

Building Your School Garden Together



Unit Snapshot

This unit provides teachers with ideas to support the development of a school garden and school garden lessons that provide students with hands-on learning experiences based on the principles of sustainability and biodiversity.

- An organic garden is made up of natural systems including relationships between living things, which aid or threaten their survival.
- All living things have requirements for survival such as air, food, water and an opportunity to reproduce.
- Environmental factors affect the survival of living things and life cycles.
- Human activity can affect natural systems and change garden environments.

Getting Started

- The idea of setting up a school garden seems straightforward, but there are some key considerations that I recommend you investigate, to ensure that your garden can be sustainable in the long term.
- School gardens are often set up and maintained by parent volunteers. It is strongly recommended that at least one staff member be part of the process

and appointed to oversee the development and future maintenance of the garden. This may require some consideration in the school budget.

- The School Grounds person needs to be included in the development process, especially as they will become a handy resource as time goes on. Be aware of the workload your garden may inflict upon them.
- Volunteers are terrific and help get things done. Regular gardening/mowing can become a problem. Recognition of parent volunteer help through newsletters/assemblies, celebrations etc are necessary to keep the parent help flowing. This needs to be managed also. See 'Volunteers'
- Set up a team or garden group involving as many key people as possible. Keep all stakeholders informed and develop a plan, short term and long term. Celebrate each stage of development.
- Start small and within your resource budget. The bigger the garden, the bigger the weeding and maintenance problem.
- Try using galvanised garden beds if your budget allows. They retain water and goodness over the holiday periods and help combat the weeding problem. Weeds in these tend to be easy for children to pull compared to weeds in the ground which can often be too hard for children to move and tend to spread rapidly. There are plenty of ways to make cheap gardens too. Old tyres make great recycled gardens too and can be rolled away afterwards. Glass planter boxes available from glass distributors can be trimmed to size.
- An easy system of composting (I haven't found one yet) for rather large amounts. Properly done, this can be set up to clearly demonstrate the process of decomposition. This is a necessary part of the garden system and ideally needs to be in close proximity to the garden. See composting resources for some good ideas.
- Worm farms are easy to maintain and go well in a shady part of the garden.
- Make sure you have sufficient garden tools, gloves, gumboots etc for groups of children to use. Small ones are best, including small watering cans that children can carry easily. A small shed will be necessary to house your equipment and is best nearby.
- Try applying for garden grants when you have a plan. These could be the responsibility of one volunteer. Remember, you need to be accountable and produce a report at the end of the project. Other ways to seek funding could be through your school association, the Health and Wellbeing Committee in your school or through a fund raising committee.
- Establish a relationship with your local nursery. Local nurseries will often donate left over seedlings each week!
- Include students where possible in the planning and development of the garden.

Start thinking about how the children will benefit from the school garden. How will your lessons run?

How will all children have access to the garden? When? How do we share garden beds? Who will supervise? What will your involvement be?

- Even the youngest students can experience the garden. Recorded observations in the garden will be limited so lots of oral discussions about the garden are necessary. Photos are an excellent way of recording experiences and allow the students to reflect and see change. Encourage questions and follow up in the classroom at every opportunity.
- All children will need the opportunity to experience the garden. Open garden at lunchtimes, supervised by a teacher seems to be the best option for this as some classes may not take on garden lessons. Duty timetables may be altered to include this. Limited tool use for these sessions is better for safety.
- **As you can see, the work involved in a sustainable school garden is ongoing. Be creative in your thinking and don't overload yourself with extra work. Work within your boundaries of time and budget.**



Organisation of
Lessons/experiences

Volunteers

- Volunteers are very useful for working with small groups where the garden is in close proximity to the classroom. Volunteers could be used for planting seeds, propagating, and general maintenance.

- The work of volunteers needs to be recognised and celebrated by school staff/principal at every opportunity. School gardens provide valuable learning experiences for the youngest students who require parent helpers. Strongly encourage these parents to become engaged with the garden. They may be with you for some time!
- When you have a solid volunteer base, you may be able to conduct successful working bees to help with general maintenance.

Whole School Engagement

Try some whole school ideas to raise the profile of the school garden. Use the school newsletter or create a garden 'Leaflet' that could be produced by the children.

- Give all students a tomato seed to plant
- Sunflower seed planting
- Potato planting
- Whole school recycling systems of materials and food scraps. Have a 'Green Waste' team.
- Link the school garden with the canteen.
- Develop a shared approach to caring for the worms and the chickens in the garden.
- Hold an event in the school garden. Even a staff meeting.
- Garden competitions: Grow something in a mini hothouse; draw a labelled bird's eye view of the garden; build a scarecrow; improve/design a garden; pumpkin growing competitions.
- Selling the produce

Garden Buddy Program at Lauderdale Primary School

In our large school, garden classes operate through a garden buddy program. The key teacher managing the school garden teaches a grade 4 class. The school garden is open for all students to visit at lunchtimes twice a week. (We are looking to increase this in the future) This has become part of the duty timetable.

