

Activity T2

Mobi's Catchment Challenge



How can you tell if a catchment is healthy?

When you get sick, a doctor will conduct a number of tests that help to predict how healthy or unhealthy you are.

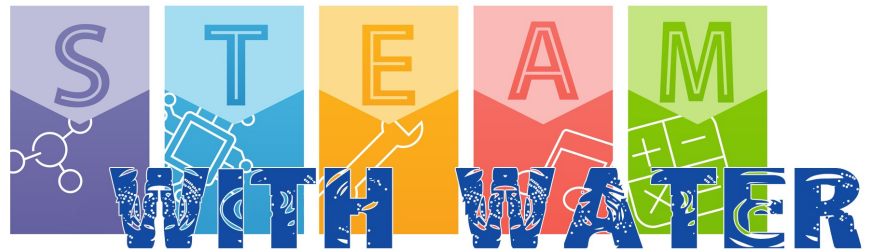
Scientists do the same to monitor the health of the waterways. **The Smart Catchments project** is using SMART sensors placed in Saltwater Creek to and these are sending readings directly to the Gauging Station, which we can then see LIVE online. Therefore any concerns that are raised about the health of the creek can be responded to promptly.

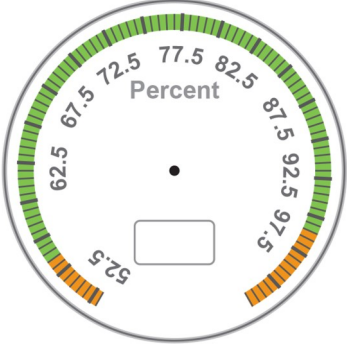
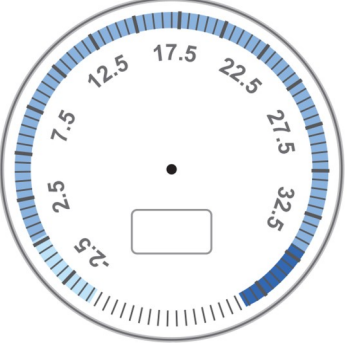
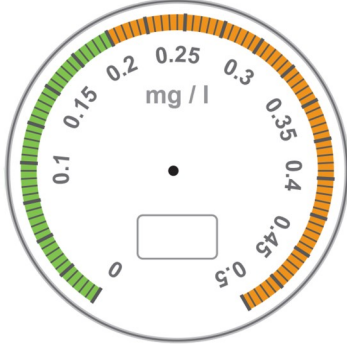
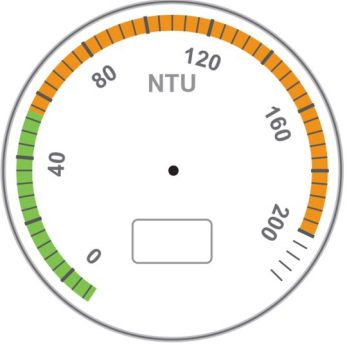
Head to Mobi's Catchment Challenge under educational tools at www.cairns.qld.gov.au/smartcatchments to take a look at the dials to see what is being monitored.

<p>pH</p> <p>A circular dial for measuring pH. The scale ranges from 6.4 to 9.0. The dial is color-coded: green for 6.4-7.6, yellow for 7.6-8.4, and orange for 8.4-9.0. A needle points to 7.2. The text 'pH Units' is in the center. There is a small empty box at the bottom for recording the reading.</p>	<p>What can changing levels of pH in a creek indicate?</p> <p>What effects pH levels?</p>
<p>Chlorophyll-a</p> <p>A circular dial for measuring Chlorophyll-a. The scale ranges from 3.0 to 5.0. The dial is color-coded: green for 3.0-4.2, yellow for 4.2-4.6, and orange for 4.6-5.0. A needle points to 3.8. The text 'ug / l' is in the center. There is a small empty box at the bottom for recording the reading.</p>	<p>What is Chlorophyll-a?</p> <p>Why do we measure Chlorophyll-a?</p>
<p>Temperature</p> <p>A circular dial for measuring temperature. The scale ranges from 18 to 34. The dial is color-coded: green for 18-26, yellow for 26-30, and orange for 30-34. A needle points to 26. The text '°C' is in the center. There is a small empty box at the bottom for recording the reading.</p>	<p>What is a healthy/normal temperature range for Saltwater Creek?</p> <p>What effects water temperature?</p>

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<p>Dissolved Oxygen</p>  <p>A circular gauge for Dissolved Oxygen. The scale is labeled 'Percent' and ranges from 52.5 to 97.5 in increments of 2.5. The needle is positioned at approximately 62.5. There is a small white box for recording the reading.</p>	<p>What causes low dissolved oxygen?</p> <p>How does low dissolved oxygen effect the health of the creek?</p>
<p>Salinity</p>  <p>A circular gauge for Salinity. The scale ranges from -2.5 to 32.5 in increments of 2.5. The needle is positioned at approximately 17.5. There is a small white box for recording the reading.</p>	<p>What is salinity a measure of?</p> <p>What is a normal reading for salinity in Saltwater Creek?</p>
<p>Nitrate</p>  <p>A circular gauge for Nitrate. The scale is labeled 'mg / l' and ranges from 0 to 0.5 in increments of 0.05. The needle is positioned at approximately 0.15. There is a small white box for recording the reading.</p>	<p>What is nitrate?</p> <p>What is a normal level of nitrate?</p>
<p>Turbidity</p>  <p>A circular gauge for Turbidity. The scale is labeled 'NTU' and ranges from 0 to 200 in increments of 40. The needle is positioned at approximately 40. There is a small white box for recording the reading.</p>	<p>What causes high levels of turbidity?</p> <p>What is the effect of high levels of turbidity?</p>