

Tasmanian Science Talent Search Newsletter No 4 – 2007

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Results in the Posters and Creative Writing sections for TSTS 2007 have been finalized. These will be circulated to participating schools and via SciNet as well as on our website www.key.org.au/stat/ as soon as possible. We were particularly pleased with the quality and quantity of entries. Antarctica is certainly proving to be a popular topic.

The next deadline for TSTS is July 27th for entries in the following sections:

Computer Presentations, Photographic Essays, Working Models and Science Games.

Please refer to the TSTS Booklet (found on our website, with special regard to the Judges Comments from 2006) for specific details and criteria.

Class entries: PLEASE NOTE!!

A class entry is a SINGLE ENTRY contributed to by a large group of students (4 +). It DOES NOT refer to a SET of individual entries from various members of a class. All entries submitted by individuals or small groups (up to 4 students) require an entry fee of \$5.

Technology Section:

Please note: A slight variation on the actual Technology Challenge has appeared inadvertently in STATIC and on our website for a short time.

The correct Challenge is set out below.:

Technology Challenge

Eligible students – All age groups

When his food started to run out, the Antarctic explorer Mawson had to kill his huskies and pull his sledge himself. If only he could have more efficiently used the powerful energy of the Antarctic winds to move his sledge with his remaining provisions!

Your Challenge is:

To design, make and appraise a model sledge (without wheels) at least 15cm long and 7 cm wide which can carry a load of glass marbles across smooth linoleum or polished wood (sorry, no ice available!) for a distance of at least a metre, propelled by a hairdryer (as the “wind”) held at a distance of no less than 50cm from the sledge. The judges will use a 2000W hairdryer.

It doesn't have to be fast, but the more it can carry, the better it will rate.

Consider:

- Overall design and weight of the sledge
- Distribution of additional weight (glass marbles)
- Design, size, material of sail
- You may move the “Wind” behind it, as long as you keep at least 50 cm away from the sail .

I suggest you tape the hairdryer to a stick at a measured distance of 50cm for easy control!

Start reading about sledge designs, snow-skiing, typical land yachts (with sails), snow shoes and ice skates. Sketch some rough drawings, make a “prototype”, test it...how many marbles can it carry?...record all designs and results in a construction diary...try varying the design to improve efficiency...re-test...try again...re-test.

Consider how you measure its efficiency, use tables for your results, take photos or do labelled drawings.

Judging criteria:

- Weight carried (number of marbles)
- Stability
- Design, creativity,
- Percentage of recycled materials used
- Understanding of the underlying science ie.. Friction
- Must fit in an A4 "Reflex" type box
- Design plan and construction diary (25%)

Curriculum Goals

Students will understand how to design, make and critically evaluate a wind powered sledge.

Students will understand how to describe and reflect on the process that they used to design their sledge.

Closing date: for sending in entry forms: 6th August, 2007.

Do NOT send entries to the judges.

Regional Public Judging Days

When and Where:

Hobart Aug 12 · Launceston Aug 26, Devonport August 19 at Imaginarium. Specific times will be announced on the STAT website and via Infostream and SciNet. .

Students from remote centres may send a video /DVD showing their sledge in action along with their diary/report.

NB: Watch for latest information through newsletters via Infostream, SciNet and the STAT website or email stsearch@bigpond.net.au for further details.

Every entry MUST be accompanied by an entry form signed by student's teacher, an entry fee of \$5 per entry, or a request from the school that all fees be billed at the end of the year.

The entry form is printed in the TSTS Booklet (distributed to all schools) and it is **also available online through the STAT website:**

<http://www.key.org.au/stat/>

See Judges Comments from 2006 on website for lots of useful hints!

In 2007, entries in sections other than Technology are to be forwarded to: The Director TSTS,

- Via Redline to 454 Windermere Rd., Windermere 7252
- C/- STAT, P.O.Box 3053, Launceston Delivery Centre, Canning St., L'ton 7250
- By personal delivery to : Cosgrove High School (south) Attention Rob Thomas
Or Launceston Church Grammar Button St, Mowbray Heights
Attention Margaret Hosford

Continue to watch Infostream and SciNet for further updates.

**For all queries, contact The Director, TSTS (Margaret Hosford)
at: stsearch@bigpond.net.au**