can I use what I have learnt?





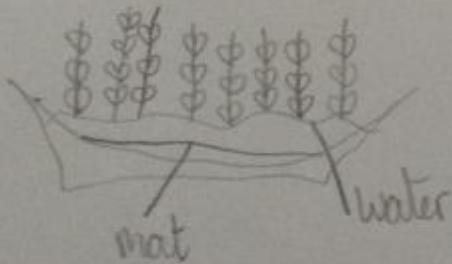
11th June 2021

Demeter Project - Final thoughts

Draw here: What does a farmer look like?

Write here: What does a farmer do?
Has this changed since we started
the project?

A farmer grows different
varieties of plants and
seeds. They also
sometimes have animals
but not all of them.

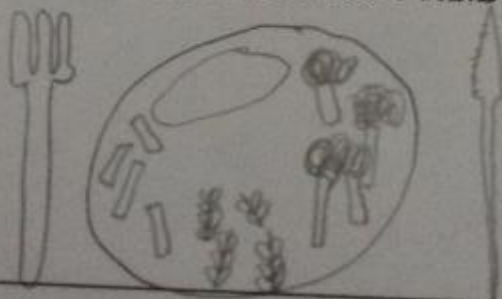
Hydroponics - Draw or write what I have
learnt about this processWrite here: What do I still want to
find out?

Do hydroponics ever
go rotten?

Do they ever get out
of date?

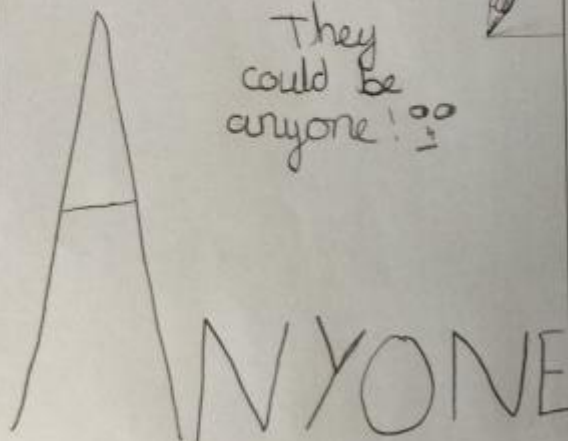
Can you still use
soil to grow them?

Now or write here: How can I use what I have learnt?



Demeter Project - Final thoughts

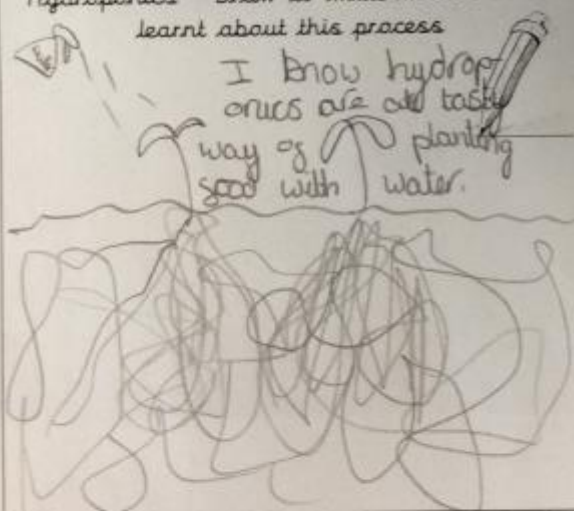
Draw here: What does a farmer look like?



Write here: What does a farmer do?
Has this changed since we started the project?

A farmer can look after crops or animals. In fields or indoors. or... whatever they want!

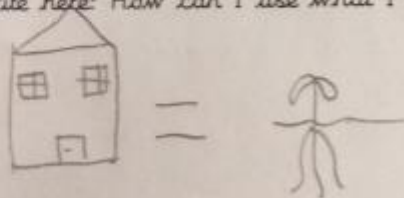
Hydroponics - Draw or write what I have learnt about this process



Write here: What do I still want to find out?

I still want to find out if you can plant flowers with hydroponics

Draw or write here: How can I use what I have learnt?





