Curriculum Management, Planning and Leadership in Home Economics / Technology and Living (Refreshed)
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Experience Sharing

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Law Ting Pong Secondary School

Background of School

- Located in Tai Po
- **Co-educational** school
- Medium of Instruction: English
- Only 1 Food Teacher in school
- Food Science (TL) room started up again in 2012
- **Flexibility** in arrangement of the subjects & curriculum in Junior Secondary Curriculum
- Strong and clear direction of using

  Learning Targets in Learning and Teaching

Lesson planning

- **Learning targets**:

  For students academic improvements

- Peer critique: help each other to achieve the learning targets

Timetabling

Year Level	Curriculum Time in a school year	Class Size	TL lesson in each week	Duration in each lesson	Remarks
S1	Each student will have around 16-17 hours	10-16	1	55 min (lesson time) + 5 min (intersession between lessons)	-Odd numbers group in 1st semester -Even numbers group in 2nd semester
S2 / S3	Same as above				
S4 / S6			Cluster school programme		

Efficiency in using curriculum & lesson time

- Curriculum mapping / planning / assessment / interdepartmental collaboration

- All gear to 1 important element: **EFFICIENCY**

- With constraint curriculum time, different departments worked together ensuring elements in curriculum are well covered

Position of the subject / Role of panel head

Food Science (name of the subject)

-increase students exposure to science related studies

e.g. Food Chemistry (chemical structures and bonding)

e.g. Textile Technology (latest inventions in the area of study)

e.g. Rheology (fats and oils, worksheets)

(study of flow and deformation of matters under applied forces)

Project initiatives

-interdepartmental collaboration (lobbying with different subject heads)

Healthy Eating concept at school

-working closely together with Canteen service provider, Senior management team (SMT), PTA and students

Junior secondary curriculum planning

(K10) **Food and Nutrition** Food Science
(K11) **Food Preparation and Processing** Food Science
(K12) **Fabric and Clothing Construction** (I) Food Science /OLE / ECA
(K13) **Fashion and Dress Sense** (I) VA/ Life Ed. / ECA
(K14) **Family Living** Humanities / Life Ed.
(K15) **Home Management and Technology** (I) Food Science /OLE

- Eg. **Food Technology**
  - working with Humanities: Sustainability essays on Food / Food Tech. / Food Science / Foods and Nutrition / Nutrition related diseases / Quality of Life / Consumer Science, etc.
- Eg. **Textile Technology**
  - project work and presentations
  - exposure of the latest technology and news in this field of study for students

Healthy eating concept at school

- **<u>One clear message to students</u>**:
  -learn how to eat well in class
  -eat well at school
  (food choices at lunch are healthy)

- No processed meat
  deep fried/ instant noodles

- Healthy lunch vs. comfort food

Curriculum mapping and **Cross KLA collaboration**

Project nature	Subjects involved	Learning Objectives	Learning outcomes
Curriculum mapping & Collaboration in S2 (6-7 dept. work tog.)	Food Science (leading) +English Language +Mathematics +ICT +D&T +VA (+Humanities) (+Performing Arts)	-Theory in practice -Collaboration -Planning (-Food Tech. -language arts -Paper engineering -Arts, Design -Survey)	Healthy Packaged Food Products with Marketing plan and Product Launch Video Trailer
STEM Education (3-7 dept. work tog.)	Food Science +Biology +Chemistry	-Molecular Gastronomy	Spherification of food products
Cross-Subject in S3 (2 dept. work tog.)	Food Science +Biology	-Balanced Diet, -Foods and Nutrition	Practical & Written work on Balanced Diet

Cross KLA collaboration (6 subjects)

- Originated from: Food Science (TL / HEc)

- (TL / HEc) Food Product Development
- Maths Paper Engineering
- D & T Graphics Design / Materials
- VA Package Design for the Food Prod.
- Eng. Lang. Slogan and Marketing strategies
- ICT Video development for Ad. Food

Cross KLA: message to the students

Topics in the cross-KLA project

- Current list of topics to be covered
- Production of a healthy, fruit-based snack to sell to teens
- creation of the snack (Food Science)
- use of language to discuss and describe health food (English)
- Creation of a package for this new product

Topics in project (cont.)

