Step 1: Research

Use the PIADS RESEARCH JOURNAL to complete your research for your essay. Make sure that you identify a local or global ISSUE that science is applied to, and then turn it into a proper research question.

Step 2: Outline

When you have completed your research, organize your information into an <u>alphanumeric</u> OUTLINE using roman numerals, capital letters, numbers, and lowercase letters.

Do not write complete sentences, but only write the topic or short fact.

Step 3: Vocabulary

Now that you have created your outline, you are almost ready to begin writing. BEFORE you begin, choose at least 5 science vocabulary words you will use in your writing.

Find the definitions of the words in the dictionary and record them. Then use the use the words in a sample sentence to show that you know what the word means (do not use the sentence you find in the dictionary!)

Step 4: Writing

Use your outline to write an essay using PROPER PARAGRAPHS. Each paragraph should be about one major idea, such as describing the issue, or discussing how it interacts with the economic factor. Paragraphs are not just for decoration! Cite your information using MLA format. Use EasyBib.com to save your sources, and export the Works Cited as a .doc file to attach to your essay.

Step 5: Turning it in

Put your work in this order, then staple them together before submitting your work.

Top Bottom Essay → Outline → Vocabulary → Research Journal

PROPER PARAGRAPH FORM								
1 Introduction Sentence - tells the main topic or idea of the whole article	2 or 3 Main Points - a sentence with a main ideas - an additional sentence with supporting facts from your research - not just telling or listing all the details!	1 Conclusion Sentence - retells the main points without the facts and concludes the paragraph						

TIPS ON HOW TO STRUCTURE YOUR ESSAY

BEGINNING

The beginning of your essay is your **introduction**. Let us know what the essay is going to be about!

Length = 1-2 paragraphs

STEP 1: Introduce the specific issue you will be addressing.

STEP 2: Introduce the example that you will discuss.

STEP 3: Give your main point of view and outline how your essay will be structured.

MIDDLE

The middle of your essay is the largest part. It is called the **main body**. In it you will discuss the details of your issue.

Length = 5-8 paragraphs

STEP 1: Explain the scientific processes used to address your issue.

STEP 2: Give examples of direct effects of your issue on people, society, or the environment.

STEP 3: Give an example of how the effects are an advantage. Discuss the positive and negative results of this advantage.

STEP 4: Give examples of indirect effects of your issue on people, society, or the environment.

STEP 5: List major advantages and disadvantages relating to our factors (social, economic, etc).

END

The end of your essay is the **conclusion**. It should relate back to your main purpose with one or two summarizing statements.

Length = 1 paragraph

STEP 1: Review the main points of your essay.

STEP 2: Summarize the main ideas relating to your issue.

STEP 3: Make a recommendation about how to responsibly use the science you discussed, and who is responsible to do so.

Social

The people affected or involved, from a few people up to the global community. How does this impact relationships and the way people interact with each other?

Economic

The costs and benefits of using science. Who pays or receives the benefit? Is it worth it?

Political

Is the government involved directly, or are powerful groups trying to influence people or the government? Should the government get involved, or stay out?

Environmental

Is the issue an environmental one in some way, either directly or indirectly? Be specific about the impacts. What part of the environment is impacted?

Cultural

A problem in one place is seen differently in another for reasons such as faith or what people see as important. Will cultural expression and celebration interact with this issue?

Ethical

Is it right or wrong to use science in this way? and if we do use it, is there a proper way to do it?



MYP 1: CRITERION D								
Evaluation Items			De	esc	riptors			
A specific issue or problem is	stated w/ limited success		stated		outlined		summarized	
Application of science in providing a solution is	stated w/ limited success		stated		outlined		summarized	
Implication of using science to solve the problem is, interacting with a factor	stated w/ limited success		stated		outlined		described & summarized	
Factor included in the essay is	Moral		Economic		Social		Cultural	
	Ethical		Environmenta I		Political		No Factor	
Use of scientific language* to communicate understanding is	with limited success		sometimes applied		usually clear & precise		consistent clear & precise	
In-text citations** are	missing		sometimes included		mostly included and correct		complete and correct	
Works cited*** is	a list of websites or book titles		partially complete and attempts to use a format		mostly complete using MLA guidelines		complete using MLA guidelines	

Use <u>EasyBib.com</u> to record your sources when researching, and EXPORT your works cited, don't copy/paste individual entries.

Level	MYP Descriptor
0	The student does not reach a standard described by any of the descriptors below.
1-2	The student is able to, with limited success: i. state the ways in which science is used to address a specific problem or issue ii. state the implications of using science to solve a specific problem or issue, interacting with a factor iii. apply scientific language to communicate understanding iv. document sources
3-4	The student is able to: i. state the ways in which science is used to address a specific problem or issue ii. state the implications of using science to solve a specific problem or issue, interacting with a factor iii. sometimes apply scientific language to communicate understanding iv. sometimes document sources correctly
5-6	The student is able to: i. outline the ways in which science is used to address a specific problem or issue ii. outline the implications of using science to solve a specific problem or issue, interacting with a factor iii. usually apply scientific language to communicate understanding clearly and precisely iv. usually document sources correctly
7-8	The student is able to: i. summarize the ways in which science is applied and used to address a specific problem or issue ii. describe and summarize the implications of using science and its application to solve a specific problem or issue, interacting with a factor iii. consistently apply scientific language to communicate understanding clearly and precisely iv. document sources completely

apply	use knowledge and understanding in response to a given situation or real circumstances
describe	give a detailed account or picture of a situation, event, pattern or process
document	credit sources of information used by referencing (or citing), following one recognized referencing system (MLA at our school); references should be included in the text and also at the end of the piece of work in works cited
outline	give a brief account
state	give a specific name, value or other brief answer without explanation or calculation
summarize	abstract a general theme or major point(s)

