## Field Studies (Plankton trawl, mangroves, transects, Macro Inv, Ghost crab study)

**Notes:**

* Where a [CARA activity guideline](https://education.qld.gov.au/curriculum/school-curriculum/CARA/activity-guidelines) exists for the activity and the minimum requirements outlined cannot be met the activity must be modified or alternative controls implemented to ensure an equivalent level of safety for staff, students and others involved.
* Where a CARA activity guideline does not exist, and when considering any other risks relevant to an activity, the [Curriculum activity risk planner](http://ppr.det.qld.gov.au/education/management/Procedure%20Attachments/Managing%20Risks%20in%20School%20Curriculum%20Activities/Curriculum%20Activity%20Risk%20Planner.DOC) is to be used.

|  |  |
| --- | --- |
| Activity Description: Scientific field studies | |
| Teachers/Leaders: Eric Cech, Mia Kitchener, Andrew Gill, Paul Kanters, Cathy Capearn | |
| Class groups: All | Number of students: Mixed |
| Start date: 0/702/2022 | End date: 09/12/2022 |

*Use this risk assessment matrix as a guide to assess the* [*inherent risk level*](http://ppr.det.qld.gov.au/education/management/Pages/Managing-Risks-in-School-Curriculum-Activities.aspx)*. Refer to the* [*Curriculum activity risk planner*](http://ppr.det.qld.gov.au/education/management/Procedure%20Attachments/Managing%20Risks%20in%20School%20Curriculum%20Activities/Curriculum%20Activity%20Risk%20Planner.DOC) *for further details.*

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| --- | --- | --- | --- | --- | --- |
| **Likelihood** | **Consequence** | | | | |
| 1 - Insignificant | 2 - Minor | 3 - Moderate | 4 - Major | 5 - Critical |
| 5 - Almost Certain | Medium | Medium | High | Extreme | Extreme |
| 4 - Likely | Low | Medium | High | High | Extreme |
| 3 - Possible | Low | Medium | High | High | High |
| 2 - Unlikely | Low | Low | Medium | Medium | High |
| 1 - Rare | Low | Low | Low | Low | Medium |

*Indicate the assessed risk level and undertake the actions required for that level of risk.*

| **Inherent risk level** | | | **Action required** |
| --- | --- | --- | --- |
|  | **Low** | Little chance of incident or injury | * Manage risk through regular planning processes. |
|  | **Medium** | Some chance of an incident and injury requiring first aid | * Document risks and controls in regular planning documents. * Manage risk through regular planning processes OR complete this *Curriculum Activity Risk Assessment*. |
|  | **High** | Likely chance of a significant incident and injury requiring medical treatment | * A *Curriculum Activity Risk Assessment* is required to be completed. * Principal or head of program (i.e. DP, HOD, HOSES) approval is required prior to conducting this activity. * Parent/carer consent is recommended. * Once approved, activity details are to be entered into the [School curriculum activity register](http://ppr.det.qld.gov.au/education/management/Procedure%20Attachments/Managing%20Risks%20in%20School%20Curriculum%20Activities/School-curriculum-activity-register.docx). |
|  | **Extreme** | High chance of a serious incident resulting in highly debilitating injury | * Consider conducting an alternative activity or modifications to the activity that could achieve comparable learning outcomes. * A *Curriculum Activity Risk Assessment* must be completed. * Principal approval is required prior to conducting this activity. * [Parent/carer](http://ppr.det.qld.gov.au/education/management/Procedure%20Attachments/School%20Excursions/Permission%20form%20template.DOC) consent must be obtained for student participation. * Once approved, activity details are to be entered into the  [School curriculum activity register](http://ppr.det.qld.gov.au/education/management/Procedure%20Attachments/Managing%20Risks%20in%20School%20Curriculum%20Activities/School-curriculum-activity-register.docx). |

**NOTE:** If the activity is to be held off-site, parent/carer consent is required irrespective of the inherent risk level. Refer to the [School Excursions](http://ppr.det.qld.gov.au/education/management/Pages/School-Excursions.aspx) procedure for the Excursion planner template.

Planning considerations

*Incorporate the following factors when planning risk management strategies for this activity.*

**Which students will be involved?**

* The number of participants, size of student groups and students' capabilities is considered e.g. age, experience, competence, fitness, maturity.
* Any individual participant needs e.g. personalised learning, support provisions is considered (including behaviour support plans), health management (including health plans and prescribed medication requirements) that may require additional supervision ratios or identification (including uniforms, hats and/or high visibility wrist bands).

