

# C&T Department

Subject offerings & Electives  
For Sec 3 (2022)







Focus on  
Needs





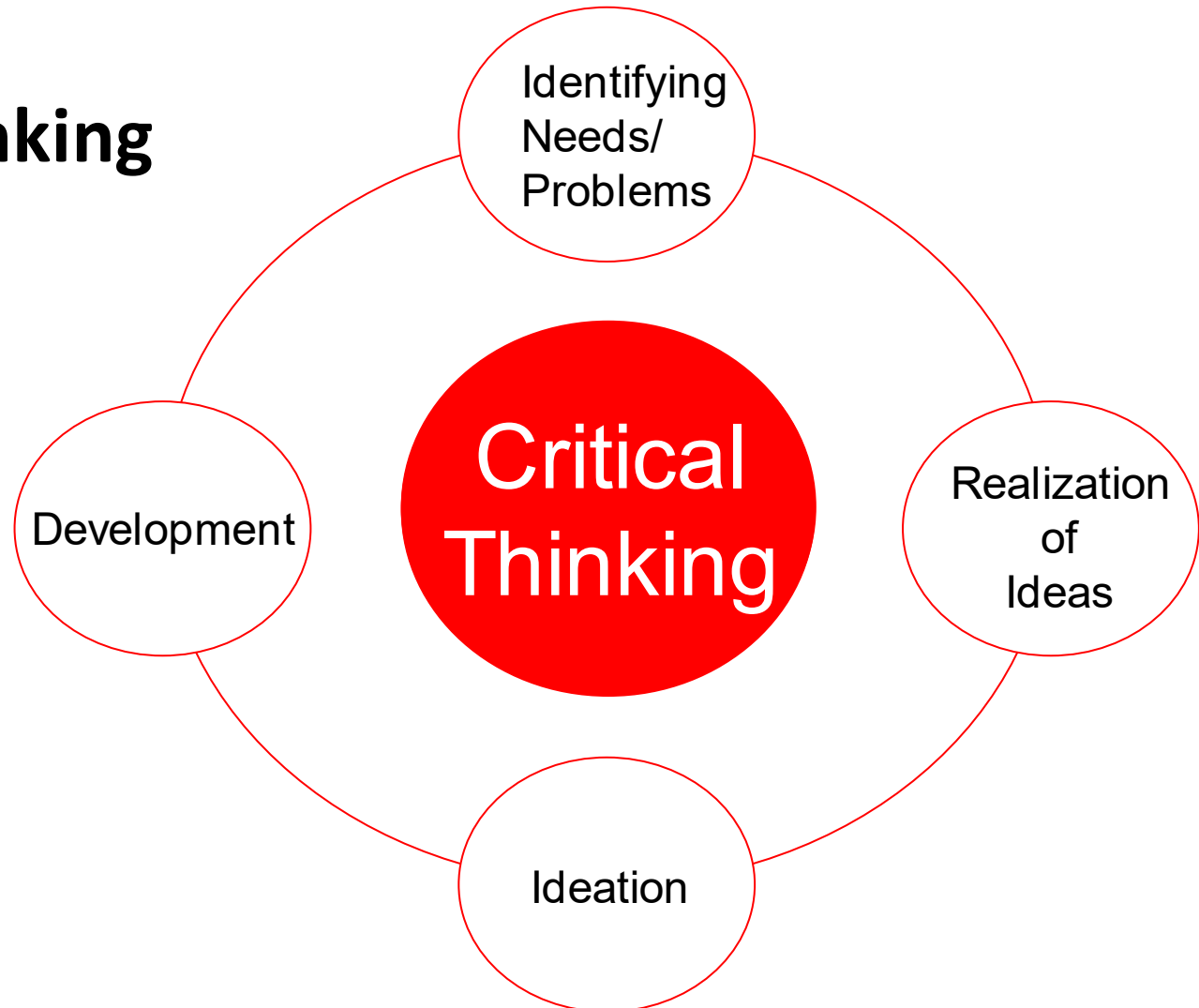
Problem  
Solving  
Process

Research  
Evaluation

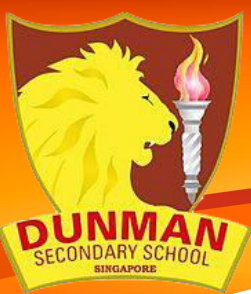
Critical  
Thinking

## Design Thinking

Taught in D&T







# Syllabus

## Design and Technology (D&T)

**Aim:** To foster values and develop dispositions for **enterprise, creativity and innovation** through research and exploration, idea and development and communication.