10 June 2021

Demeter Project - Final thoughts

Draw here: What does a farmer look like?



Write here: What does a farmer do?
Has this changed since we started
the project?

this farmer is
Vina Harvesting one
so every 3 weeks
month they harvest
the small crops

Hydroponics - Draw or write what I have
learnt about this process



Write here: What do I still want to
find out?

What other plants
and herbs can
you use during
this process?

Draw or write here: How can I use what I have learnt?

I can grow my own at home

Demeter Project - Final thoughts

Draw here: What does a farmer look like?



Write here: What does a farmer do?
Has this changed since we started
the project?

A farmer grows crops
and sometimes looks
after animals. They harvest
food with tools and
sometimes even hand pick
them

Hydroponics - Draw or write what I have
learnt about this process

I have learnt that you
don't use soil for the plants
and they only need water and
sunlight. They are also
grown on peatite

Write here: What do I still want to
find out?

Are hydroponic good
more healthy? Who was
the first farmer?
How often do they have
good?

Draw or write here: How can I use what I have learnt?

Demeter Project - Final thoughts

Draw here: What does a farmer look like?

Write here: What does a farmer do?
Has this changed since we started the project?

A farmer make all kinds of crops and helps make new animal in the spring and then looks after them to make good when they're dead and so they can keep produce.

Hydroponics - Draw or write what I have learnt about this process



Hydroponics are when you make plant or herbs without soil.

Write here: What do I still want to find out?

How many hydroponic farms are there and the largest hydroponic farms.

Draw or write here: How can I use what I have learnt?



If I become a farmer I can help the community and climate change by using hydroponics

Evaluation Tools used



First impressions sheet

Post-it notes during the sessions

Recorded table of their senses

Photos

Videos of children's responses

Final thoughts sheet

Documentation Collected

We used Smart notebook to plan all of the sessions which were visually followed by the children. Video observations of the children tasting micro herbs, children's work, group discussion notes, post-it's, first and final thoughts questionnaires and hearing the children's voice in other lessons.

Indicators



1. SCHOOL / FARM COLLABORATION

Do teachers and farmers co-participate in the design of the practice?

Level 3

Teachers and farmers have worked in collaboration to organise most aspects of the children's learning. At the start of the project we contacted our class farmers who supplied us with videos and informative information about life on their farms. This then helped the teachers to set the foundations for learning and tailor this in relation to the pathways, as well as enhancing what is already accessible from the school's provision of food education. We looked at the children's previous experiences and thought about how the pandemic may have affected them. Taking these factors into consideration we wanted to ensure children entering back into the school environment could access learning with a more hands on approach, as well as learn about some of the latest advances in farming. We liaised bi-weekly with our farmers, to find out their opinions about growth of crops and how to best look after them. We discussed the aims of the learning prior to the recorded FarmerTime call. Each class also had their regular FarmerTime call with their class Farmer where the farmer asked the children questions regarding their current knowledge on hydroponics and traditional farming. They also set us some challenges to help them on the farm. This has then helped us to tailor the learning in relation to the pathways as well as enhancing the school's provision for food education.