**Where will the students be?**

* The location of the activity is considered e.g. remote/easily accessible, public /private, school/classroom/workshop or other.
* The number of participants is appropriate for the available space.
* If outdoors – sunsafe strategies are implemented; weather and environmental conditions are assessed before and during activity (e.g. temperature, storms, water currents, tides); and strategies to reduce the likelihood of viruses, allergies and skin infections caused by insects (e.g. ticks, mosquitoes, spiders) and other animals are applied.
* The site is checked for hazards (e.g. poisonous plants, dangerous animals, uneven terrain, barbed wire) and necessary controls implemented.
* The nature of the activity is considered to ascertain whether safety/exclusion zones or spectator zones are appropriate.
* Activities are appropriately situated in relation to buildings, pedestrians, members of the public, vehicles and other activities e.g. designated areas for activity, spectators and vehicles are established.

**What will the students be doing?**

* The nature and duration of the activity is considered i.e. need for drinking water, food, rest, appropriate clothing, warm-up and warm-down.
* Instruction in rules, pre-requisite skills and safety procedures is provided to participants.
* Student skills are developed in a progressive and sequential manner.
* First aid and emergency medical treatment provisions are appropriate for the type of activity and location e.g. first aid kit, first aid trained personnel, Ventolin®, Epipen®, and students' personal prescribed medications as required in health plans are available.
* Emergency response strategies are in place that include, but not limited to, communication plans (e.g. mobile phone, walkie talkie), safety induction, evacuation plans.
* Hair, clothing, footwear and jewellery are worn in a manner that is appropriate and safe for the activity.
* Personal items, e.g. drink bottles, towels and mouthguards, are not shared between participants.

**What will the students be using?**

* Instruction in safety procedures and safe handling of equipment is provided.
* All equipment (including protective equipment) is suitable for the activity, properly maintained, appropriately used and complies with the relevant safety standard.
* [Relevant department procedures and guidelines](https://education.qld.gov.au/curriculum/school-curriculum/CARA/activity-guidelines) are adhered to for the use of equipment, compliance of equipment and appropriate work processes.

**Who will be leading the activity?**

* A registered teacher will have overall responsibility for the activity.
* Sufficient adult supervision is in place to manage the activity safely (including in emergency situations).
* The activity leader has the expertise (formal qualifications) or competence (knowledge and skills) to plan, induct, instruct and manage the activity safely for participants and others.
* There are sufficient supervisors present with current First Aid qualifications (including CPR) or ready access to qualified first aid personnel.
* A safety induction session (including designation of roles) is conducted with all supervisors prior to the commencement of the activity outlining risk management processes and emergency response strategies for the activity.
* Supervisors are active in their supervision, visible and are readily identifiable to participants.
* Blue Card requirements are adhered to for all supervising leaders/volunteers.

**I have incorporated the above factors when planning my risk management strategies for this activity.**

**Additional activity-specific requirements for participants with specialised learning needs are provided in the Other Details box below.**

| Other Details: |
| --- |
|  |

*Where a* [*CARA activity guideline*](https://education.qld.gov.au/curriculum/school-curriculum/CARA/activity-guidelines) *exists, ensure the minimum requirements are met.*

*Check if relevant Codes of Practice/Guidelines exist for each activity.*

*Consider any other information relevant to the safety of staff and students when conducting this activity and document below.*

***Where a CARA activity guideline does not exist:***

X I have identified the hazards and risks relevant to this activity and provided information below in the respective boxes about the risk management strategies that will be implemented to ensure the safety of students and others.

Mandatory/Special Requirements

Where hazardous chemicals are used or generated by the activity (e.g. dust, gas, fumes), complete the [Chemical Hazards in the Curriculum template](https://education.qld.gov.au/curriculum/school-curriculum/CARA/activity-guidelines) and attach it to this risk assessment.