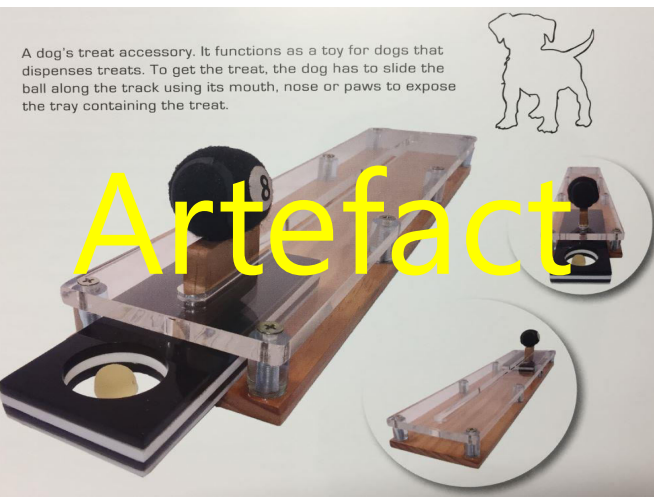
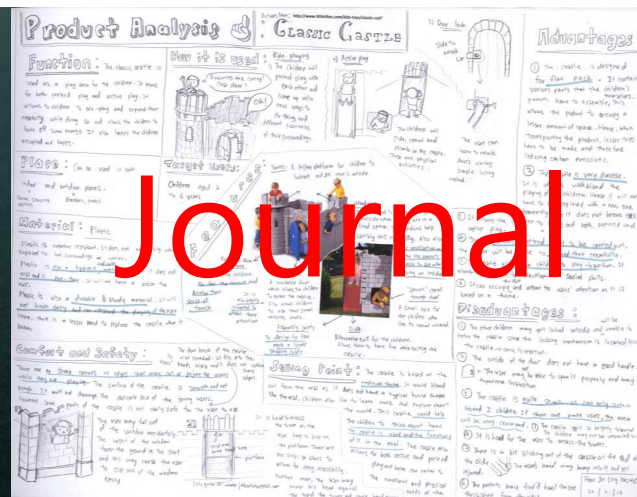
### Assessment Objective:

To assess knowledge with understanding, design problem solving and realization of design solution.

