

SDG 15 Seeding Sustainability

MM4 Growing and Foraging



MM4: Growing and Foraging

Experimentation and Exploration

Lesson 8: Raised Beds

Subjects: CSPE, English, Geography, Horticulture, Science

Lesson Title and Summary: Raised Beds

Raised-bed gardening is a form of gardening in which the soil is contained in 'beds', which are usually made of wood, rock, or concrete and which can be of any length or shape. Raised beds extend the planting season, can reduce weeds and they reduce the need to use poor soil.

In this lesson, learners consider design issues related to the construction and siting of raised beds. They also review language for making plans, plan, elevation, scale.

Vocabulary: Aspect, Elevation, Plan, Raised Beds, Scale

In this lesson, the learner will:

- gain an understanding of how raised beds are designed
- consolidate understanding of siting a vegetable garden.
- Develop a design for a raised bed system (extension task)

Materials

- Site Map
- Graph paper

2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



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ACTIVITY INSTRUCTIONS

Activity 1: What are raised beds? Making predictions (20 mins)

1. Put learners into groups of 3. Give them some time to discuss the following questions:

- What is a raised bed? How big should it be?
- What are some of the advantages of a raised bed system?
- What materials can you construct a raised bed from? Be creative! What are some of the advantages and disadvantages of the material choice?
- Are there any materials you should not construct a raised bed from?
- What are some important things to remember when choosing a site for a raised bed system?

2. Share the Worksheet: Raised Beds and discuss the answers / worksheet as a class.

Activity 2 Siting a raised bed system (30 mins)

- As a group, discuss the best place in the school to site your raised bed system.
- Consider all the information from the questions and the worksheet to justify your site.
 - This may involve walking around the school grounds.
- Using graph paper, draw a plan for the raised bed. To do this learners must
 - Decide on a scale, i.e. what does each square on the graph paper equal?
- Have learners decide on what materials they could use
 - What materials would you use?
 - What are the dimensions of the bed in the plan and elevation?
 - Consider the information from activity 2 to help.
- Once completed, create a list of materials needed per raised bed.

REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks
- Two things they found most interesting and would like to explore more
- One – their opinion they have about the tasks

Use Post-its or a mentimeter survey - www.mentimeter.com - to gather reflections

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EXTENSION / REDUCTION ACTIVITIES:

For a shorter class, Focus on Step 1 and include a walk around the school - Step 1 activity 2, step 1.

For a longer class, complete Activities 1,3, then create new groups of three so that there are representatives from different groups in each new trio. Share designs and ideas and ask learners to give each other feedback on improving their design.

For an additional class: Set up Step 3 as a peer assessment activity that learners can complete out of class. In the next class, each learner / group then gets another's design and has to provide written feedback on what they like about it and why, adding 1-2 improvements that they believe can be made to it.

This can then be shared and the best ideas taken to finalise a school raised bed system. Learners can also use the Food Pyramid resources (see media box) to help them with their initial designs.

Introduce one of the videos from the media box to consider how to build raised beds. Learners can discuss the best design / materials based on specific needs identified in Activity 3.

MEDIA BOX: (materials, online video links, extra resources, case studies etc)

Grow It Yourself How to build a raised bed (3:21min) <https://www.youtube.com/watch?v=BpSopUk9diU>

Step by Step (1:17min) <https://www.goodhousekeeping.com/home/gardening/g20706096/how-to-build-a-simple-raised-bed/>

Gardener' World article and Monty Don video (1:36min) <https://www.gardenersworld.com/how-to/diy/how-to-build-a-raised-bed/> also has links further down to different types of raised beds

The Food Pyramid <https://www.gov.ie/en/publication/70a2e4-the-food-pyramid/>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

Go on a tour of raised beds in the local community with a representative of the local Tidy Towns group.

Visit a local community allotment for design ideas.

Invite a landscape designer to talk to the class about garden design.

MM4 L8 WS: DEVELOPING RAISED BEDS



1. What materials can be used for raised beds?

- Anything really, timber planks, bricks, old logs, woven willow, etc.
- Timber planks- permanent, must be waterproofed, bricks- permanent, but heavy, sink into the ground and hard to “fix”, Willow, logs – biodegrade and become a ridge system over time, decaying wood pulls nitrogen from the soil.
- Anything that’s been pressure treated to prevent rot. Railway sleepers for example as the coatings leech into the soil and damage crops or are taken up by them.

2. Where should they be placed? Do you need to do more research? Consider the aspect, sunlight and shelter, proximity to compost, water supply, kitchen / or area where they will be used.

4. Raised beds (containers for growing food in) should be 8” to 18” high, wide enough to work both sides from one side or short enough that you don’t have to walk too far to get around it.

5. Consider how you will control the growing conditions, i.e. Drainage, soil composition, easier to work.



- Using Logs - any found wood can be made to form the edges of a raised bed.
- 1 x 1 joints - a useful no screw raised bed.
- Corrugated tin with wooden re-enforcing both for strength, structure and aesthetic design.

MM4 L8 WS: DEVELOPING RAISED BEDS

15 LIFE ON LAND



- Willow offers a decorative container for raised beds, both supple and strong.
- This could also be developed using living willow, however, as willow likes water this may only suit certain planting designs or crop rotation.



- Cavity bricks are relatively easy to lay and offer bot edging for a raised bed with additional planters.
- This can be developed creatively to add an aesthetic aspect to your raised beds.
- They can also be treated with colour - again adding an additional visual quality to your planting schemes.

