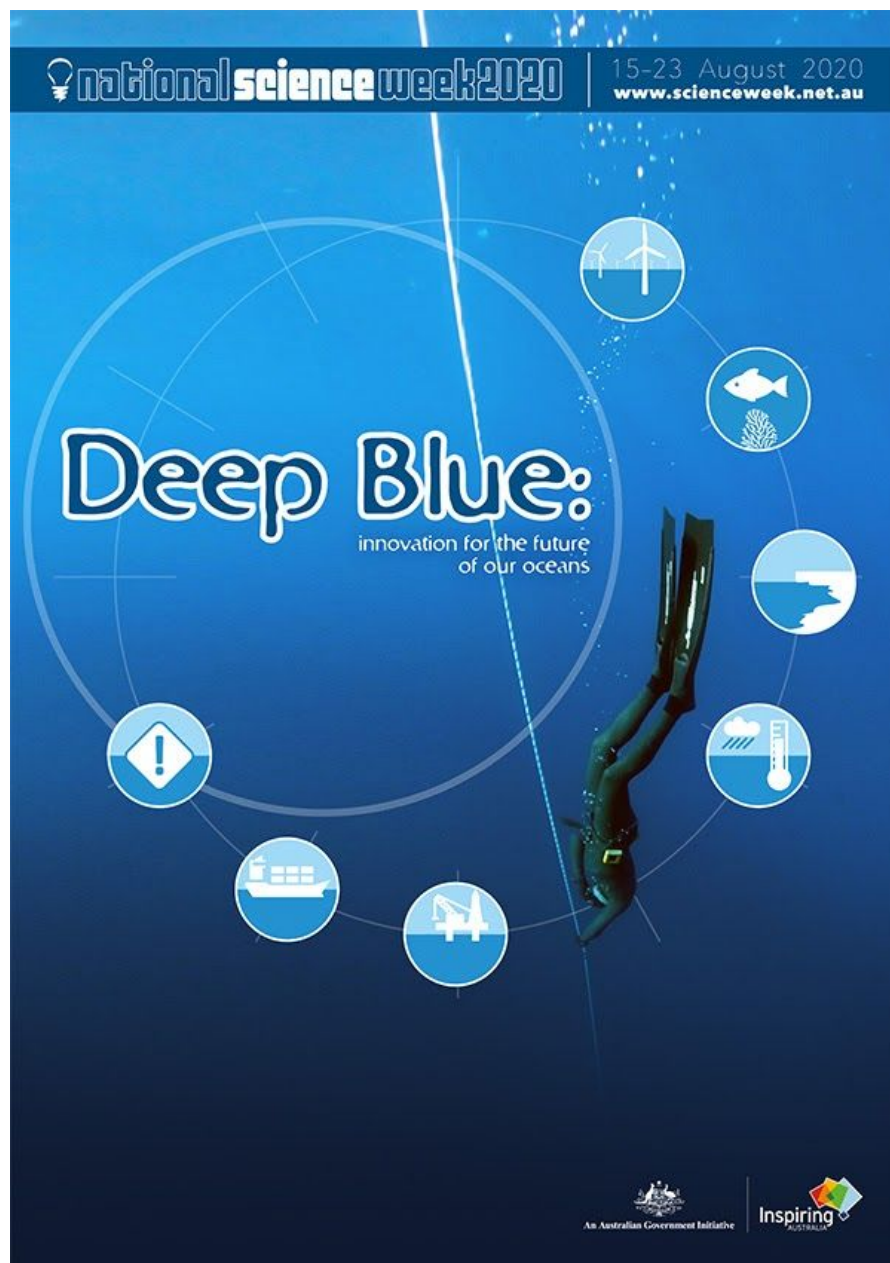


'Deep Blue'

Innovation for the future of our Oceans

INQUIRY PROJECT 2020



It is time to dive head first into your 'Deep Blue - innovation for our future oceans' inquiry project!

You are the captain of your own ship and you are about to embark on a journey all about innovations for our future oceans. This is the time to challenge yourself and your thinking. You need to be asking questions that are based around our National Science Week theme, 'Deep Blue - innovation for the future of our oceans'.

Let's start with the obvious...

How can the theme, 'Deep Blue', become an inquiry project?

