Classroom on the Sea:
A story of innovation and collaboration at the Cowell Area School
Aquaculture Program

Presented by Jan Potter (Principal Cowell Area School),
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Input from Bob Combes (Senior School Coordinator CAS)

Vision Statement of School guides Aquaculture program

Our Vision

*Developing a positive & innovative community*

Our Purpose

*Achieving our potential now and in the future*

Our Values

*Respect, Learning, Success and Responsibility*
Eyre Peninsula

Tourist Drives

Cowell - Pt. Gibbon - 20km
Pt. Gibbon - Coopoo - 14km
Carp - Crossville Cor - 13km
Crossville Cor - Cowell - 32km
Cowell - Coopoo - 16km
Coopoo - Mangalio - 22km
Mangalio - Yabmanoo - 20km
Yabmanoo - Cowell - 25km

Points of interest around Cowell

1. Flatt Rock Beach - according to scientists, the flat rock formation is a visible remnant of the Ice Age. Good swimming beach.
2. The Knob - a sheltered beach for swimming, and a rocky point for fishing, beach toilet facilities.
3. Pt. Gibbon - Old fishing port. Only part of the original jetty remains. Before the jetty was constructed, wood was loaded into keelboats from the cliff top. Public toilets and BBQ area. Paths along the cliff top.
4. Pt. Gibbon - White sand hills and beach. Sections closely resemble this beach and they can be seen at the point of the sand hils amongst the rock and seaweed. Many locals do snorkeling around the reef at this beach. It is also known for its surfing spot particularly around the outer side of the sand hills. Good swimming beach.

5. Location of McCarthy Cairn - At this point about half a kilometre from the road, Mrs. McCarthy and six of her children perished in a fire in 1880, believed to have been started by natives.
6. Yabmanoo - Site of the first district Post Office and Police Station.
7. Warralakreek - Where the first settlers, Dr. McKeevich and his brothers settled in 1855.
8. Mangalio - Grain and Community Centre for the surrounding farming area.
9. Middlecamp - Shearing Shed and Cooper's Cottage - Used as a railway meeting place from Warralakreek Station when coming wood to Cowell for loading onto the boats.
10. Minnow Creek National Trust Reserve - Ruins of a school which was typical of many other one-room teacher schools in the district.
11. Pt. Gibson Point - First station and wharf site in the district.
12. Ulgarr Gap - Early watering place, where there was a salt garden watered from the fresh water spring, and also a blacksmith's shop.
13. Ulparra Weir - First Weir, constructed in 1891. Water was redirected to Cowell and surrounding districts.
14. Elbow Hill - Named by Captain Matthew Flinders in 1802. Here is the Elbow Hill Inn, a recently renovated shop and licensed restaurant, overlooking pool and service station. Ask to have a look through the renovated messmate church.
15. Mt. Olivers - TV tower, also abandoned Millicent silver and copper mines.
Cowell Area School “AQUACULTURE”

Classroom on the Sea
Cowell Area School specialises in a range of Seafood and Marine skills in the Aquaculture Industry.

**CURRICULUM:**
- Certificate 1 & 2 Seafood Industry (Aquaculture)
- Structured Workplace Learning
- Over 95% success rate – employment, further education
- Cowell Area School is recognized for Australian School Based Apprenticeships
- Links with Australian Fisheries Academy & TAFESA. A

- **ELECTIVE UNITS:** (additional qualifications)
- Students have the opportunity to obtain the following:
  - PADI Diving
  - Boat License
  - Sea time hours (200)
  - Radio Telephony
  - **ACCOMMODATION**
  - Private accommodation will need to be sought.
  - **FACILITIES**
  - Oyster Lease
  - Doorways to Construction
  - Recirculating Tanks
  - Skills Centre
Real not simulated work

**Benefits**
- Perception by students of relevance
- Variation from normal school setting
- Not a simulated workplace
- Allows opportunity to pursue interest area

**Structured Work Days**

Stage 1 Seafood Operation students are rostered to participate in one full work day. They arrive at school earlier than usual and work on the schools oyster lease with the Farm Manager. Once they have successfully completed their Elements of Shipboard Safety arrangements are made for the students to work off site. They are assessed on this work as part of their SACE achievement.

*Advantage: get to experience the reality of oyster farming ‘when the tide is right’.*
Evolution of ‘School on the Sea’
# Aquaculture Units of Competency

**Nominal Hours:**

<table>
<thead>
<tr>
<th>Competency</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Work effectively in the seafood industry</td>
<td>30</td>
</tr>
<tr>
<td>Communicate in the seafood industry</td>
<td>30</td>
</tr>
<tr>
<td>Apply basic food handling and safety practices</td>
<td>20</td>
</tr>
<tr>
<td>Meet workplace health and safety requirements</td>
<td>20</td>
</tr>
<tr>
<td>Carry out basic aquaculture operations</td>
<td>20</td>
</tr>
<tr>
<td>Feed stock</td>
<td>20</td>
</tr>
<tr>
<td>Handle stock</td>
<td>15</td>
</tr>
<tr>
<td>Harvest stock</td>
<td>15</td>
</tr>
<tr>
<td>Collect brood stock and seed stock</td>
<td>25</td>
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</tbody>
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(For every 70 accumulated hours students are credited with 10 SACE credits towards their SACE. This applies to Certificate 1 and Certificate 2 competencies)
New boat and tractor assists in improvements in production and current workplace practice experience.
Value of Oyster lease
World Aquaculture conference: Education, Extension & Technology Transfer
Collaboration: Knowledge sharing & skill building across all aspects: Students visiting Tasmania

