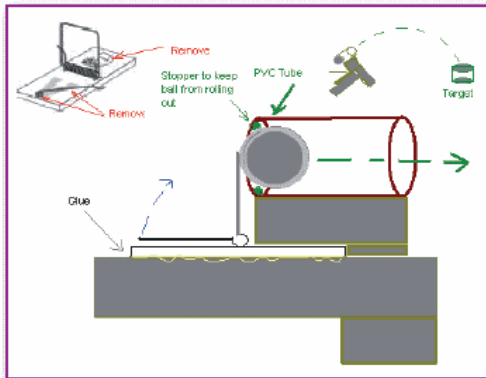


Technology Challenge

K-Year 8 students only

Topic

Design a Ping Pong ball launcher to land in a set target.



Learning outcomes

- Literacy and Numeracy in Science and Technology
- Strategies for designing and Evaluating
- Scientific experimentation
- Reflection and articulation of the scientific ideas and findings
- Journal detailing your experiments

Closing Date

Teachers should contact TSTS Director by email before August 5th with a list of intending entrants

Judging

Regional judging will be held as part of National Science Week in Launceston Sun August 16, in Hobart Sun. August 23, and in Devonport if required. Watch Infostream and website for further details.

Science Games

Eligible students – all age groups

Topic: Unrestricted

Closing Date: 14th October 2009

Information

This section requires entrants to produce a game that develops a scientific concept or principle. Games based solely on the recall of factual knowledge will not be viewed favourably by the judges. Interest and enjoyment are also important priorities. Computer games are also included in this section.

*See TSTS website for Judges' Comments 2006/07/08

Presentation of the game

- Board games: make these from sturdy card, and package all pieces securely in a box no larger than an A4 reflex paper box. All playing pieces must be included so that the Judges can play the game.
- Write Instructions clearly on a sheet separate from the game so that the judges can easily learn to play the game.
- Write a brief description about the scientific concept, principle or process on which the game is based. Also include the references used to construct the game and acknowledge any assistance given.

Judging Criteria

- Does the game develop a science concept, skill, principle or process?
- Is the game interesting and fun to play?
- Does the game match the interest level for which it was designed?
- Does the game have originality?
- Does the game show inventiveness?
- Are the rules and/or instructions clearly written and explained?

The Challenge

The purpose is to design and construct a Ping Pong ball launcher to land a ball in a series of buckets set 4 metres away lined with bubble wrap. Each entry will fire 6 balls at the target. The total score will be used for criterion 1 below.

The launcher will be constructed from simple items. The energy source could include: rubber bands, mouse trap, springs, "tube-in-tube" plunger etc. Your Journal will contain details of the experiments done to perfect your design and to get the angle of projection optimised. Display results in some form of chart or graph. Construction materials must be principally recycled materials with all the materials used fitting in an A4 reflex box.

On the day

Fire 6 ping balls at the target trying to gain the maximum 300 points. All 6 balls fired within 3 minutes. Launcher can be adjusted between firings, (angle, power delivered etc), but the design should have been set at school before arriving.

Judging Criteria

1. Points gained
2. Elegance and thoughtfulness of design
3. Your ability to explain how you designed and tested your launcher at school.
4. Design plan and construction Journal
5. Your calibration charts or graphs

Do NOT send entries to the judges

School should hold their own judging of entries. The best 10 entries in each division will then be taken by students to the public judging in their local region. Schools in remote locations may submit their winning entries via video.

For further details and ideas

See "Technology" page on the TSTS website:

www.key.org.au/stat/html/talent.htm

Or type into Google: "Ping Pong ball launcher"



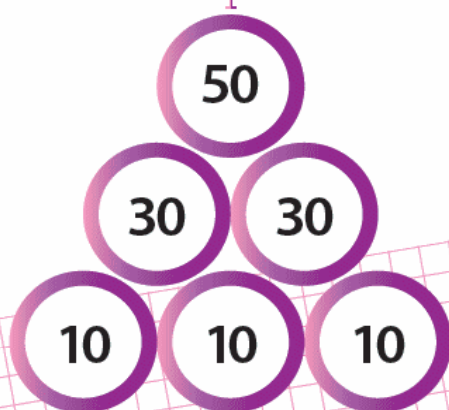
School of
Education

School of
Mathematics & Physics

School of
Human Life Sciences

LAUNCHER

4m



Buckets lined with bubble wrap

There are several other Technology competitions for Tasmanian students in Years 9-12.

For further details see:

<http://www.utas.edu.au/set> (Resources for teachers)

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Proudly supporting the
Tasmanian Science
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2009



TASMANIAN ALKALOIDS
Value Adding in Tasmania

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Einstein
was young
once too

Perhaps Einstein's most important contribution to science was not a theory, not a discovery, but merely a personal philosophy which stated, "Genius is 1% inspiration and 99% perspiration". It's a philosophy that Rio Tinto Alcan not only supports but also encourages and rewards.

We are proud to once again support the Tasmanian Science Talent Search. We believe that the key to tomorrow lies with our young people of today.