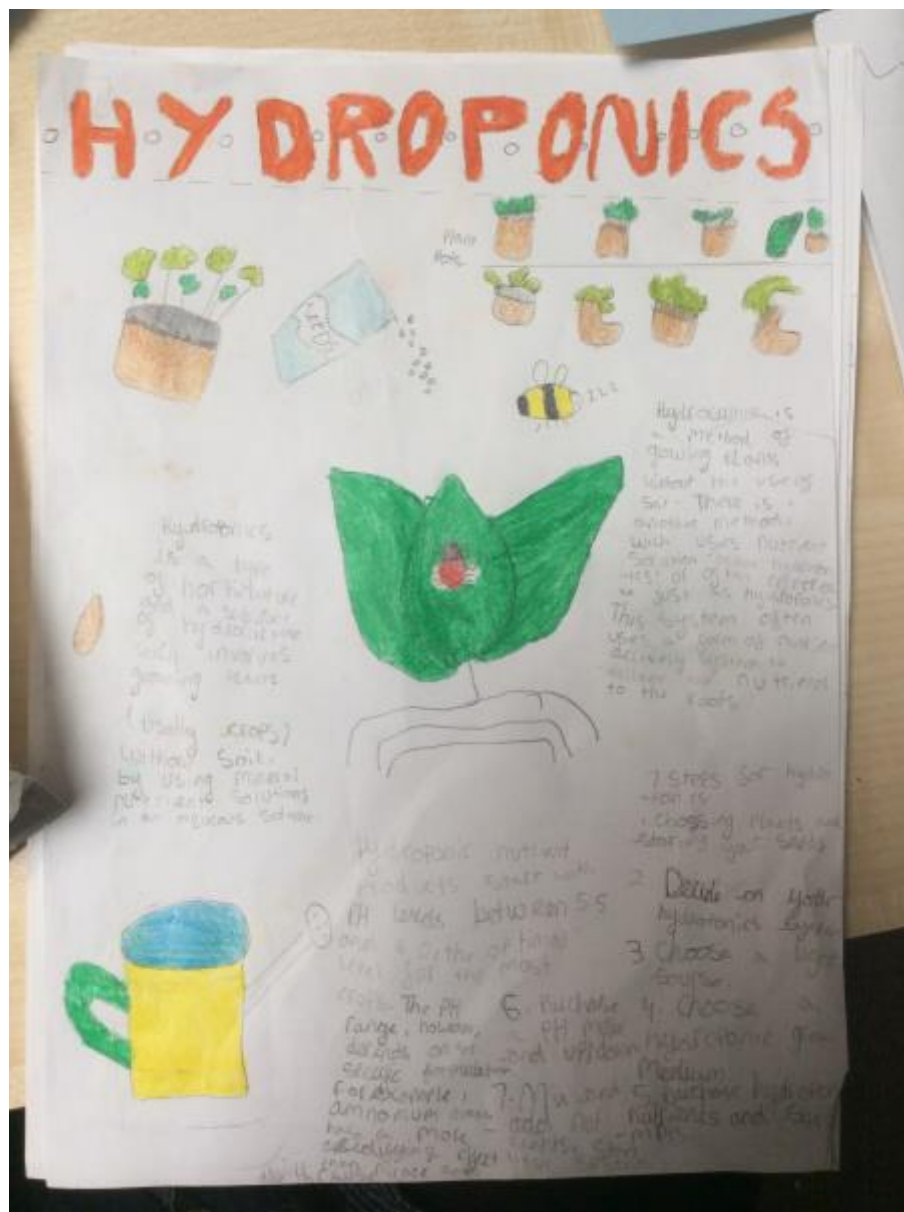
2. LEARNING CONSTRUCTION

How is learning promoted and made visible to students?

Level 2

Learning within Washingborough Academy has been promoted by using visual, auditory and kinesthetic tools to ensure that every learner has been able to participate and had a positive and enjoyable experience. The children were given the opportunity to evaluate what farmers do as part of their jobs and to compare crop farming and hydroponic farming. As a result, the children were asked to compare which type of farming they prefer and to give reasons to support their thinking.

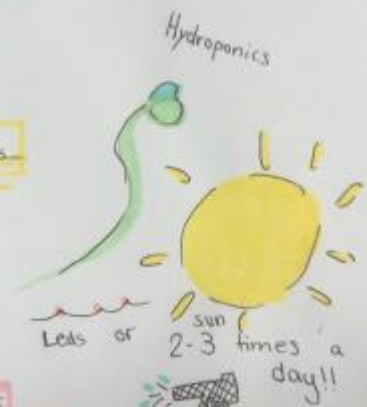
Throughout the practice the children have been able to ask and answer questions starting from the first impression lesson, throughout several TastEd sessions and during the final thoughts lesson. The children have been made to feel that their comments, curiosities and opinions are always valid. Plus, the children have had time to reflect upon each stage of the practice and to share their understanding with their peers. UKS2 children created posters about hydroponics at home too as part of their Blue Peter Green Badge challenge. They explained what hydroponics was and how it can help our environment.