- creation net of the package (Maths)
- converting the 2D plan into a 3D model (Design & Technology)
- creating a logo (Visual Arts)
- colour scheme and design of the outside of the package (Visual Arts)
- creating a descriptive, persuasive blurb for the package (English)

Topics in project (cont.)

- Development of marketing campaign for the product
- creation of a slogan, print ad, and a script for a TV commercial (English)
- acting for the camera (Performing Arts)
- storyboarding and filming a TV commercial (ICT)

Food product development in Food Science

Understand existing trendy products in market

- I can compare and contrast the strength and the weaknesses of the current product to improve my own design.
- I understand what drives consumers to buy.

Packaging design and working drawings and making and actual package in VA, Mathematics, DT

Generate ideas for new food products and their package

- I can create the packaging based on consumers' desires.
- Based on consumers' needs, I can decide my new food product and design packaging.

Food product development in Food Science

Realise the design by making the product using previous knowledge

- I know how to develop new food products by making use of a basic recipe.

Cross KLA collaboration (6 subjects)

- **Obstacles**

- lobbying different dept. to work together
- May / may not have common interest or capacities to work together
- Time constraints to arrange meeting for 6 dept. head
- Misunderstanding in communication / email correspondence
- Some department heads stay firm & no room to negotiate

Cross KLA collaboration (6 subjects)

- **<u>Suggested solutions</u> to face possible obstacles:**

-send out blue print of what we all going to do:

propose delivery schedule

-prepare feasible learning and teaching materials for other dept

-being flexible in meeting up with individual department

-try to clarify messages rather than assume the meaning of the message

-collaboration is to socialize

(connection & communication is essential)

SWOT analysis of Food Science

Strengths	Weaknesses
• cross subject / KLA collaboration (e.g. 6 subjects collaboration, STEM activities) for building a more connected and diverse curriculum • Healthy Eating concept at school • experienced teachers with international exposure • good support with WiFi and BYOD (Bring your own device) • Individual ipads / laptops provided by school for students • technology / e-learning is used widely in school (e.g. Teamie and Gibbon) • small class size, thus more chances for students to get involved for hands on practical sessions in lesson	• size of Food Science room is small, thus lead to a smaller no. of students in selecting Food Science • misconception as a non-academic subject / nature of the subject as they do not understand the rationale and value of Food Science for students, thus affect student's subject selection

SWOT analysis of Food Science

Opportunities	Threats
• PDPs organised by EDB for knowledge enriching and useful L&T materials from tertiary institutes • more issues and concerns on food safety and consumption have been raised by general public • many TV programmes about food science, food safety and healthy eating / cooking • great demand of trained manpower in the fashion industry and business • SBA pilot scheme	• shortage of Food Science teacher supply • lack of career prospects

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STEM activities (Cross subject)

- Food + Biology +Chemistry in cross-subject STEM activities:

➢ Molecular Gastronomy (physical + chemical properties of Food)

➢ Spherification of fruit juice (fresh juice vs. bottle)

- 200ml juice+1g Sodium Alginate (in syringe)
- 500ml water+5g Calcium Chloride (in mixing bowl)

E-learning

- Technology has provided good support to more staff using student response systems like **Nearpod** and **Quizlet**.
- Teamie (FIP classroom), acknowledging prior learning allow students to share their learning, consolidate learning
- Google Drive / Google Forms /nearpod (quiz)
- Ping Pong / Kahoot / Padlet / (quiz and feedbacks)
- Critique sessions
- Peer assessment / evaluation
- Learning Targets

Technology and e-learning

(infrastructures, rules & regulations)

- Individual ipads / laptops provided by school for students
- Students encouraged to use their own electronic devices, i.e. mobile and tablets to interact meaningfully in lesson
- Good and stable WiFi network from QEF (Quality Education Fund) for upgrading technology infrastructure
- Apple TV

Thank you