Working on Oyster Lease

Ready to unload the Oyster Baskets
Seafood & aquaculture important part of small coastal communities: Cowell Area School encourage & foster the young towards experience & jobs in these industries

This photo appears on School webpage above advertisement advertising oysters for sale and can order from the website: http://acacia.cowellsa.sa.edu.au/cms/?q=node/5
Collaboration: Knowledge sharing & skill building: Students visiting Tasmanian Hatchery Shellfish Culture

Students visiting Tasmania on oyster lease

Gaining wider experience in hatchery in Tasmania
Key strategies for School on the Sea

**School programs** that embed fisheries and aquaculture within programs foster interest as a career.

**Engagement** with local commercial producers, research bodies and other schools involved in similar activities (Australia & overseas) is needed.

*Knowledge & skill building in Tasmania visit*

*Work experience in Tasmania (a student already offered a job when graduated)*
Building knowledge and experience of Industry through school years
Strong Water & Environment focus for all students:

Younger students of Cowell Area School can participate in a series of sea themed activities. These include fishing trips, boat trips, scavenger hunts, sea activities at lunchtime, and a taste of seafood lunch, and practice in science experiments.
Aquaponics

Aquaponics and garden projects supporting recycling of nutrient rich water and sustainable futures education.

Junior students working on the aquaponic vegetable gardens
Land based aquaculture facilities

- Oyster handling / harvesting shed
- Split recirculation system (fresh/seawater) inside a second shed
- An array of aquaria for experiments and tropical fish
- Semi-enclosed recirculation system
  (Tanks contain brown trout, Barramundi, ornamental fish, turtles…)

![Aquaculture facilities images]
• **Land based tank system**: both fresh water and salt water developed

• **Local fish farms** have housed fingerlings in the school tanks for experimental purposes

• **Aquaria** are used for breeding purposes to give students theory & practical experience
Aquaculture related infrastructure
We raise rainbow trout, barramundi and very large goldfish
Skills Centre: provides an Aquaculture classroom and food handling and preparation area with a kitchen. Food and Hospitality is embedded in this course.
Entrepreneurship: Field Days

These opportunities build networks & skills in marketing and knowledge sharing for future business operators & serve to advertise the school program.
So many people want our oysters
A gift pack put together by students.
Contains:

- An Oyster Cookbook
- A shucking board
- Shucking knife
- A brochure about our school
Making Oyster Shucking Boards in Tech. Studies
Keys to success

Collaboration with other schools

Facilities & infrastructure

Individually negotiated curriculum & small class sizes

Workplace assessor training

Relationships with Australian Maritime & Fisheries, TAFESA, Registered Training Organisations (Australian School Based Apprenticeships), National Training Packages

Relationships with Employment Agencies

Small rural community: strong social capital

Belief that authentic learning is valuable

Relationships with oyster growers

Keys to success

Individuals

Organisations (Australian School Based Apprenticeships), National Training Packages

Facilities & infrastructure

Individually negotiated curriculum & small class sizes

Workplace assessor training

Relationships with Employment Agencies

Small rural community: strong social capital

Belief that authentic learning is valuable

Relationships with oyster growers
Strengths of the Aquaculture Course

• An excellent geographical position on Eyre Peninsula

• Own oyster lease & training & job opportunities within this ‘oyster community’

• Have school transport & accommodation to support local and visiting students & teachers

• Local & distance delivery programme

• Recognised as a centre of excellence in education, strong tertiary links to Flinders University and the University of South Australia. The Seafood industry and Industry Pathways Program

• Recognised by international visitors as a centre of excellence in school based aquaculture & reciprocal knowledge & skill building & sharing with visits to Cowell & Cowell students go interstate & overseas for students
State of Progress: 2014

- **Output:** Around 2 million Oyster spat are farmed annually on school’s oyster lease and sold in Australia and overseas.
- **We deliver:** Bistro sized to Coffin Bay regularly for on growing and recent comments have been made about the quality and size of our oysters

- **Awards:** Won first place for Innovative Engagement with Business & Community at 2013 SA Public Teaching Awards
- **Regional Winners** of Excellence in Rural Education 2013

- **Support:** We have a fantastic support network within the school, with the local growers and within the wider Industry.
- **Future:** We are working for sustainability and growth in our program and for innovation now and in the future. In September we will travel to the USA to visit various sites on the East Coast to gather more information and insight.
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