HYDROPONICS

hydroponics

Microherbs



They might not always look how you thought.

Herbs

Fun fact

Micro-herbs/microgreens are a young vegetable that are approximately 1-3 inches (2.5-7.5cm)

You don't even need soil!



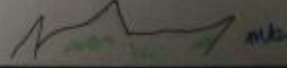
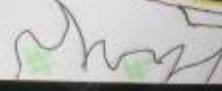
You only need a kitchen roll/towel.

Takes about 25 days!!

YUMMM....!



Small Vegetables!



Hydroponics

Potter

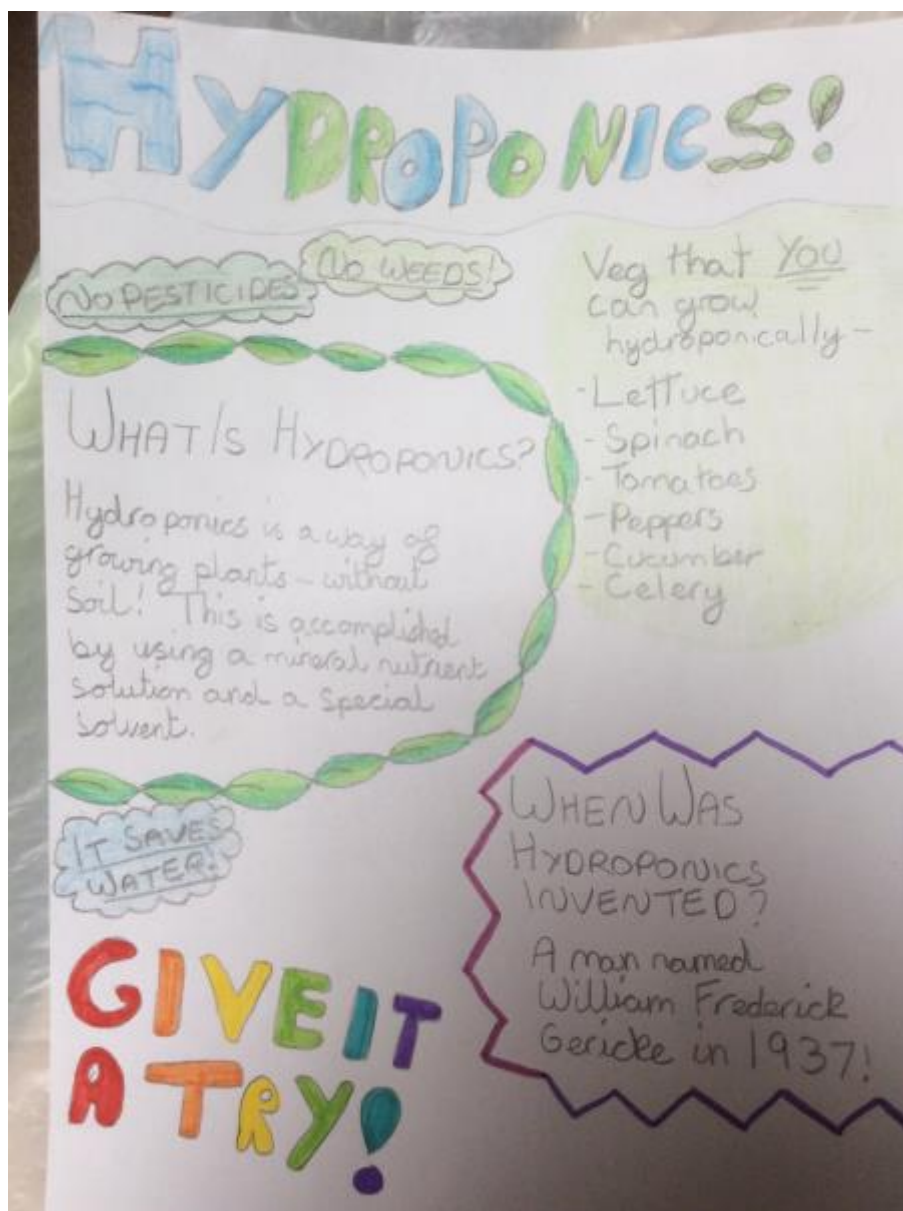


Hydroponics is growing plants without soil. Plants also need light, water, carbon dioxide and oxygen at the root zone. They also use 95% less water than normal.