theory

Journal

Artefact

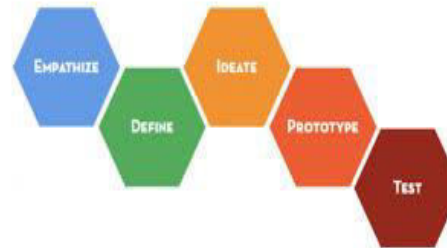




# Syllabus

## Paper 1

Written Paper – 40%

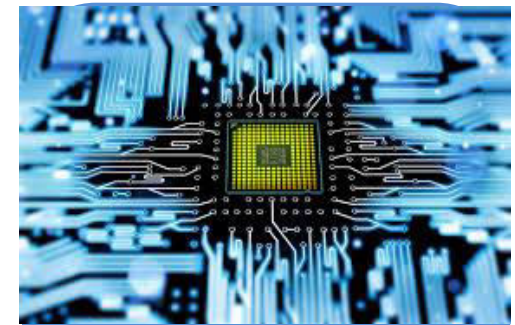


**Design  
Thinking**



**Mechanism**

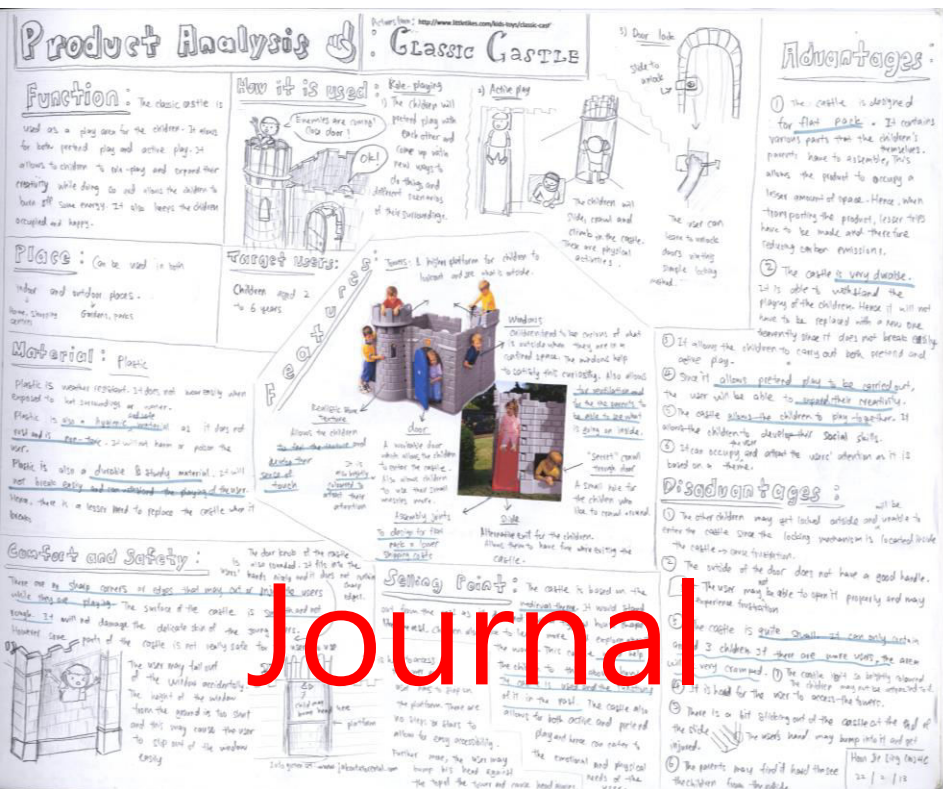
## How Technology Works



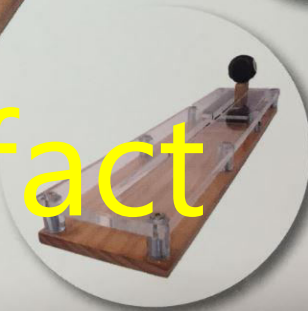
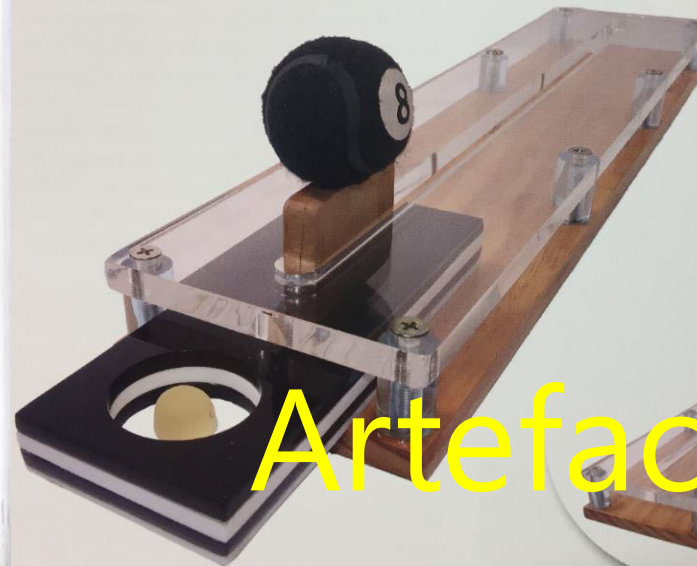
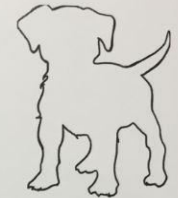
**Electronics**



## Paper 2 Coursework – 60%



A dog's treat accessory. It functions as a toy for dogs that dispenses treats. To get the treat, the dog has to slide the ball along the track using its mouth, nose or paws to expose the tray containing the treat.



