

	<b>WATER WISE EDUCATION TEAM ACTIVITY TEMPLATE</b>	
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<b>Grade</b>	<b>11</b>
<b>Term</b>	<b>4</b>
<b>Subject</b>	<b>Life Science</b>
<b>Name of Topic</b>	<b>Human Impact on the Environment: Current Crises for Human Survival: Problems to be Solved Within the Next Generation</b>
<b>Sustainable Development Goal/s (SDGs)</b>	SDG 2: Zero hunger SDG 3: Good health and well being SDG 6: Clean water and sanitation SDG 11: Sustainable cities and communities SDG 12: Responsible consumption and production SDG 13: Climate action SDG 14: Life below water SDG 15: Life on land
<b>Name of Activity/ Programme</b>	Human Impact Tin Talk
<b>Outcomes/Purpose</b>	<p>To introduce content relating to the causes and consequences of the following (related to conditions and circumstances in South Africa):</p> <ul style="list-style-type: none"> <li>- The atmosphere and climate change,</li> <li>- Water availability and quality,</li> <li>- Food Security,</li> <li>- Loss of Biodiversity,</li> <li>- Solid Waste Disposal.</li> </ul> <p>To establish learner knowledge of the core content and to broaden the understanding of the interrelatedness between the biotic and abiotic factors in the environment and the relationships and consequences of humans between these.</p>
<b>Link to CAPS</b>	<b>Strand 3 Environmental Studies:</b> Human Impact on the Environment. In this knowledge strand, it is important to emphasize the interrelatedness and interdependence of the human impacts and the environment.  Refer to CAPS document: <b>FET Life Sciences: Page 51-52</b>



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<b>Materials needed for the Activity</b>	<ul style="list-style-type: none"><li>- Set of labels (attached activity template).</li><li>- Pictures depicting each of the labels in activity template.</li><li>- Tin cans and/or boxes of various sizes (if these are not available then labels and pictures can be placed directly onto the wall or board in a classroom - however the impact will not be as great as when using a tin can or a box).</li><li>- Prestik</li><li>- Glue</li><li>- Table or equivalent surface or a wall or board (depending on what is available).</li></ul>
<b>Activity Outline (In detail)</b>	<ul style="list-style-type: none"><li>- Place the different size tins or boxes on the table in front of the classroom.</li><li>- Engage with the learners and ask them what are the 5 current crises/ challenges related to the human impact on the environment. (Their answers should relate to the atmosphere and climate change, water availability and quality, food security, loss of biodiversity and solid waste disposal).</li><li>- Once the learner identifies one of the above, get them to take a large tin/box and label it with the challenge (you can also pre label the tins to save time and turn them so that the learners cannot see them until they give you the correct answer).</li><li>- Once all challenge tins/boxes have been labeled, let them be placed on the table in a straight row facing the learners.</li><li>- Now proceed to ask the learners what are the abiotic/ non-living factors in the environment.</li><li>- Once the learners identify the abiotic factors, get them to take another large tin/box and label it with the challenge (you can also pre label the tins to save time and turn them so that the learners cannot see them until they give you the correct answer).</li></ul>



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- Now get the learners to think about how the abiotic factors relate to the current crises and get them to place the abiotic factors on top and between the current crises tins/ boxes (see image below).
- Ask the group what are the biotic/ living factors in the environment and get them to label the 2 remaining medium sized tins/boxes and the small tin/ box. Let them discuss why they decided to label them in that way.
- Place the 2 medium tins/ boxes of biotic factors on top of the abiotic factors and the smallest tin/ box on top of the 2 medium boxes (see below image for clarity).
- Open discussion around the relationships and interdependence between the biotic and abiotic factors.
- Further discuss the relationships between the hydrosphere, lithosphere, atmosphere and biosphere by allowing the learners to place labels of these as where they think they belong in the visual model.
- Ask questions about:  
What would happen if we continued to use biotic and abiotic factors in an unsustainable way? At this point remove the water or light tin.  
Open discussion around the implications of having poor water quality and less water available, how will this affect the other biotic and abiotic factors.  
What would happen if there was no more water? (what does it mean for the environment, what does it mean for me, what does it mean for the community?)
- Each one of the current crises can be questioned in a similar way and a connection can be shown on how everything is interrelated and interdependent.



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- Questions can be asked to learners as to what they think could be possible solutions to the current crises.
- Learners can be asked how they could change their own behavior to help address these issues.
- Label of footprint to be placed on or next to the 5 tins at the base (see below), discussion to be based on how the current crises are the footprints that we are leaving.
- Water Wise hand label to be used to show that by being Water Wise we can have a positive impact by changing our behavior.



**Key words for the  
Activity  
(Terminology)**

- Human Impact on Environment,
- The atmosphere and climate change,
- Water availability and quality,
- Food Security,
- Loss of Biodiversity,
- Solid Waste Disposal,
- Biotic and Abiotic
- Hydrosphere, Lithosphere, Atmosphere, Biosphere
- Footprint and handprint

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<b>Name of Worksheet/s (please attach)</b>	Human Impact Tin Talk: Labels and Pictures
<b>Notes for the Facilitators</b>	The activity may be used as a picture building game in the event of tins and boxes not being available.
<b>Any opportunity for using technology e.g. Computers; GPS; cel phones; etc.</b>	For each of the current crises there is opportunity to show videos relating to each topic. For more about the six meanings of being Water Wise the website could be used. <a href="http://www.randwater.co.za">www.randwater.co.za</a> and click on the Water Wise logo.
<b>References</b>	CAPS document: FET Life Sciences: Page 51-52
<b>Assessment</b>	
<b>Activity developed/adapted by</b>	Developed by Nyree
<b>Activity developed/adapted date</b>	Finalised 24 March 2020