Best plants to grow hydroponically

- ♥ Strawberries
- ♥ Spinach
- ♥ Bell peppers
- ♥ Lettuce
- ♥ Herbs
- ♥ Mint



3. INTERDISCIPLINARY DIMENSION

Level 3

The children used the skills from TastEd lessons to explore the micro herbs that they had grown in their classroom. They used all of their senses and made observations of the hydroponic process. They also used their FarmerTime to learn more about traditional farming. The children then went home and set up their own hydroponic trays using items at home e.g. Tupperware box and kitchen roll. In the media, there is more coverage of hydroponic farming which the children have then linked to our sustainability projects and thought about how we can make a difference. Over the last few weeks, our TastEd lessons have not only enabled our children to have a greater understanding of where food comes from, but also have exposure to the different textures, smells and tastes associated with a variety of micro-herbs and vegetables. It was wonderful to hear the children's feedback and the comparisons they were making when we were making corn frizzlers. We grew coriander as a micro-herb and many could taste this within the sweetcorn dish; commenting on how

different it tastes when blended with other ingredients as oppose to on its own. Children were also discussing how the taste would change if we substituted the herb for lemon-basil (another herb we have grown). The exposure to different foods that they may not get to experience away from school has been invaluable for each of them and the knowledge they now possess enables them to have really in-depth discussions when we are cooking and tasting different dishes.









4. ASSESSMENT FOR LEARNING AND SELF-ASSESSMENT

Level 3

The children started the practice by giving their first impressions of farmers and considering what hydroponics could be without any prior learning. After this task, the children were made aware of the nature of hydroponics farming and were asked to compare this type of farming with crop/animal farming. From this point, the children were continuously part of evaluating and reflecting on their learning through group discussions, written comments, farmers videos, planting and monitoring the growth of various micro herbs, using their senses to taste their grown micro herbs and by finally completing a 'final thoughts' questionnaire. The children were asked to think about how they could use their hydroponic learning in the future and to ask any further questions. Children also compared the growth of the micro herbs by analysing the amount of water each micro herb needed and presenting this information on graphs.

5. INCLUSIVENESS

Level 3

Throughout this process, we have used a range of teaching styles (including: practical, written, drawing, discussion, paired work, class work) were used to support all of the children. They also worked in mixed ability groups to enable all pupils to showcase their knowledge. During the written task, children were able to record in different ways to support those children who find writing difficult. All of the children enjoyed sharing their ideas about the herbs, by using their senses to describe each of them. Discussions as a class and with their talk partner were vital to enable the children to show their learning and be used as an assessment tool for all of the lessons. The teachers worked collaboratively in providing a plan of learning which would allow the children to understand how to grow micro-herbs without the use of soil (hydroponics). All of the teachers were able to share their teaching experiences and give advice about each lesson. Lessons were adapted by Key Stages.

6. FEASIBILITY

Level 3

During the practice, we felt that we had sufficient time, space and materials to develop the children's awareness of a different type of farming called hydroponics. Over a seven-week period the children took part in a lesson a week to first develop their understanding of hydroponics, secondly to practically grow micro herbs, thirdly to use their senses in TastEd sessions to eat their grown micro herbs and finally to create graphs to show the herbs journey linked to maths. All of these sessions were carried out in the normal day to day running of the classroom. We had the necessary materials and resources to gain these experiences for the children in a successful manner. As a school, we are now going to further develop the growth and use of hydroponics within our school grounds and we are going to also set up an aeroponic system on one of our playgrounds to grow food for our school kitchen.