Grade four classes have a whole class lesson each week on sustainable practises in the garden which could include any learning experience the garden presents. Examples of this can be found under 'Real Experiences'

Grade 4 students are then put into garden groups (5 per group, each person allotted a role. These are called 'Garden Leader' groups. Each Garden Leader group are paired with a younger class. All grade 4 students have the experience of being the 'Garden Leader' for 1 to 2 sessions per week.

Younger classes visit the garden as a whole class with their teacher as supervisor each week for 45 minutes and meets their regular Garden Leader group. The visiting class is split into 4 groups.(which has been done prior to the visit) The group of garden leaders each take a group of students and one of them supervises overall and keeps time and manages the shed.

The structure of the lesson is as follows:

Group 1: feeding and care of the chickens

Group 2: weeding and planting

Group3: Watering

Group 4: Garden Tour: This is where the students impart their knowledge of sustainable gardening to the younger students.

Each activity lasts for 10 minutes. Groups rotate taking their leader with them. A brief coming together at the end with the leaders and teacher to reiterate the learning during the lesson. Teacher can then follow up with classroom activities.

A written instruction sheet is taken to the garden outlining the activities and groups for the session. This allows for feedback for later classroom discussion and communication between class teacher and the key teacher. (appendix 1)

Our preschool group visit the garden each fortnight with their parents and garden buddy leaders from the grade 4 classes.



Garden Tours

Look at the garden closely. What is happening? Look for evidence of new growth, seeds, creatures, and compost. The principles of biodiversity are in action right before you. Encourage students to ask questions. Garden tours are based on real experiences. I have found that questions and group brainstorming is effective. Remember there is not always one answer when environmental factors are involved!!

- Why is nothing growing in this soggy bathtub?
- What do worms do in the garden?
- Why is this soil so dry? How do we nourish the soil?
- Why are the chickens losing feathers?
- What do we need compost?
- Why is this growing here?
- How do we prune these grape vines? Why do we tie them up when they grow?
- What is eating our cabbages?

Question asked by a prep student: Why does the cauliflower have huge leaves that wrap around it when the broccoli plant doesn't?

Answer provided by another student of the same age:

Because the birds think its bread so the leaves protect it from the birds.

What a great answer. The only explanation I found is that the cauliflower is closely related to the cabbage which has tightly wrapped leaves. The first reason is probably more correct.

Examples of real experiences



Prep Garden buddies searching for bugs with their own unique bug catchers



Students learning about the 'hilling' method of growing potatoes. These have been planted in hessian sacks.



Students learning to identify ripe strawberries.

In the Garden

Safety in the Garden: What's in the Shed?

- Establish rules within the garden. Have them clearly set out. Monitors for the shed are best.
- Explain each garden tool and its safety rules. Sketch and label each tool and explain its purpose.
- Students should wear gloves at all times and wash hands thoroughly afterwards.

Living and Non-living Things

- Find things in the garden that are not living and things that are living. Classify them. How do we know?

Resources: Primary Connections: Life and living (should be available in your school library)

What grows here?

- Seasons: What grows when? Where and Why?
- Write down what you can see growing in the garden.
- Fruits and vegetables. How are they different?
- Weeds. What's a weed?
- What grows in this area? Visit your local nursery.
- What is a native plant? What is native to this area?
- Investigate traditional bush food and medicinal plants which grow locally.
- **Scottle: What Does your Garden Grow?**

What creature is that?

- Predict which insects and other creatures will be found in your garden Write them down.
- What is an insect? Insect classification
- What should we do with insects in the garden?
- Locate some different creatures in the garden. Find out what they are and what they do.

- Which bugs are useful? Harmful?
- Make an organic bug spray using garlic, chilli and pepper.
- How do insects pollinate plants? Do all plants need pollination?
- Draw who eats who in the garden as a simple food chain.
- Watch a bug closely to see how it interacts with the soil.

www.teachers.asn.au/minibeasts/jmresources/minibeasts/minibeasts.htm

www.global-garden.com.au - garden kids -make a bug spray; Good Bugs; Snail Traps

Scoutle: 10703 Mini Beasts

1118 Garden Detective (insects)

0285 The Very Hungry Caterpillar

11378 Bug Business (unit)

Bugwise: located under school resources grade 5/6 on this site, a must see.

