**Pest Free Tawa – unit plan **

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| **Curriculum level:** 3  **Age:** Year 5/6 | **Title/Context:** Pest Free Tawa  **Time for unit:** 3 weeks + | | **Key understandings:**   * Ecosystems, habitats * Impacts of pests |
| **Curriculum achievement objectives**  ***– from the Nature of Science strand*** Understanding about science  * Students identify ways in which scientists work together and provide evidence to support their ideas.  Investigating in science  * Students build on prior experiences, working together to share and examine their own and others’ knowledge.  Communicating in science  * Students engage with a range of science texts and begin to question the purposes for which these texts are constructed.  Participating and contributing  * Students use their growing science knowledge when considering issues of concern to them. * Students explore various aspects of an issue and make decisions about possible actions. | | | |
| **Capability focus**:   * Gather and interpret data * Engage with science | | | |
| **Curriculum achievement objectives**  ***–* *from the contextual strand***  **Living World** – **Ecology**  Students explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human induced (level 3) | | | |
| **Learning outcomes:** *(from both the Nature of Science strand and the contextual strand/s)*  Students will:   * have multiple opportunities to make careful observations and will be able to differentiate between observation and inference * explain some of the characteristics of scientists * explain what is required to do thorough research * be able to identify pests within our school habitat * understand why certain animals are considered pests * as citizen scientists make observations and record data found around our local community and online * apply their knowledge and experience to design a pest trap for a specific pest, suitable for use in the school or home environment. | | | |
| **Māori and Pacific Nations considerations:**  Students should be engaging with genuine te reo Māori, history and tikanga. The best way for them to do this is to learn about te ao Māori from tangata whenua. Talk with Tawa College and with our Kapa Haka Leaders. The unit provides strong opportunities to develop the concept of kaitiakitanga (guardianship) and the process and practices of protecting and looking after the environment. | | | |
| **Integration with: technology and maths**  **Technology** L3:  **Technological knowledge – Technological products**  Students understand the relationship between the materials used and their performance properties in technological products.  **Maths** L3:  **Statistical investigation**  Students conduct investigations using the statistical enquiry cycle: gathering, sorting, and displaying multivariate category and whole number data and simple time-series data to answer questions; identifying patterns and trends in context, within and between data sets; communicating findings, using data displays.  **Statistical literacy**  Students evaluate the effectiveness of different displays in representing the findings of a statistical investigation or probability activity undertaken by others. | | | |
| **Lesson structure and sequence**  Food web activity.  Think, pair, share about what a pest is, types of pests. | | **Organisation/questions/sources/ resources**  [www.sciencelearn.org.nz/resources/1173-new-zealand-bush-ecosystems](https://www.sciencelearn.org.nz/resources/1173-new-zealand-bush-ecosystems) | |
| Tracking tunnels:   * Footprint identification * Defining pest * What evidence can we find of pests around us? * Placing tracking tunnels around school and identifying footprints from these. | | Pest Free Tawa sheet  [www.doc.govt.nz/nature/pests-and-threats/animal-pests](http://www.doc.govt.nz/nature/pests-and-threats/animal-pests)  [www.pfw.org.nz/get-involved/resources](http://www.pfw.org.nz/get-involved/resources)  [www.sciencelearn.org.nz/resources/2195-predator-free-2050-vision](http://www.sciencelearn.org.nz/resources/2195-predator-free-2050-vision)  [www.sciencelearn.org.nz/resources/2196-can-we-make-new-zealand-pest-free-introduction](http://www.sciencelearn.org.nz/resources/2196-can-we-make-new-zealand-pest-free-introduction)  [www.sciencelearn.org.nz/resources/2614-pest-detectives](http://www.sciencelearn.org.nz/resources/2614-pest-detectives)  [www.incrediblescience.co.nz/eco-memory/animal-footprints](https://www.incrediblescience.co.nz/eco-memory/animal-footprints/)  [ww.sciencelearn.org.nz/resources/1171-making-a-tracking-tunnel](https://www.sciencelearn.org.nz/resources/1171-making-a-tracking-tunnel) | |
| Animal tracks game. | | [www.incrediblescience.co.nz/eco-memory](http://www.incrediblescience.co.nz/eco-memory) | |
| Online citizen science Identify New Zealand Animals. | | Guest speaker: Victor Anton, Victoria University of Wellington to introduce this.  Model using the OCS Identify New Zealand Animals by referring to the tutorial.  [www.zooniverse.org/projects/vykanton/identify-new-zealand-animals/classify](https://www.zooniverse.org/projects/vykanton/identify-new-zealand-animals/classify) (Note: this project is now complete)  [www.sciencelearn.org.nz/resources/2607-citizen-science-online-animal-identification](http://www.sciencelearn.org.nz/resources/2607-citizen-science-online-animal-identification)  <https://predatorfreenz.org/detecting-predators-city-works-best> | |
| Interpreting graphed data  What is this bug? activity to make using this database and collected bugs/picture cards. | | [www.landcareresearch.co.nz/resources/identification/animals/bug-id/what-is-this-bug](http://www.landcareresearch.co.nz/resources/identification/animals/bug-id/what-is-this-bug) | |
| Designing traps:  Finding out about NZ inventions. | | <http://instructionalseries.tki.org.nz/Instructional-Series/School-Journal/School-Journal-Level-3-May-2017/Designed-for-Good>  [www.doc.govt.nz/news/media-releases/2014/doc-trialling-new-version-of-self-set-traps](https://www.doc.govt.nz/news/media-releases/2014/doc-trialling-new-version-of-self-set-traps) | |
| Designing a model for a specific pest.  Poster diagram explaining detail and 3D model. | | [www.stuff.co.nz/business/85552226/traps-lure-whack-kill-rodents-to-help-make-nz-predatorfree-by-2050](https://www.stuff.co.nz/business/85552226/traps-lure-whack-kill-rodents-to-help-make-nz-predatorfree-by-2050)    [www.goodnature.co.nz/products/rat-stoat/](https://www.goodnature.co.nz/products/rat-stoat/)    [www.goodnature.co.nz/fileadmin/documents/Manuals/A24\_Success\_Guide\_REV\_13\_NZ.pdf](https://www.goodnature.co.nz/fileadmin/documents/Manuals/A24_Success_Guide_REV_13_NZ.pdf)  [www.radionz.co.nz/news/business/233798/pest-trap-takes-off](https://www.radionz.co.nz/news/business/233798/pest-trap-takes-off)  [www.radionz.co.nz/news/national/313828/self-resetting-rat-traps-20-times-better-than-standard-traps-study](https://www.radionz.co.nz/news/national/313828/self-resetting-rat-traps-20-times-better-than-standard-traps-study) | |
| **Assessment:**  [Assessment Resource Banks](https://arbs.nzcer.org.nz/):   * Animal pests * Which pest am I? * Why are these animals pests? | |  | |