Note: Where the overall risk level conclusion for the use of a hazardous chemical is extreme, the activity must not proceed, as risks are not effectively controlled.

| Provide information about any mandatory or special requirements for each activity that is to occur: |
| --- |
| *Mandatory requirements must be met for the activity to be conducted.*  ·Refer to the School Excursions and International School Study Tours procedure for off-site activities.  ·Identify hazards associated with biological materials and animals and establish appropriate management  processes that comply with the Infection control guideline and/or relevant Australian Standards (e.g. AS  2243.3 — Safety in laboratories: Microbiological safety and containment).  ·Use the Chemical Hazards in the Curriculum template and Chemical Hazards Guidance notes when  required.  ·Establish and implement procedures appropriate to the activity, location and conditions. This must  include, but is not limited to: safety (e.g. identification of ingestion hazards, defined procedures in a  published experiment); emergencies (e.g. spill control, injury, first aid); communication (e.g. assistance);  and supervision.  ·Induct students on procedures for safety and correct technique.  ·Trial any activity sourced online to ensure all hazards are identified, controls are planned, procedures are appropriate and educational outcomes exceed the risk of conducting the activity.  ·Do **not**:  - collect samples from areas likely to pose risk of contamination by human pathogens including, but not  limited to, human or animal body fluids or waste on toilets, carcasses, diseased tissue (plant or  animal), hand basins, door handles, phones or computer keyboards; |

Supervision Requirements

| Provide information about supervision for each activity that is to occur: |
| --- |
| Medium Risk: A registered teacher with competence (knowledge and skills) in the activity and its potential hazards including using aseptic technique when using/growing cultures.  High Risk: A registered teacher with qualifications in science (or an equivalent qualification appropriate to the activity), competence (knowledge and skills) and experience in the activity and knowledge of its potential hazards including the precautionary approach, aseptic technique and waste management. |

Qualification Requirements

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| --- |
| Provide information about the leader/supervisor’s relevant qualifications and/or competence for each activity that is to occur: |
|  |

Equipment/Facility Requirements

| Provide information about equipment/facilities for each activity that is to occur: |
| --- |
| ·Location must be suitable to the science activity being undertaken.  ·Adequate ventilation and sufficient workspace for the planned activity.  ·Suitable and accessible safety and first aid equipment as appropriate.  ·Source biological specimens from commercial suppliers.  ·Tools must be well-maintained, sharpened, stored appropriately when not in use, transported safely (e.g.  using a protective cover), cleaned following use to reduce the risk of contamination.  ·Personal protective equipment must include fully enclosed footwear and apron/coat. Other personal  protective equipment will depend on the activity and may include: lab standard eye protection; gloves; and  appropriate face protection  ·Take appropriate precautions when maintaining, storing, transporting and disposing biological materials  within an educational institution (e.g. use Clinical and related waste guideline). Such materials for disposal  include but not limited to: live animals (e.g. fish); biological material (e.g. specimens); and used instruments (e.g. dissection boards, probes).  ·Use a double-bagging technique when disposing of hazardous biological materials.  ·Clean-up equipment (e.g. broom, dustpan and brush) including disinfectants for use with microorganisms. |

Hazards and Control Measures

Information on managing common hazards and risks in the school environment can be found at [Hazards and Risks](https://education.qld.gov.au/initiatives-and-strategies/health-and-wellbeing/workplaces/safety/hazards).

