

TASK ANALYSIS  
DIP ED CB/TVET 2025

**Task Name:** Air-layering on croton plants at Marabella North Secondary School.

**Task Description:** Using step-by-step guide to perform air-layering.

**Date:** 19<sup>th</sup> May 2025

**Prepared By:** Riad Rampat

**Class:** 404

Step #	Task Step Description	Required Tools/Resources	Key Considerations/Notes
1.	<b>Wear PPE</b> – Put on gloves. Sanitize the knife.	Gloves, ethanol/sanitizer, knife, cotton	Sterile conditions are necessary to prevent spread of diseases.
2.	<b>Select a healthy branch</b> – Semi-woody, about pencil thickness. Free from diseases or pest damage.		Choosing a too young stem can take longer for roots to develop.
3.	<b>Make 2 ring cuts</b> – Remove a 2–3 cm strip of bark about 30 cm from the tip. Scrape lightly to stop healing.	Knife	
4.	<b>Apply rooting hormone</b> (optional) on the exposed area.	Rooting powder, brush, dropper.	Rooting hormone would speed up the process.
5.	<b>Wrap the cut</b> with moist soil. Press it around the wound.	Pro-mix, water, bucket, plastic wrap.	Pro-mix is a neutral potting medium that does not contain nutrients.
6.	<b>Cover with plastic wrap</b> – Make sure it's tight and sealed.	Plastic	Exposure can cause spread of diseases and water to evaporate.
7.	<b>Tie both ends</b> of the wrap securely with string or tape.	String	Seal tightly to avoid drying of pro-mix or pathogens to enter.
8.	<b>Label the branch</b> (optional) with the date.	Marker	Label date to record time for root development to occur.
9.	<b>Check weekly</b> – Ensure the moss stays moist. Wait 4–8 weeks for roots.		

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10.	<b>Cut below the root ball</b> and plant in soil once roots are visible.	Knife, potting mix, pot.	New plant can be planted in pot or directly into the ground.

Skills and Knowledge Required:

- Prerequisite Skills:
  - Know the parts of a plant (stem, node, bark, roots)
  - Understand asexual vs sexual propagation
  - Know why asexual propagation is used (fast, true-to-type plants)
  - Identify a healthy plant suitable for layering
- Prerequisite Knowledge:
  - Use tools like a knife safely
  - Follow step-by-step instructions
  - Keep materials clean to prevent plant disease
  - Work with care and patience

Performance Criteria

- Indicators of Success
  - Roots are visible through the plastic
  - The moss/soil stays moist but not soggy
  - The branch remains healthy and green
  - New plant survives after being potted
- Common Challenges/Errors
  - Plastic not sealed properly – causes drying
  - Moss too dry or too wet – stops root growth or causes rot
  - Cut not deep enough – healing instead of rooting
  - Using an unhealthy or wrong type of plant

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#### Safety or Compliance Considerations

- Regulations to Follow
  - Always wear PPE: gloves and safety goggles when using sharp tools.
  - Disinfect tools before and after use to prevent spread of plant diseases.
  - Use approved rooting hormones and follow instructions carefully.
  - Dispose of plant waste and plastic wraps properly to maintain hygiene.
- Potential Hazards
  - Cuts or injury from sharp knives or blades.
  - Skin or eye irritation from rooting hormone or sap.
  - Infections or contamination from unclean tools.
  - Allergic reactions from plant sap or moss in sensitive individuals.

#### Time Frame

- Estimated Time to Complete Task
  - Preparation & Setup: 10–15 minutes
  - Performing Air Layering (per plant): 15 minutes
  - Follow-up Monitoring (weekly): 5 minutes per check