**Skills Portfolio Name: …………………………….**

**Chemistry Practical 4: Measuring enthalpy changes**

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| Using a thermometer Level of confidence (circle) 1 (low) 2 3 4 5 (high) | |
| *Insert photograph here* | ***What was difficult about the technique? What advice would you give another student to carry it out correctly?*** |

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| Drawing a results table Level of confidence (circle) 1 (low) 2 3 4 5 (high) |
| ***Either scan your results tables or take photos of them and insert them here. Make sure it is neat and readable.*** |

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| Drawing a graph Level of confidence (circle) 1 (low) 2 3 4 5 (high) |
| ***Either scan one of your graphs or take a photo of it and insert it here. Make sure it is neat and readable.*** |

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| Calculating enthalpy changes Level of confidence (circle) 1 (low) 2 3 4 5 (high) |
| ***Show your full workings for the two enthalpy calculations you did in the experiment. These can be scanned or typed.*** |

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| Drawing enthalpy level diagrams Level of confidence (circle) 1 (low) 2 3 4 5 (high) |
| ***Draw fully labelled enthalpy level diagrams for both of the enthalpy calculations you did in the experiment. These can be hand-drawn and scanned or drawn using tools within the software. You should show the enthalpy (**H) change for each reaction as calculated.*** |

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| Evaluating an experiment Level of confidence (circle) 1 (low) 2 3 4 5 (high) |
| ***The literature value for the enthalpy change for the reaction between copper (II) sulfate and zinc is -217 kJ mol-1. Compare this value to the value you calculated based on your experiment. Write an evaluation of this experiment, identifying problems with the procedure which might be the cause of any discrepancy between the literature value for Hr and your measured value. State the effect of these problems on your results and suggest modifications to the procedure that might lead to a more accurate value for Hr.***  ***Make sure you read the feedback you were given on the evaluation you wrote in the Skills Portfolio C2 before you do this.*** |

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| Reflection on test performance |
| ***This is for you to reflect on your performance in the test you sat in week 6. You should answer the following questions:***   1. ***How did you feel about your performance?*** 2. ***What did you learn from watching the video that explained all of the answers?*** 3. ***What are you going to do to improve your performance in future?*** |