An inquiry project involves:

- Seeking out your passions
- Developing your own questions
- Making observations
- Researching to find out what information is already available
- Conducting experiments
- Collecting data
- Outlining possible explanations
- Creating predictions for future study

During this inquiry project you will:

1. Create your own questions
2. Research your questions and find supporting evidence to answer your questions
3. Present your findings to your teacher and peers

And what's all this about innovation for our future oceans? What does this mean?

Deep Blue - innovation for the future of our oceans is the school theme for National Science Week in 2020. You can find a great deal of information here:

https://www.scienceweek.net.au/wp-content/uploads/2020/03/2020ASTA-DeepBlue_ResourceBook_FINAL.pdf

What is a **passion** and where is it driven from?

The time has now come to decide what your inquiry project is going to be about! What topic are you about to dive head first into!? What topic ignites your creativity? What are you **passionate** about?

Once you've decided, write **WHY** that topic interests you. It is important to understand the **WHY** behind our ideas/topics/questions because that is where our passion is driven from!

For example: My inquiry project is going to be about "Pollution in our ocean." I am interested in this topic because keeping our sea creatures healthy and safe is important to me. I don't want to see turtles or other sea creatures become extinct! If we don't protect our ocean animals, who will?

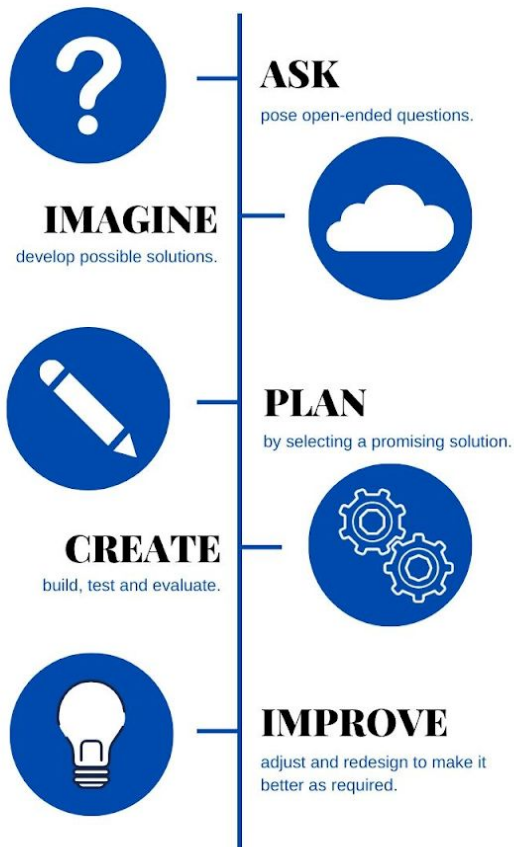
Looking for some ideas? Need inspiration? Have a look at these topic ideas below:

- The ocean and coastal environment.
- Oceanography, climatology and meteorology.
- Maritime safety and security.
- Shipping traffic (particularly international) and ports.
- Offshore oil and gas.
- Fisheries.
- Aquaculture (ocean/coastal).
- Ocean renewable energy.
- Oil spills and other human-induced marine incidents.
- Coastal surges, sea level rise and other climate-related incidents including climate change.
- Tourism (ocean/coastal).
- Seabed mineral exploration.
- Marine biotechnology.

So let's get swimming Be sure to use the Rosalie Design Cycle to assist you during your inquiry process, let's quickly have a look at it.



PROUD TRADITION. SHAPING FUTURES.



The design process supports students to develop the knowledge, understandings and skills to ensure that, individually and collaboratively, students: investigate, design, plan, manage, create and evaluate solutions.

For more information visit:
https://k10outline.scsa.wa.edu.au/_data/assets/pdf_file/0009/364545/Design-and-Technologies-Curriculum-Pre-primary-to-Year-10.PDF

Step 1: Brainstorming inquiry topics

What are you passionate about when it comes to the future of our oceans? **WHY?**

Using the table below write down as many different issues, ideas, worries, questions that you may have!

For example: Drinking water, pollution in the ocean, energy from the ocean, protecting our coral reef, tourism, impacts of climate change.

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From the ideas above, what topic are you most interested in? Which topic are you excited about and want to become an expert in?

