

Name: \_\_\_\_\_

## HSC PHYSICS – TASK THREE – RESEARCH SKILLS

### Task Description:

You are required to conduct your own research into the contributions to the understanding of light made by particular scientists over time. From this research, you are to provide an evidence-based response to a given question. You may present your information in any format that you choose as long as it is accessible to mark.

### The question:

*“Whose contribution (Maxwell, Newton, Huygens, Planck or Einstein) to the understanding of the nature of light has had the greatest impact on the world we live in today?”*

### Starting point:

It is important to break the task into smaller, more manageable sections. You may wish to use the following table to help scaffold and organise your information.

Scientists	Contribution	Impact on our understanding	Impact on our lives	Level of importance
Maxwell				
Newton				
Huygens				
Planck				
Einstein				

As there is a research aspect to the task, you are required to keep a list of your sources of information and correctly reference those sources. This reference list must be submitted along with your response to the question on the due date.

This is a task designed to develop and assess your ability to use a wide variety of evidence and apply critical thinking to solve a problem. You will also be assessed on how well you are able to use evidence, scientific language and forms of communication to inform an audience.

Quality is more important than quantity in a task such as this. Plan out your information and identify how to best explain a concept. You are encouraged to submit a draft of the task to your teacher for feedback and seek regular feedback from your peers.

## MARKING CRITERIA

Criteria	Mark
<p>The response includes all or most of the following:</p> <ul style="list-style-type: none"> <li>• A detailed outline of the contributions of ALL scientists (Maxwell, Newton, Huygens, Planck, Einstein)</li> <li>• A detailed explanation of the impact the contribution of each scientist had on the understanding of the nature of light</li> <li>• A detailed explanation of the impact the contribution of each scientist had on our daily lives</li> <li>• An evidence-based judgement about the impact of the contribution of each scientist</li> <li>• A reference list containing multiple sources of information that are referenced appropriately.</li> <li>• Format of presentation is appropriate for the audience and easy to access</li> <li>• The language of the presentation is correct for the context and the audience</li> </ul>	18 – 20
<p>The response includes some of the following:</p> <ul style="list-style-type: none"> <li>• A detailed outline of the contributions of ALL scientists (Maxwell, Newton, Huygens, Planck, Einstein)</li> <li>• A detailed explanation of the impact the contribution of each scientist had on the understanding of the nature of light</li> <li>• A detailed explanation of the impact the contribution of each scientist had on our daily lives</li> <li>• An evidence-based judgement about the impact of the contribution of each scientist</li> <li>• A reference list containing multiple sources of information that are referenced appropriately.</li> <li>• Format of presentation is appropriate for the audience and easy to access</li> <li>• The language of the presentation is correct for the context and the audience</li> </ul>	15 – 17
<p>The response includes most of the following:</p> <ul style="list-style-type: none"> <li>• An outline of the contributions of some of the scientists (Maxwell, Newton, Huygens, Planck, Einstein)</li> <li>• An explanation of the impact the contribution of each scientist had on the understanding of the nature of light</li> <li>• An explanation of the impact the contribution of each scientist had on our daily lives</li> <li>• An evidence-based judgement about the impact of the contribution of each scientist</li> <li>• A reference list containing multiple sources of information that are referenced appropriately.</li> <li>• Format of presentation is appropriate for the audience and easy to access</li> <li>• The language of the presentation is correct for the context and the audience</li> </ul>	10 – 14
<p>The response includes most of the following:</p> <ul style="list-style-type: none"> <li>• An outline of the contributions of some of the scientists (Maxwell, Newton, Huygens, Planck, Einstein)</li> <li>• A description of the impact the contribution of each scientist had on the understanding of the nature of light</li> <li>• A description of the impact the contribution of each scientist had on our daily lives</li> <li>• A judgement about the impact of the contribution of each scientist</li> <li>• A reference list containing multiple sources of information that are referenced appropriately.</li> <li>• Format of presentation is appropriate for the audience</li> <li>• The language of the presentation is correct for the context</li> </ul>	5 – 9
<p>The response includes some of the following:</p> <ul style="list-style-type: none"> <li>• An outline of the contributions of some of the scientists (Maxwell, Newton, Huygens, Planck, Einstein)</li> <li>• An identification of the impact the contribution of each scientist had on the understanding of the nature of light</li> <li>• An identification of the impact the contribution of each scientist had on our daily lives</li> <li>• A judgement about the impact of the contribution of each scientist</li> <li>• A reference list containing multiple sources of information</li> <li>• An appropriate format and appropriate language is used in the response</li> </ul>	1 – 4
Failure to submit a response	0