^{*} you must use appropriate scientific vocabulary

** you must use in-text citations according to MLA format

*** works cited must be done according to MLA guidelines, and should only include sources you used in writing the essay, and reference in your text

MYP 2-3: CRITERION D								
Evaluation Items		Descriptors						
A specific issue or problem is	stated		outlined		summarized		described	
Application of science in providing a solution is	stated		outlined		summarized		described	
Implication of using science to solve the problem is, interacting with a factor	stated		outlined		described		discussed & analyzed	
Factor included in the essay is	Moral		Economic		Social		Cultural	
	Ethical		Environmental		Political		No Factor	
Use of scientific language* to communicate understanding is	with limited success		sometimes applied		usually clear & precise		consistent clear & precise	
In-text citations** are	missing		sometimes included		mostly included and correct		complete and correct	
Works cited*** is	a list of websites or book titles		partially complete and attempts to use a format		mostly complete using MLA guidelines		complete using MLA guidelines	

Use <u>EasyBib.com</u> to record your sources when researching, and EXPORT your works cited, don't copy/paste individual entries.

Level	MYP Descriptor
0	The student does not reach a standard described by any of the descriptors below.
1-2	The student is able to: i. state the ways in which science is used to address a specific problem or issue ii. state the implications of the use of science to solve a specific problem or issue, interacting with a factor iii. apply scientific language to communicate understanding but does so with limited success iv. document sources, with limited success
3-4	The student is able to: i. outline the ways in which science is used to address a specific problem or issue ii. outline the implications of using science to solve a specific problem or issue, interacting with a factor iii. sometimes apply scientific language to communicate understanding iv. sometimes document sources correctly
5-6	The student is able to: i. summarize the ways in which science is applied and used to address a specific problem or issue ii. describe the implications of using science and its application to solve a specific problem or issue, interacting with a factor iii. usually apply scientific language to communicate understanding clearly and precisely iv. usually document sources correctly
7-8	The student is able to: i. describe the ways in which science is applied and used to address a specific problem or issue ii. discuss and analyze the implications of using science and its application to solve a specific problem or issue, interacting with a factor iii. consistently apply scientific language to communicate understanding clearly and precisely iv. document sources completely

analyze	break down in order to bring out the essential elements or structure; to identify parts and relationships, and to interpret information to reach conclusions
apply	use knowledge and understanding in response to a given situation or real circumstances
describe	give a detailed account or picture of a situation, event, pattern or process
discuss	offer a considered and balanced review that includes a range of arguments, factors or hypotheses; opinions or conclusions should be presented clearly and supported by appropriate evidence
document	credit sources of information used by referencing (or citing), following one recognized referencing system (MLA at our school); references should be included in the text and also at the end of the piece of work in works cited
outline	give a brief account
state	give a specific name, value or other brief answer without explanation or calculation
summarize	abstract a general theme or major point(s)

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MYP	4-5	:	CRIT	E	RION	1	D	
Evaluation Items			De	scr	iptors			
A specific issue or problem is	outlined		summarized		described		explained	
Application of science in providing a solution is	outlined		summarized		described		explained	
Implication of using science to solve the problem is, interacting with a factor	stated		described		discussed		discussed & evaluated	
Factor included in the essay is	Moral		Economic		Social		Cultural	
	Ethical		Environmental		Political		No Factor	
Use of scientific language* to communicate understanding is	with limited success		sometimes applied		usually clear & precise		consistent clear & precise	
In-text citations** are	missing		sometimes included		mostly included and correct		complete and correct	
Works cited*** is	a list of websites or book titles		partially complete and attempts to use a format		mostly complete using MLA guidelines		complete using MLA guidelines	

Use <u>EasyBib.com</u> to record your sources when researching, and EXPORT your works cited, don't copy/paste individual entries.

Level	MYP Descriptor
0	The student does not reach a standard described by any of the descriptors below.
1-2	The student is able to: i. outline the ways in which science is used to address a specific problem or issue ii. outline the implications of using science to solve a specific problem or issue, interacting with a factor iii. apply scientific language to communicate understanding but does so with limited success iv. document sources, with limited success
3-4	The student is able to: i. summarize the ways in which science is applied and used to address a specific problem or issue ii. describe the implications of using science and its application to solve a specific problem or issue, interacting with a factor iii. sometimes apply scientific language to communicate understanding iv. sometimes document sources correctly
5-6	The student is able to: i. describe the ways in which science is applied and used to address a specific problem or issue ii. discuss the implications of using science and its application to solve a specific problem or issue, interacting with a factor iii. usually apply scientific language to communicate understanding clearly and precisely iv. usually document sources correctly
7-8	The student is able to: i. explain the ways in which science is applied and used to address a specific problem or issue ii. discuss and evaluate the implications of using science and its application to solve a specific problem or issue, interacting with a factor iii. consistently apply scientific language to communicate understanding clearly and precisely iv. document sources completely

apply	use knowledge and understanding in response to a given situation or real circumstances
describe	give a detailed account or picture of a situation, event, pattern or process
discuss	offer a considered and balanced review that includes a range of arguments, factors or hypotheses; opinions or conclusions should be presented clearly and supported by appropriate evidence
document	credit sources of information used by referencing (or citing), following one recognized referencing system (MLA at our school); references should be included in the text and also at the end of the piece of work in works cited
evaluate	make an appraisal by weighing up the strengths and weaknesses
explain	give a detailed account
outline	give a brief account
summarize	abstract a general theme or major point(s)

^{*} you must use appropriate scientific vocabulary

** you must use in-text citations according to MLA format

*** works cited must be done according to MLA guidelines, and should only include sources you used in writing the essay, and reference in your text