

S.T.E.M in the garden

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S.T.E.M integrated naturally

Garden tasks make great S.T.E.M activities.

Easy to adapt and stretch out the S.T.E.M learning.

Science - growing, seasons change, soil pH, watering frequency, plant life cycles, insect life cycles.

Technology- watering systems, ICT communications, rain gauges.

Engineering- building, physics (wheelbarrow- simple machines, leavers, force, motion), building structures (tee-pee's).

Mathematics- measurement, supporting shapes and costs (\$20 grow it challenge).



S.T.E.M - essential skills

STEM in the garden focuses on:

- Critical thinking skills
- Hands on learning
- Problem solving
- Collaboration - working together.

Essential skills for our learners... 21 century skills



STEM garden challenges:

S: How healthy is my soil? A Ph story. Who pollinates my plants? Beneficial insects.

T: Fastest growers- Capturing my plants on film... mini garden movies.

E: Standing tall- How can I help my plants reach the sun? - building teepees

M: Square meter gardening- growing great plants. \$20 grow it challenge, budget allocation purchasing plants, selling produce to the kitchen, children manage the budget and aim to make profit.... While growing great plants.



"Harvesting the garden!"

Each week the kitchen will place an order with the garden.

group	Type of plant	Number	Sale amount \$
4 M Red	Silverbeet	12 stalks	\$ 2 / \$1
4 M Green	"	6 stalks	\$ 1 -
M Blue	"	" stalks	\$ 1
M Yellow	chives	3 bunches	\$ 6 -
M Orange	spring onions	1 stalk	\$ 2 -
B Red	Silverbeet	18 stalks	\$ 3 -
D Yellow	cucumber	4 stalks	\$ 2
D Green	silverbeet	4 stalks	\$ 4
D Red	spring onion	16 tops	\$ 2
D Blue	spring onion tops	13 tops	\$ 3
D Orange	mint	3 bunches	\$ 2

garden

Square meter gardening:

- Compact gardening in small spaces
- Maximizes yields
- Creates mini ecosystems
- Promotes companion planting
- Creativity with themed gardens - pizza, salad, 3 sisters (corn, zucchini and beans)
- Maths focus in the sessions - measurement of squares (15cm - 6 square grid).



Square meter frame making

STEM problem solving :

- Ring lock fencing frames
- Measurement
- Working with different materials.
- Collaboration and teamwork
- Working on skills and problem solving.



Stable structures - teepee

Making connections to prior/
current learning:

Strongest shapes - triangles

Secure knots - teamwork and fine
motor skills.

Supporting plants, which plants
need help? Problem solving

Applying knowledge



Finding STEM in every situation

Wheelbarrow launch - finding
STEM challenges are everywhere...

