



Think Science! Newsletter 1

This month: Picking a topic and writing a question

Welcome to our first newsletter for *Think Science! 2024*. Each month of the competition, you'll receive an email from us to guide you through the process of preparing entries with your students. You are also welcome to email any questions or comments to us at thinkscience@ansto.gov.au

We hope you find these newsletters helpful, however, if you would prefer not to receive future editions, please email us and let us know.



Topic selection

Any ethical topic can be chosen for student investigations in *Think Science!*, provided it is *investigable* at school.

Teachers must approve all topics before investigations start and can offer guidance in selecting topics. To make it easier for teachers to offer support, investigation topics can coincide with classroom lessons and several teams in a class can investigate the same topic.

Investigations must be conducted at school and should make use of available equipment and inexpensive materials that are easy to obtain. We encourage students to 'keep it simple' and choose a topic that they can feel comfortable investigating as a team and enjoy learning about!



Writing an appropriate testable question

After the topic has been decided, coming up with a suitable question sets the investigation up for success. First and foremost, the question must be **testable** (or *investigable*). Testable questions are always about changing **one thing** (independent variable) to see what the effect is on **another thing** (dependent variable).

Testable questions clearly state the variable being changed and what is being observed or measured.

A good example of a testable question (by previous *Think Science!* participants) was: *Does changing the height of a ramp affect how far a ball will travel?*

Questions which are not testable	<i>Example</i>
involve more than one variable being changed	<i>Does the structure and size of the body, nose cone and fins alter the distance that the paper rocket travels?</i>
require an opinion, or could be answered differently by different people	<i>What is the most appealing colour to the human eye?</i>
'why' questions	<i>Why is the sky blue?</i>

We recommend that investigation questions involve the collection of **measurable data**, for example: height, length, weight, temperature, time etc., and that **teachers discourage investigations involving the collection of human data**.

This article provides useful information and video links on the structure of testable questions and application of 'SMART' concept: [Asking Testable Questions | Let's Talk Science \(letstalkscience.ca\)](http://letstalkscience.ca)

Additional information to support students in writing questions, including use of a variables grid, is found here: [Supporting students to write questions for investigation | Primary Connections](http://letstalkscience.ca)

Student Logbook

We have provided student logbooks to guide your students through the scientific method so they know what we expect them to do.

The logbooks are available on our website for you to use or alter to suit:

[Year 3-6 Student Logbook](#)

[Year 7–10 Student Logbook](#)

Check out our 2024 website!

There's lots of additional information and resources for teachers on our [website](#).

Online Information Session – Register now!

You can register [here](#) for our free Information Session in Term 2. This will be held over MS Teams on **Monday 6 May, at 4:00 pm EST**.

The session will provide an overview of the competition, discuss approaches to student videos and give you an opportunity to ask questions. The session is expected to finish at 4:45 pm.

Contact us

Don't hesitate to call us on (02) 9717 3090 or email thinkscience@ansto.gov.au if you have any questions.



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