Growing Things

(seeds, roots, soil, plant structure, pollination)

Seeds

- Collect various types of seeds.
- Investigate methods for growing seeds and seedlings.
- What are the 3 magic things all plants need to live? Draw them. How do they use these things?
- Keep a diary of a carrot or a bean.
- Have some seeds planted in the classroom to plant in the garden later.
- Seed saving. Tomato seeds are good for this.
www.backyardfarmer.com.au/organic-gardening/saving-tomato-seeds10steps/
www.global-garden.com.au -garden kids-grow things-Growing seeds in a tray;
Sprouting Sprouts; Growing pea sprouts; Mr.Boxhead,eat his hair; Making seed pod animals
- Try growing mushrooms. (A fungi that requires darkness)
www.global-garden.com.au -garden kids-Grow things-Growing mushrooms

Plant Structure

- Pull up a plant and notice the structure of the roots and the soil collected within the roots. Label the parts of a plant. Find out about photosynthesis.
- Find 5 interesting facts about plants.
- Keep a plant journal of the garden or a specific plant you are growing.
- Write a plant care label.
- Basic propagation techniques. Strawberry runners are good for this.
- Adopt a plant or 'patch' in the garden to monitor and care for.
- Make a mini hothouse

www.global-garden.com.au -garden kids- Make a mini hothouse

www.global-garden.com.au -garden kids- Grow things- Growing sunflowers; Growing garlic; Growing potatoes in tyres; Growing pumpkins

www.organicsschools.com.au/ lessons/How plants grow

Soil and decomposition of matter

- Look at soil types. Find examples of different types of soil. Which is the best for growing edible food? Why?
- Test soil nutrient levels and pH in soil using test kits available from nurseries.
- Understanding mulching, compost and nutrient cycles.
- Develop a composting system suitable for your garden.

www.global-garden.com.au -garden kids- Watch and Learn- soil texture

www.organicsschools.com.au - lessons - Healthy soil;composting

- Scootle: L4 Soil Types
L68 Soil
L3 Create a Soil Environment
187 Explore Soil

Compost worms

- Draw and label the parts of a worm. What are compost worms and how are they different from common garden worms? Compare them.
- Conduct an experiment with worms. Make 2 mini composts in jars. Add compost worms to one. Put in same amount of food. Record the process.
- Compare the action of compost worms and garden worms.
- Use the worm castings as liquid fertilizer.

www.organicsschools.com.au - lessons- worm farming

Water Conservation

- Water wise gardening (particularly in areas with tank water) such as weed control.
- What are natives?
- Make a rain gauge.

www.global-garden.com.au -garden kids-Making a rain gauge
www.organicsschools.com.au - lessons - Water;mulch

Most importantly, start growing things. There's all sorts of ways to do this in the classroom. Most of the learning will come from the experience.

General Resources

Primary Connections: Plants in Action, stage 2 Life and Living

Fiction

In the Tall Tall Grass, Denise Fleming

The Very Hungry Caterpillar, Eric Carle

Grouchy Ladybug, Eric Carle

The Tiny Seed, Eric Carle

The Very Busy spider, Eric Carle

The Very Quiet Cricket, Eric Carle

The Very Clumsy Click Beetle, Eric Carle

Looks Like Lunch, Eric Carle.

I'm a Seed, Jean Marzollo

The Carrot Seed, Ruth Krauss

Digital Resources (Scootle)

L699 Garden Detective: Australian Garden: digital resource

L68: Soil

2381: Restaurant Rules

7865: Dragons Jumble Garden

11466: Water Cycle

Internet websites

www.primezone.edu.au

<http://aggie-horticulture.tamu.edu/kindergarden/nutrition/ideas/forkids.html>

<http://www.kiddiegardens.com/>

<http://www.growingraw.com/garden-activities-for-kids.html>

Chickens/Eggs



- Chickens are fabulous in the school garden. Providing they are relatively friendly, they are great companions for the children who love to interact with them daily. Be aware that they will need to be cared for during school breaks!
- There are many ways to feed your chickens from leftover waste throughout the school. Develop a system for volunteers or garden leaders to collect the food and feed the chickens.
- Have chicken carers that do the task on a daily basis. Rotate classroom responsibility for them. Eggs can be used in the canteen or sold to support the garden or used for cooking (the ideal option)
- Describe how you would care for a chicken. Include a suitable home and its materials, its diet and any other care you might need to give.
- Draw and label the anatomy of a chicken. How long does it take for chickens to hatch? How often do they lay eggs?
- Where are chickens farmed?
- Chickens for meat production: organic and free range chickens
- How is chicken meat processed?
- How healthy is chicken for us? What different cuts can you buy? How do we cook chicken?
- Free range, caged and barn laid eggs. What's the difference? What's best?
- Breeds of chickens

Resources and websites:

The Workboot Series: Eggs Resource Kit www.kondinin.com.au

The Workboot Series: The story of Chicken www.kondinin.com.au

www.poultryhub.org Poultry Hub

www.virtualchicken.org explores reproductive system of a hen and egg.

www.chicken.org.au Australian Chicken Meat Federation

www.farmissues.com/virtualTour includes virtual tours of Canadian poultry farms.

<http://thinkegg.com> Egg facts and recipes

www.chicken.com.au View chickens breeding and schools-farm-visit

To The Table

To be developed..

Appendix 1:

Garden Session

Class:

Leader:

Timekeeper:

Other members:

Group Activities:

1. Chickens:

2. Watering:

3. Weeding/ planting:

4. Farm Tour:

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Additional Information:

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