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Supporting the Professional Learning of School Leaders and Teachers

Senior Cycle Physics

Professional Learning Booklet

Day 3 - 2025 / 2026

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Useful Links

Senior Cycle Physics Specification	Guidelines to support the Physics in Practice investigation	Padlet Link	Phyphox App

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Engaging with the Guidelines for the Physics in Practice Investigation

Stage	What are the Key Messages? How would you engage your students throughout this stage?	Links to the Unifying Strand
Initial Response		
Background Research		
Designing and planning the Experiment		
Conducting the experiment		
Data Analysis and Conclusions		
Finalising the Report		

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SCAMPER

Adapt

Could we use batteries instead of a power supply?

Modify

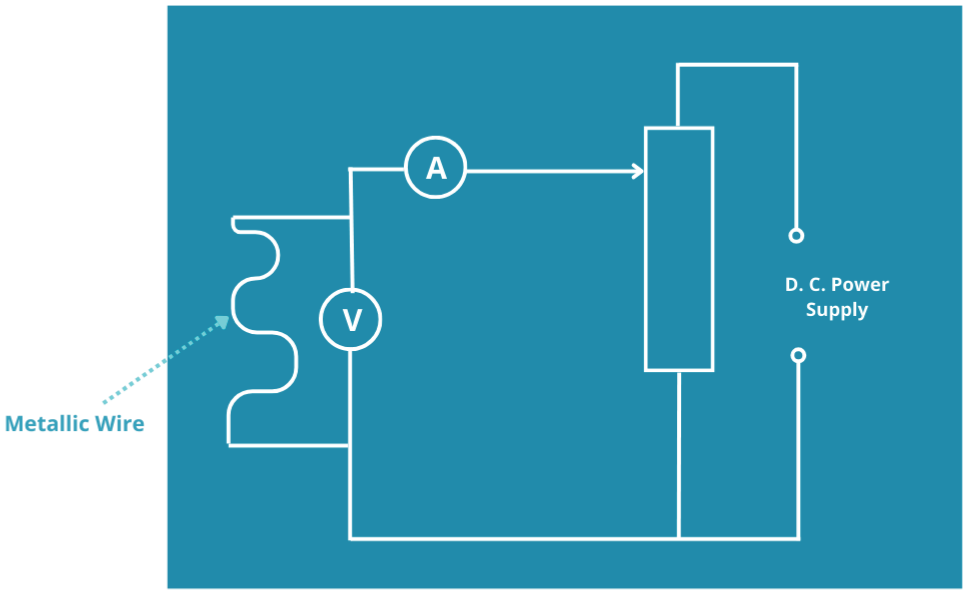
What if we change the length or thickness of the wire?

Purpose

Can we apply this setup to test components in real devices?

Combine

Can we use a temperature sensor to see how heat affects resistance?



Eliminate

What happens if we remove the potential divider?

Substitute

What happens if we use a filament bulb instead of a metallic conductor?

Rearrange

Could we measure the resistance to workout the voltage?

Substitute (Swap)

- Could I swap for a different chemical, object, method, variable, material or piece of apparatus?
- Could I replace any parts or features in the original to improve or change the design to make it my own?

Combine (Bring together)

- Could I combine methods or pieces of apparatus to test my hypothesis?
- If I repeat the test many times and combined the results to get an average, would it improve my investigation?

Adapt (Change)

- Could I adapt a piece of apparatus to serve my need?
- Could I adapt a method to work for my experiment?
- Could a solution to one issue be adapted to help solve a different issue?

Modify (Magnify/Minify)

- Could I modify the time taken for my experiment? Could I modify an experimental set up to make it safer?
- What could I make bigger or smaller to improve the efficiency of my design?

Purpose (Put to another use)

- Could the products or byproducts of my experiment be put to a use in the real world?
- Could my apparatus, method or device be used for something else? Could I use my apparatus in other investigations?

Eliminate (Remove)

- Could I remove a variable affecting my results?
- Could I eliminate a piece of apparatus?
- What can be removed or simplified?

Rearrange (Reverse)

- Would rearranging the order of steps in my method produce a different outcome?
- What if I reversed the way my device works
- What other arrangement might work better or more efficiently?

Please note: The questions detailed above are examples and are not intended to be exhaustive

Recording the Learning

Investigation 1 : _____

What other contextual strand learning outcomes could this activity support?	
What unifying strand learning outcomes are students engaging with?	
Substitute (Swap)	
Combine (Bring together)	
Adapt (Change)	
Modify (Magnify/minify)	
Purpose (Put to another use)	
Eliminate (Remove)	
Rearrange (Reverse)	

Recording the Learning

Investigation 2 : _____

What other contextual strand learning outcomes could this activity support?	
What unifying strand learning outcomes are students engaging with?	
Substitute (Swap)	
Combine (Bring together)	
Adapt (Change)	
Modify (Magnify/minify)	
Purpose (Put to another use)	
Eliminate (Remove)	
Rearrange (Reverse)	

Recording the Learning

Investigation 3 : _____

What other contextual strand learning outcomes could this activity support?	
What unifying strand learning outcomes are students engaging with?	
Substitute (Swap)	
Combine (Bring together)	
Adapt (Change)	
Modify (Magnify/minify)	
Purpose (Put to another use)	
Eliminate (Remove)	
Rearrange (Reverse)	

Recording the Learning

Investigation 4 : _____

What other contextual strand learning outcomes could this activity support?	
What unifying strand learning outcomes are students engaging with?	
Substitute (Swap)	
Combine (Bring together)	
Adapt (Change)	
Modify (Magnify/minify)	
Purpose (Put to another use)	
Eliminate (Remove)	
Rearrange (Reverse)	

Recording the Learning

Investigation 5 : _____

What other contextual strand learning outcomes could this activity support?	
What unifying strand learning outcomes are students engaging with?	
Substitute (Swap)	
Combine (Bring together)	
Adapt (Change)	
Modify (Magnify/minify)	
Purpose (Put to another use)	
Eliminate (Remove)	
Rearrange (Reverse)	

Recording the Learning

Investigation 6 : _____

What other contextual strand learning outcomes could this activity support?	
What unifying strand learning outcomes are students engaging with?	
Substitute (Swap)	
Combine (Bring together)	
Adapt (Change)	
Modify (Magnify/minify)	
Purpose (Put to another use)	
Eliminate (Remove)	
Rearrange (Reverse)	

Students learn about

Students should be able to

Notes