| Provide information about:   * Hazards: | * Planned control measures: |
| --- | --- |
| **Considering**  **environmental**  **conditions**  **Equipment** | ·Undertake a reconnaissance of new or infrequently used fieldwork areas to ensure suitability and safety.  ·When intending to conduct activities outside, assess weather (Bureau of Meteorology) and environmental conditions.  Cease activities when conditions tend towards unfavourable (e.g. impending storm).  Ensure the school’s sun safety strategy is followed.  Ensure the location is suitable for the activity and for the storage, transportation and disposal of the biological material and chemicals used.  Briefs given on use of all equipment  Shovel safety is explained. Carrying and digging  Students to wear closed in shoes when using a shovel |
| **Accessing**  **facilities and using**  **equipment**  **Accessing facilities and using equipment**  **Managing student**  **considerations**  **Accessing facilities and using equipment**  **Managing student considerations** | ·Review experimental procedures. Identify, record and control foreseeable hazards associated with individual activities.  ·If hazardous chemicals or biological materials are required, use only the smallest quantity that will guarantee the viability of the experiment.  ·Refer to, and follow, supplier Safety Data Sheets (SDS), manufacturer instructions or product information sheets for equipment and biological material.  ·Equipment must be well-maintained, transported safely, stored appropriately when not in use and cleaned following use. Visually inspect equipment and remove damaged electrical equipment, glassware and/or apparatus from service.  ·Establish, induct and implement procedures for clean-up and storage of equipment.  Sterilise any equipment used for microbiology or genetic material before the activity appropriate to Australian Standards.  ·Label all biological material so it and associated hazards can be clearly identified.  ·Use (or prepare) standard operating procedures (SOP) to address all safety aspects of the activity (e.g. Science-based risk assessment tool). These procedures should address all aspects fo the activity (e.g.  appropriate level of facilities for microbial risk groups, handling, disposal and sterilisation procedures). Attach these procedures to the CARA record.  ·Establish, induct and implement procedures for management and disposal of dissection, microbial and genetic wastes (e.g. disposed in a designated receptacle)  Page 4 of 5 Biological activities v2.0  *During the activity*  ·Implement protection and handling processes to avoid contact with plant and animal material (e.g. saps, tissue matter). Comply with Animal Use in Queensland State Schools requirements when handling live animals.  ·Manage spills immediately.  ·Establish and implement exclusion zones to maintain a safe activity area during teacher demonstrations.  ·Handle all cultures with the assumption that they are potentially hazardous.  ·Monitor and control student movement when environmental hazards exist (e.gclassroom furniture, traffic, outdoors).  *After the activity*  ·Ensure biological material (e.g. microbial, genetic, enzymatic) and tools are sterilisedappropriately before disposal. Note: If unsure, seek advice from an institution  proficient in disposal techniques such as a university.  ·Label and date all specimens and samples for storage. Refrigerate as necessary.  Dispose of within appropriate timeframes.  ·Sterilise equipment in contact with microbial and genetically modified organisms.  ·Follow hand hygiene practices established in the Infection Control Guideline.  **Additional links**  Australian school science information support for teachers and technicians  Creating Healthier Workplaces  Department of Agriculture and Fisheries  and 'sharps' (e.g. scalpel blades disposed in an appropriate sharps containers). Refer to SDS or consult local authorities on the appropriate means of disposal. |
| **Managing student**  **considerations** | ·Ensure appropriate personal protective equipment (e.g. gloves) is worn/used during the activity.  ·Ensure loose clothing and long hair is appropriately secured.  ·Where individual experimental investigations are undertaken, ensure students have complete and appropriate procedures in place and have identified and managed any hazards associated with their activity.  ·Review activity instructions with students before commencing the activity. Ensure students have been inducted with regard to the correct setup and operation of all equipment and can use appropriate laboratory technique to complete the activity safely.  ·Monitor students for safe movement around the activity area. |
| **Accessing**  **facilities and using**  **equipment** | ·Implement protection and handling processes to avoid contact with plant and animal material (e.g. saps, tissue matter). Comply with Animal Use in Queensland State Schools requirements when handling live animals.  ·Manage spills immediately. |
| **Managing student**  **considerations** | ·Establish and implement exclusion zones to maintain a safe activity area during  teacher demonstrations.  ·Handle all cultures with the assumption that they are potentially hazardous.  ·Monitor and control student movement when environmental hazards exist (e.g.classroom furniture, traffic, outdoors). |
| **Accessing**  **facilities and using**  **equipment** | ·Ensure biological material (e.g. microbial, genetic, enzymatic) and tools are sterilised appropriately before disposal. Note: If unsure, seek advice from an institution proficient in disposal techniques such as a university.  ·Label and date all specimens and samples for storage. Refrigerate as necessary.  Dispose of within appropriate timeframes.  ·Sterilise equipment in contact with microbial and genetically modified organisms. |
| **Managing student**  **considerations** | ·Follow hand hygiene practices established in the Infection Control Guideline. |

| Submitted by: | |
| --- | --- |
| Name: Paul Kanters | Position: Teacher |
| Email: pkant2@eq.edu.au | |
| Signed: | Date: 03/2/22 |

| Approval *(only required for high or extreme risk activities)* | | | |
| --- | --- | --- | --- |
| X | Approved as submitted | | |
| By: Andrew Gill | | Designation: Principal | |
| Signed: | | Date: 03/2/22 | |
| Once approved, activity details should be entered into the *School curriculum activity register*. | | | Reference No. |

| Monitoring and Review *(to be completed during and/or after the activity.)* | **Yes** | **No** |
| --- | --- | --- |
| Have additional hazards been identified? |  |  |
| Were the control measures effective? |  |  |
| Are further or different actions required? |  |  |

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