Step 2: Select your final inquiry topic

Let's start by narrowing it down to your top 2 topic ideas:

| |
|----|
| 1. |
| 2. |

You're doing a fantastic job. Well done for coming up with some incredible topics!

My final inquiry topic

| |
|---|
| My inquiry topic is: |
| I am passionate about this topic because: |

Step 3: Create your inquiry question and sub-questions

Well done! Now that you have decided on your inquiry project topic, it's time to come up with your inquiry question and four sub-questions to answer along the way. A sub-question forces you to delve deeper and answer further.

For example, if my inquiry question was:

How much plastic is in the ocean?

My sub-questions may be:

1. Where does the plastic come from?
2. What systems are in place to stop plastic entering the ocean?
3. Will a ban on plastic straws help reduce plastic in the ocean?
4. What alternative materials can we use instead of plastic for straws?

My main inquiry question is:

| |
|--|
| |
|--|

My four sub-questions are:

| | |
|--|--|
| | |
| | |

Step 4: Decide on your mode of presentation

After you have decided your inquiry project, it is always a good idea to think about how you are going to present your information. Here are some ideas that may provide some inspiration for your inquiry project:

Book Creator COMIC STRIP
video POSTER GOOGLE SLIDES
DISCUSSION Journal
Science Experiment brochure
iMovie

When you have decided [how](#) you are going to present your inquiry project, type it into the box below. Write the materials and equipment you will need in order to achieve this presentation mode.

[Justify why this particular mode will interest and capture your audience's attention. You need to be able to explain why you chose this.](#)

For example: I have chosen Book Creator, I will need access to WiFi, an iPad and preferably an Interactive Smart Board that has Reflector installed so I can present my project on a big screen. I chose to use Book Creator because I don't feel comfortable speaking in front of a live audience. Book Creator allows me to use my own voice as I can add it to my presentation and my audience will be able to hear my passion!

Step 5: It's time captain, lets research!

The following pages are for you to conduct your research.

Remember you must write your final project in your **OWN** words. Copying and pasting other people's work is plagiarism. It is important to use your own words, as you are the **expert**.

You must include a reference page which shows a record of the websites, books, and any other source of information that you have taken information from.

Main inquiry question

My main inquiry question is:

Research:

Sub-question 1

My first sub-question is:

Research:

Sub-question 2

My second sub-question is:

Research:

Sub-question 3

My third sub-question is:

Research:

Sub-question 4

My fourth sub-question is:

Research:

Reference Page

(Places that I sourced my information from)



Here are some links to other interesting sites and information:

<https://www.sciencelearn.org.nz/resources/2510-the-ocean-in-action-question-bank>

<https://www.sciencelearn.org.nz/topics/oceans>

<https://www.marinelittersolutions.com/about-marine-litter/frequently-asked-questions/>

Rubric

| | | | | |
|--|---|---|--|---|
| Followed appropriate inquiry process | No evidence is available showing that I followed the correct inquiry process | Little evidence is available showing that I followed the correct inquiry process | Some evidence is available showing that I followed most of the correct inquiry process | Evidence is available showing that I followed the correct inquiry process. This includes my inquiry question and sub questions, brainstorm and research |
| Quality of research | Little information given / is difficult to understand | Some information given | Good information that answers most of my inquiry questions | Excellent information that answers <u>all of</u> my inquiry questions and in a logical order |
| Quality of presentation | Oral presentation, Visual work, Multimedia work, not presented clearly | Some of oral presentation articulated clearly Some visual work presented clearly Some multimedia work presented clearly | Oral presentation mostly articulated clearly Visual work mostly presented clearly Multimedia work mostly presented clearly | Oral presentation articulated clearly, with appropriate expression and tone Visual work is neat, legible, colourful and has correct spelling Multimedia work is easy to view, has clear information, correct spelling and attractive layout |
| How I used 'extras' to make my presentation richer | Sequence and layout used poorly / hasn't added to the quality of the presentation | Sequence and layout needs improvement in some areas | Sequence and layout used well | Sequence and layout (headings/sub-headings/diagrams/pictures/labels) add to the quality of the presentation |
| Resources I used | No references | Reference page shows few sources used | Reference page shows some sources have been accessed and used | References show that information comes from reliable and reputable sources with multiple being used |