# Artefact

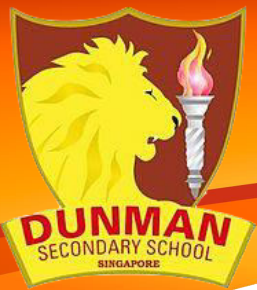


# Nurture

## *Developing the Child holistically In the area of academic and character*







# Misconception & Reality

## *Misconception*

D&T Coursework

**TRAIN**  
to be  
Technician

## *Reality*

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It is  
**TIME**  
consuming

**RELEVANCE**  
after  
N Levels

ITE, Poly  
Engineering  
Design  
Architecture  
Food Science  
**Any Course**

**RELEVANCE**  
To the  
world

# Design thinking the way forward for firms

A PROCESS to help produce practical innovations known as "design thinking" has been hailed as a game-changer for firms here looking to break new ground.

Spring Singapore chairman Philip Yeo, speaking at the opening of DesignWorks Singapore at Singapore Polytechnic (SP) yesterday, said this technique could give local firms a critical edge.

"Enterprises can make good use of design thinking to discover new opportunities to expand their market share and transform (themselves) into innovative, thinking companies," said Mr Yeo.

DesignWorks Singapore is the result of a new partnership between SP and the University of Toronto's Rotman School of Management.

The centre, located at the polytechnic, was modelled on the Rotman School's DesignWorks centre for design-based innovation and education.

For over five years, leaders at Rotman School, such as adjunct

professor of business design Heather Fraser, who is also the director of Rotman DesignWorks, have been instrumental in driving business design into the business, marketing and corporate culture of major North American multinationals and entrepreneurs.

Business design is a methodology that takes the best principles and practices from the world of design, and applies them to business strategy.

According to Prof Fraser, the discipline of business design is an important competency that can help firms identify new opportunities, and shape new strategies for accelerated growth and competitiveness.

SP principal Tan Hang Cheong said that initially, DesignWorks will offer local businesses a range of programmes to enhance the business design capabilities of firms and to help them identify opportunities for growth and innovation.

Representatives of business and industry associations, and

government institutions are also welcome.

Applying design practices is the way forward when it comes to driving innovation and it is not just about the aesthetics, said Mr Yeo.

"What makes Apple successful and admired by its fans and customers? The true innovation behind Apple lies in its deep understanding of the needs of users," he added, referring to the highly successful maker of the iPhone and other leading consumer electronics products.

To date, 12 Singapore-based businesses have participated in the pilot Business Design programme conducted by Rotman DesignWorks.

Mr Joseph Foo, executive chairman and founder of Jason Marine, was one of those to benefit from the practical aspect of design thinking.

"The programme has equipped us with the methodology to incorporate key systems into our process flow to ensure enhanced performance for the group," said Mr Foo. "With a better understanding of ourselves, our customers will also know what we can do for them."

**FRANCIS CHAN**

*Published 29  
Sep 2010  
The Straits  
Times*

# 'Design thinking' is being fostered in children



In Singapore, companies with design-related workshops for children include Thinkroom (above), Happness Makers and As Many Minds. PHOTO: THINKROOM

Organisations in Singapore and around the world are increasingly offering workshops to nurture design thinking in children and encourage creative solutions to global problems

PUBLISHED: SEP 23, 2017, 5:00 AM SGT



Natasha Ann Zachariah

At a workshop last year, 30 children were asked how they would get people to exercise more.

Make home owners run on treadmills to power up the television. Build narrower lift doors so those with wider girths are forced to slim down to get in.

*Published 23  
Sep 2017  
The Straits  
Times*

Singapore

## Good design thinking 'critical' in transforming Singapore again: PM Lee

Speaking at the Singapore University of Technology and Design's first Ministerial Forum on Thursday (Apr 5), Mr Lee also noted that there are many design issues to think about when reimagining Singapore.



Good design thinking was a key reason for Singapore's successful journey from third world to first, and it will be critical to transform Singapore again, and stay an outstanding city in the world, Prime Minister Lee Hsien Loong said on Thursday (Apr 5).

SINGAPORE: Good design thinking was a key reason for Singapore's successful journey from third world to first, and it will be critical in the country's future transformation, for it to remain an outstanding city in the world, Prime Minister Lee Hsien Loong said on Thursday (Apr 5).

*Published 5  
Apr 2018  
The Straits  
Times*



***Come and join the team!***

