



CITIZEN SCIENCE BEACH LITTER AUDIT INSTRUCTIONS



PURPOSE

Beach Litter Audits are a great way to get an accurate picture of what types and quantities of litter are appearing on our beaches, thereby giving us an opportunity to speculate about the sources of this litter and what measures can be undertaken to reduce or eliminate these. Reference sites on beaches are regularly audited to track any increase or decrease of litter items that are known to threaten wildlife and/or human health, or are the subject of ongoing campaigns, eg. Container Deposit Legislation. The data is entered into the State government's LitterWatch database.

VICTORIAN CURRICULUM LINKS

- F-2** Use informal measurements in the collection and recording of observations (VCSIS052).
Use a range of methods, including drawings and provided tables, to sort information (VCSIS053).
- 3-4** Use formal measurements in the collection and recording of observations (VCSIS068).
Use a range of methods including tables and column graphs to represent data and to identify patterns and trends (VCSIS069).
- 5-6** Construct and use a range of representations, including tables and graphs, to record, represent and describe observations, patterns or relationships in data (VCSIS085).
Compare data with predictions and use as evidence in developing explanations (VCSIS086).
- 7-8** In fair tests, measure and control variables, and select equipment to collect data with accuracy appropriate to the task (VCSIS109).
Construct and use a range of representations including graphs, keys and models to record and summarise data from students' own investigations and secondary sources, and to represent and analyse patterns and relationships (VCSIS110).
- 9-10** Construct and use a range of representations, including graphs, keys, models and formulas, to record and summarise data from students' own investigations and secondary sources, to represent qualitative and quantitative patterns or relationships, and distinguish between discrete and continuous data (VCSIS137).
Analyse patterns and trends in data, including describing relationships between variables, identifying inconsistencies in data and sources of uncertainty, and drawing conclusions that are consistent with evidence (VCSIS138).

LOCATION

Any beach location where there is sufficient width of sand to place the 3 quadrats between the top of the beach and the shoreline.

SAFETY

Before you start: Have First Aid Kit and gloves on-site. Check the entire site to note possible hazards.
Warn all collectors: Don't put your fingers where you can't see them!

EQUIPMENT

50m tape measure, compass, clip board, datasheet, pen, 12 tent pegs, gloves, collection bags or buckets.





DETAILED INSTRUCTIONS

1. A permanent structure at the top of the beach serves as the starting point for repeated surveys of the 3 transects. Each transect runs from the permanent landmark at the top of the beach the last high-tide line.
2. Describe the permanent landmark at the top of the beach in the "Start landmark" field at top left side of the datasheet.
3. Run the tape measure across the beach towards the closest point on the shoreline to set the transect direction.
4. At the start landmark, use a compass to find the transect direction across the beach. Record the direction on the datasheet.
5. As you cross the beach look for the last high tide line (usually a trail of seaweed along the beach).
6. Record the distance from top of beach to last high tide at the top left of the datasheet.
7. Mark the end of the transect with a peg 1m past the last high-tide line
8. Leave tape measure in place across the beach and insert pegs 50 cm either side of start and end points.
9. Divide the distance from transect start to finish by 2 in order to calculate the location of the middle quadrat.
10. At the top of the beach, place tent pegs to mark each corner of the 1m X 1m square quadrat (litter data collection zone).
11. Begin litter data collection in quadrat 1 (top of the beach), proceeding to quadrat 2 (middle) and quadrat 3 (high-tide line).
Do not dig into the sand; only collect litter on top of the sand.



- Tape measure
- Vegetation at top of beach
- Top of beach landmark
- Last high tide line
- 1m x 1m quadrat

LITTER COLLECTION TIPS

To save time: Each collector should target a particular item, eg. 'cigarette butts' and collect and count 5 of them before telling the Data Recorder as they put the litter into the collection bag. All litter in audit area quadrats is to be collected, recorded, bagged, and responsibly disposed of.

Note: Do not record litter collected outside of the quadrat on the data sheet.

DATA COLLECTION TIPS

Be sure to record the number of items in the correct quadrat column (1, 2 or 3). If you run out of space in a quadrat column for a particular item, write the name of the item in one of the blank fields.

Blank fields under each MATERIAL TYPE column are for recording harmful litter items found that are not listed on the sheet. Any additional unlisted items are to be recorded in the appropriate column under: NOTES FOR EACH QUADRAT.

To save time and space, record items in groups of 5 as they go in the bag. Put a comma after each entry so it's clear that 5,5 means 10 (not 55).

CONTACT

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LINKS

[Port Phillip EcoCentre](#) | [CSIRO](#) | [LitterWatch Victoria](#) | [Beach Patrol Australia](#)

