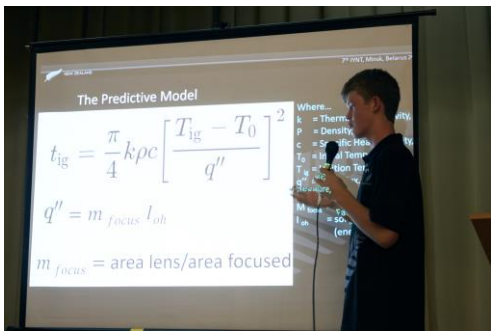
APRIL 17TH – 19TH 2020

2ND NEW ZEALAND YOUNG SCIENTISTS' TOURNAMENT

How the tournament works

There are seven open-ended problems (see next page). Students have to develop their own solutions and, at the tournament, present a solution in 8 minutes. Students can (and should) get as much help as they possibly can from anyone and everyone, but in the tournament itself students have to defend their investigations in science fights.

Preparation



Competition

Challenge your top science students

Each team is 3 students born in 2004 or later

Students can qualify for IYNT 2020 – the world cup of science

A fun, exciting competition.

Pre-register now:
www.nzyoungscientists.com

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During the first round we learnt how to work efficiently as a team during a science fight, different members taking notes to pull together an opposition or review presentation in the few minutes of preparation time.

— Millie, NZ IYNT 2018

"It was the hardest I've ever worked, but I think it paid off pretty well! (we came first). What I am most grateful for however, is the knowledge and skills I have obtained from doing this; they far outweigh any gold medal."

— Sai, NZ IYNT 2017

Accolades…

2020 NZ Young Scientists' Tournament Problems…

1. Slow match

A cord in which the flame front propagates with a constant low speed has been important to ignite cannons. Produce such cords and investigate their burn rates and other properties.

2. Popping bouy

A light ball is held underwater and then released. The ball may sometimes pop above the water surface. Investigate this effect and the role of important parameters.

3. Disinfectants

Prepare sterile culture dishes and investigate the growth of door handle bacteria and other common microorganisms. Investigate how various disinfectants, such as antibacterial soap, affect the bacteria.

4. Magnet and matchstick

A matchstick is not attracted to a magnet, however the head of a burned matchstick is attracted by a strong magnet. Investigate the reasons and the role of relevant parameters.

5. Hydrogen release

A simple method to produce gaseous hydrogen is the reaction between metal aluminum and two salts in aqueous solution (e.g. copper sulphate and sodium chloride). Investigate how the reaction rate depends on the concentration of each salt and other relevant conditions. What salts react with aluminum to release hydrogen?

6. Onion cells

Investigate the effects of various salts on the structure of onion cells.

7. Invent yourself: Soap production

Vegetable and animal oils and fats are historically used to make soap. Investigate how physical and chemical properties of such soap depend on ingredients and recipes, and propose an interesting problem concerning soap-making from easily accessible ingredients.