

Measuring coral health using transect surveys

The **aim** of this activity is to monitor the health of corals using the Coral Health Chart along a transect line as research technique.

ACARA curriculum links

Science understanding (ACSSU116)

Science inquiry skills (ACSIS124, ACSIS125, ACSIS126)

Science as a human endeavour (ACSHE119 & ACSHE223)



Instructions

- This activity can be conducted snorkelling or reef walking. If reef walking, it should be conducted on a low tide.
- The CoralWatch Virtual Reef Activity is a useful preparation for using the Coral Health Chart in the field.
- The CoralWatch data slates contain all required survey details. You can also create your own data slate by transcribing all the information onto blank waterproof paper. Make sure you don't miss any details!
- The distance along the transect line between measurements can vary depending on coral cover. If there is no coral underneath the assigned reading, students can pick the closest coral colony.
- Ensure students don't damage the coral as they lay out the tape or when taking measurements.
- For future reference, students could mark the start and end of your transect using GPS coordinates and re-survey the transect over time.

Steps to take for a transect survey

1. Read the instructions on the back of the Coral Health Chart.
2. Make sure you have all your equipment as listed.
3. Start with recording survey details on your data slate: name, date, time, GPS coordinates (if possible), water temperature, depth, activity and conditions.
4. Lay out a tape measure or string with measurements marked on it. To decide what intervals to use on the transect tape you should consider the coral cover in your area. With high coral density you could collect data every half a meter, meter or with low density it might be best to take 2 to 5 meter intervals.
5. Swim or walk along the tape, and record data every 50 cm (depending on coral cover). Aim to collect data for 20 different coral colonies.

Equipment

- If snorkelling - mask, snorkel and fins
- If reef walking - booties, hat and sunscreen
- Coral Health Chart
- Waterproof data slate with pencil
- Tape measure or rope with distance measurements
- Thermometer (if available)
- Underwater camera (if available)
- Viewing tube (if available)
- GPS to record location coordinates (if available)

