

# Speech By Ms Gan Siow Huang, Minister Of State For Education And Manpower

(Taken from [MOE website](#))

Mr Chua Seng Chong, Chairman, Tan Kah Kee Foundation

Professor Lim Yeow Khee, Chairman of the Tan Kah Kee Young Inventors' Award

Associate Professor Lim Tit Meng, Chief Executive, Science Centre Board

Distinguished guests, award recipients, parents, friends

1. Good morning to all of you on this beautiful Saturday morning. It is really nice to see all of you coming together to celebrate the achievements of our young inventors. Really happy to be able to join you this morning.

## Encouraging Innovation

2. Our Singapore story is one rooted in innovation, borne out of necessity.

(a) From the onset, it was clear that Singapore would need to forge its own unique path towards development. It was in this spirit that we strove to learn from the best around the world, and we adapted solutions to fit our local context. Through the years, our founding leaders and the pioneer generation transformed our disadvantages into unique value propositions, and established Singapore's reputation for forward thinking and innovation.

(b) We see innovation all around us today, ranging from how we plan and redevelop our limited land to meet the housing needs of our population, to technological innovations such as NEWater. The journey has not been easy, and many times people felt we would not be able to make it, but we did.

3. The future will have uncertainties, but I am confident that if we continue to have the spirit of perseverance and innovation, we will be able to succeed and survive. We now face challenges arising from demographics, technological disruptions and climate change. To respond to these present challenges and those yet to come, we will continue to need an able, innovative and united society that can formulate solutions to ensure Singapore's continued success.

## Applying Classroom Knowledge To Real-World Context

4. The Ministry of Education recognises this. And that is why our schools constantly seek to develop critical thinking among our students, and provide them with opportunities to apply classroom knowledge to real-world problems.

(a) For example, our students are encouraged to delve deeper into curriculum topics through Blended Learning. In a recent feature by the Straits Times, I was intrigued to read about how JC2 Chemistry students in St Andrews' Junior College dabbled in molecular gastronomy, by making their own "pearls" that we commonly see in bubble tea during a home-based learning lesson!

(b) Or take for example how in Design and Technology classes, our students identify real-world problems and propose creative solutions in their design, making prototypes that allow them to quickly test and adjust their solutions for end users.

(i) I hear that our students have come up with ways to help the elderly exercise during the pandemic, and even developed a cleaning tool with a long handle to help cleaners safely reach ceiling fans without having to climb ladders.

(ii) These are just some ways we encourage our students to stay curious and exercise their creativity when translating theory into real life applications.

### **Partnerships With Like-Minded Organisations**

5. However, MOE cannot do this alone, and our youths need a broad range of opportunities to apply their classroom knowledge. That is why MOE's partnerships with organisations such as the Tan Kah Kee Foundation is critical.

6. The Tan Kah Kee Young Inventors' Award aims to stimulate creativity among our youth and to promote scientific and technological breakthroughs in Singapore.

(i) For almost 40 years, the Young Inventors' Award has provided an important platform for youths from the primary to tertiary levels to showcase their creativity and inventiveness. By applying what they have learnt in school into research and making, we hope they will become inspired to contribute to our society, as they enter the workforce.

7. I was happy to hear that more than 700 participants from 81 schools took part in this year's Young Inventors' Award. This is an increase of almost 50% as compared to last year.

(a) The quality of entries has also improved. Compared to last year, the shortlisting rate has risen from 20% to 33%, and award rate has doubled from 7.5% to 15%. Well done to all participants!

(b) At this point I also want to acknowledge our teachers. I am quite sure our teachers played an important part in encouraging our students to take part in such platforms, and also to give them the opportunities and ideas for them to do well. So, thank you to the teachers too!

8. Allow me to share some notable projects from this year's entries:

(a) From the Junior level, a team came up with bioplastic packaging made of eggshells and groundnut shells, which would otherwise have been commonly discarded as food waste.

(b) Another student, who has dyslexia, produced a prototype reading tool to help people with dyslexia improve their visual focus. This tool includes a rolling platform with a magnifying bar and a coloured filter with sensors to detect lines of text.

(c) This year, judges have also decided to give two special awards for outstanding design and construction of prototypes. The student team from Jurong Secondary School impressed the judges with the scaled down model of a Tsunami Wall, and the team used a one-metre tall fish tank to simulate tsunami conditions.

(d) Another impressive prototype was built by a team from Republic Polytechnic, who came up with a device to dramatically reduce the time needed to expel fuel vapour from aircraft fuel tanks. What would have taken four to six hours for a large aircraft such as a Boeing 747 to expel fuel vapour can be potentially reduced to just two hours with this prototype. I was from the aviation sector, and I think such inventions are amazing. It could save our technicians a lot of time, and to do their work safely. So well done to the students!

## **Conclusion**

9. These are all very commendable projects. I would like to congratulate and thank Tan Kah Kee Foundation and Science Centre Singapore for continuing this important effort to stimulate innovative thinking among our youths.

10. MOE looks forward to continuing this invaluable partnership to inspire the next generations, and to grow our talent pool of young inventors. The next engineering marvel or scientific breakthrough may well come from the young minds with us today.

11. To conclude, let me congratulate all the winners of this year's Young Inventors' Awards, as well as those who took part in this competition. Keep learning, stay curious, and I look forward to your contributions to Singapore in the future.

12. Thank you.