

Tasmanian ocean temperature experiment instructions

TAFI is monitoring inshore water temperatures in 23 selected locations around the coast of Tasmania. Temperature information is recorded every two hours and most data loggers are located at a depth of 10 metres.

The information collected is used to assist marine researchers studying the relationship between temperature and the biology of marine species, such as rock lobster and abalone growth.

The data has been summarised below, with averages given for the months of the year (to two decimal points). The worksheets are designed so your class can collect temperature data from the sea and compare it with the actual scientific temperature data provided.

Four locations have been provided; choose the one most appropriate for your schools location:

- Southern Tasmania - near Southport Lagoon
- Western Tasmania - Cape Sorell
- Northern Tasmania - Stanley Nut
- North Eastern Tasmania - Eddystone Point

Materials

Redmap ocean temperature worksheet.

Waterproof thermometer – you can lower this below the surface or collect a surface temperature reading.

The ocean or nearby body of water. If your school is not located near the sea this is not a problem; just find a nearby body of water and compare your results with that of the sea. You can discuss why temperatures may vary from those provided for the ocean.



Directions

Step 1

Read the worksheet and plot the given temperatures on the graph provided.

Step 2

As a class you may like to discuss the best way to collect water temperatures. This may vary depending on your ability to access the ocean

You may collect temperature data only once per month, or you may collect temperatures throughout the month and average those before comparing them with the temperatures provided.

Step 3

Compare the results collected with the data provided by plotting your results on to a graph.

Step 4

If you only collected one temperature a month for comparison, how representative of the actual temperature is your result? How could you make your data more accurate?

Discuss the data, mentioning changes like:

- Seasonal variations – what month is it hottest or coldest?
- Maximum highs and lows
- Why do the temperatures vary slightly each year?
- What is the trend of the temperature data (upward or downward)?

Explain any variations or similarities between the two data sets.





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Name of scientist
Grade of scientist
Date of experiment

Aim or hypothesis

Method



Materials

Results

Temperature logging data: Southern Tasmania - Near Southport Lagoon

Monthly average temperature (°Celsius)								
Month	Year of data collection						NEW DATA	
	2004	2005	2006	2007	2008	2009		
JAN	12.23	14.77	15.84	14.55	16.45	14.76		
FEB	12.25	15.40	15.98	15.92	16.12	15.62		
MAR	11.97	14.96	15.85	15.85	15.50	-		
APR	11.45	14.45	14.02	14.85	14.25	-		
MAY	11.82	13.59		14.33	13.61	-		
JUN	12.56	12.86	12.23	13.54	13.26	-		
JUL	13.13	12.75	12.04	12.52	12.37	-		
AUG	14.12	12.21	11.78	12.10	11.98	-		
SEPT	-	12.49	11.86	12.17	11.68			
OCT	-	12.87	12.14	12.28	12.20			
NOV	-	14.24	12.58	13.79	12.85			
DEC	-	15.28	13.45	15.15	13.51			

Conclusions





SPOT. LOG. MAP.

