

Feedback Rubric: Water Filtration Device (Term 2, Week 2B)

Student Name:

Class:

| Course Outcomes | A | B | C | D | E | | |
|---|--|--|---|--|---|------------------------|------------|
| | Has achieved a very high level of competence in the processes and skills and can apply these skills to new situations (EXTENSIVE) | A high level of competence in the processes and skills. In addition, the student is able to apply these skills to most situations (THOROUGH) | An adequate level of competence in the processes and skills (SOUND) | A limited level of competence in the processes and skills (BASIC) | Very limited competence in some of the processes and skills (ELEMENTARY) | | |
| | 10-9 | 8-7 | 6-5 | 4-3 | 2-1 | 0 | MARK |
| Empathy and Define <u>SC4-4WS</u> Identifies questions and problems | Deep and thoughtful understanding of individuals/communities and their requirements for clean water + Extensive understanding of who the problem affects and how they are affected + Extensively articulated problem statement in relation to identified water issues of a particular individual/community + Extensive use of scientific terminology when communicating problem and defining problem statement | Detailed understanding of individuals/communities and their requirements for clean water + Detailed understanding of who the problem affects and how they are affected + Detailed articulated problem statement in relation to identified water issues of a particular individual/community + Detailed use of scientific terminology when communicating problem and defining problem statement | Good understanding of individuals/communities and their requirements for clean water + Good understanding of who the problem affects and how they are affected + Clearly articulated problem statement in relation to identified water issues of a particular individual/community + Good use of scientific terminology when communicating problem and defining problem statement | Simple understanding of individuals/communities and their requirements for clean water + Displays an understanding of who the problem affects and how they are affected + Some individual/community problems listed + Some use of scientific terminology when communicating problem and defining problem statement | Basic understanding of individuals/communities and their requirements for clean water + Basic understanding of who the problem affects and how they are affected + Individual/community problems listed + Limited use of scientific terminology when communicating problem and defining problem statement | Incomplete /irrelevant | /10 |
| | 10-9 | 8-7 | 6-5 | 4-3 | 2-1 | 0 | MARK |
| Ideate <u>SC4-5WS</u> Produce a plan to investigate questions and problems | Two credible science based sources of information used for each device design + Two extensive device designs produced + All required materials for each device provided + All designs are creative and original + All designs are relevant to the selected individual/community + Each diagram is clearly constructed and labelled | Two credible sources of information used for each device design + Two detailed device designs produced + Most required materials for each device provided + At least one design is creative and original + Most designs are relevant to the selected individual/community + Each diagram is clearly constructed and most components are labelled | Two sources of information used for each device design + Two good device designs produced + Some required materials for each device provided + Design is creative OR original + One design is relevant to the selected individual/community + Diagram for each device present with some labels | At least two sources of information provided for any device designs + Two-one simple device designs produced + A few required materials for at least two devices provided + Designs are modified from existing devices + Relevance is provided for one design + Diagram for at least one device contains some labels | One source of information listed for at least one device design + One basic device design produced + A few required materials for one device + Design may be very similar to pre-existing devices + No relevance is provided + Diagram for device is present (may not be labelled) | Incomplete /irrelevant | /10 |

| | 5 | 4 | 3 | 2 | 1 | 0 | MARK |
|---|---|---|--|--|---|------------------------|------|
| Prototype <u>SC4-4WS</u> Produce a plan to investigate questions and problems | Extensive justification of chosen device + Demonstrates deep knowledge of separation techniques in device + All chosen materials are appropriate for task + Device could be cheaply and easily constructed in chosen community + List of three potential risks with extensive risk minimisation strategies for each hazard | Detailed justification of chosen device + Demonstrates deep knowledge of separation techniques in device + Most chosen materials are appropriate for task + Device could be cheaply constructed in chosen community + List of three potential risks with detailed risk minimisation strategies for each hazard | Good justification of chosen device + Demonstrates good knowledge of separation techniques in device + Most chosen materials are appropriate for task + Device could be easily constructed in chosen community + List of three potential risks with a logical risk minimisation strategy for each hazard | Simple justification of chosen device + Demonstrates some knowledge of separation techniques in device + A few chosen materials are appropriate for task + Device could be constructed in chosen community without major issues + Simple list of two to three potential risks with at least two appropriate risk minimisation strategies | Simple justification of chosen device + Demonstrates little knowledge of separation techniques in device + A few chosen materials are appropriate for task + Device could be constructed in chosen community, may face difficulty with sourcing or purchasing materials + A single basic risk minimisation strategy with a somewhat relevant information | Incomplete /irrelevant | /5 |
| | 10-9 | 8-7 | 6-5 | 4-3 | 2-1 | 0 | MARK |
| Test <u>SC4-9WS</u> Presents science ideas using appropriate text types and representations | Extensive explanation of how device worked + Three or more detailed explanations on suitable tests that could be conducted to ensure the water is safe to drink + Extensive explanation of the impacts each hazard may have on humans + Two or more detailed reasons on why the device was or was not successful at filtering the water sample + Water sample is significantly improved after passing through filtration device | Detailed explanation of how device worked + Three detailed explanations on suitable tests that could be conducted to ensure the water is safe to drink + Detailed explanation of the impacts each hazard may have on humans + Two detailed reasons on why the device was or was not successful at filtering the water sample + Water sample is significantly improved after passing through filtration device | Good explanation of how device worked + Three explanations on suitable tests that could be conducted to ensure the water is safe to drink + Suitable explanation of the impacts that each hazard may have on humans + Two appropriate reasons on why the device was or was not successful at filtering the water sample + Water sample is improved after passing through filtration device | Simple explanation of how device worked + At least one explanations on suitable tests that could be conducted to ensure the water is safe to drink + Some explanation of the impacts that each hazard tested may have on humans + One to two appropriate reasons on why the device was or was not successful at filtering the water sample + Water sample is somewhat improved after passing through filtration device | Basic explanation of how device worked + A test that could be conducted to ensure the water is safe to drink is listed + Little to no explanation on the hazards posed to humans from the water sample given + One somewhat relevant reason on why the device was or was not successful at filtering the water sample + Water sample is slightly improved after passing through filtration device | Incomplete /irrelevant | /10 |
| | 10-9 | 8-7 | 6-5 | 4-3 | 2-1 | 0 | |
| <u>SC4-6WS</u> Follows instructions and undertakes investigation types | Extensive description of three problems encountered during investigation and their solutions + Detailed impact with 2 highly appropriate examples + High level use of PEEL scaffold | Detailed description of three problems encountered during investigation and their solutions + Detailed impact with 2 appropriate examples + Sound level use of PEEL scaffold | Good description of two - three problems encountered during investigation and their solutions + Relevant impact with 2 examples + Attempted to use the PEEL scaffold | Simple description of one-two problems encountered during investigation and a solution to at least one provided + Impact stated with an example | Basic description of one problem encountered during investigation with no solution provided + Impact stated with an example | Incomplete /irrelevant | /10 |

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| Outcome: | WS4: /15 | WS5: /10 | WS9: /10 | WS6: /10 | TOTAL /45 |
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Feedback