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Promoting Deep learning through Experiential Learning

(透過體驗學習，深化學習層階)



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Experiential Learning

- *Tell me and I will forget*
- *Show me and I may remember*
- *Involve me and I will understand*





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Experiential Learning

- Learning from experience or learning by doing.
- Immerses learners in an experience → encourages reflection → develop new skills, new attitudes, or new ways of thinking.

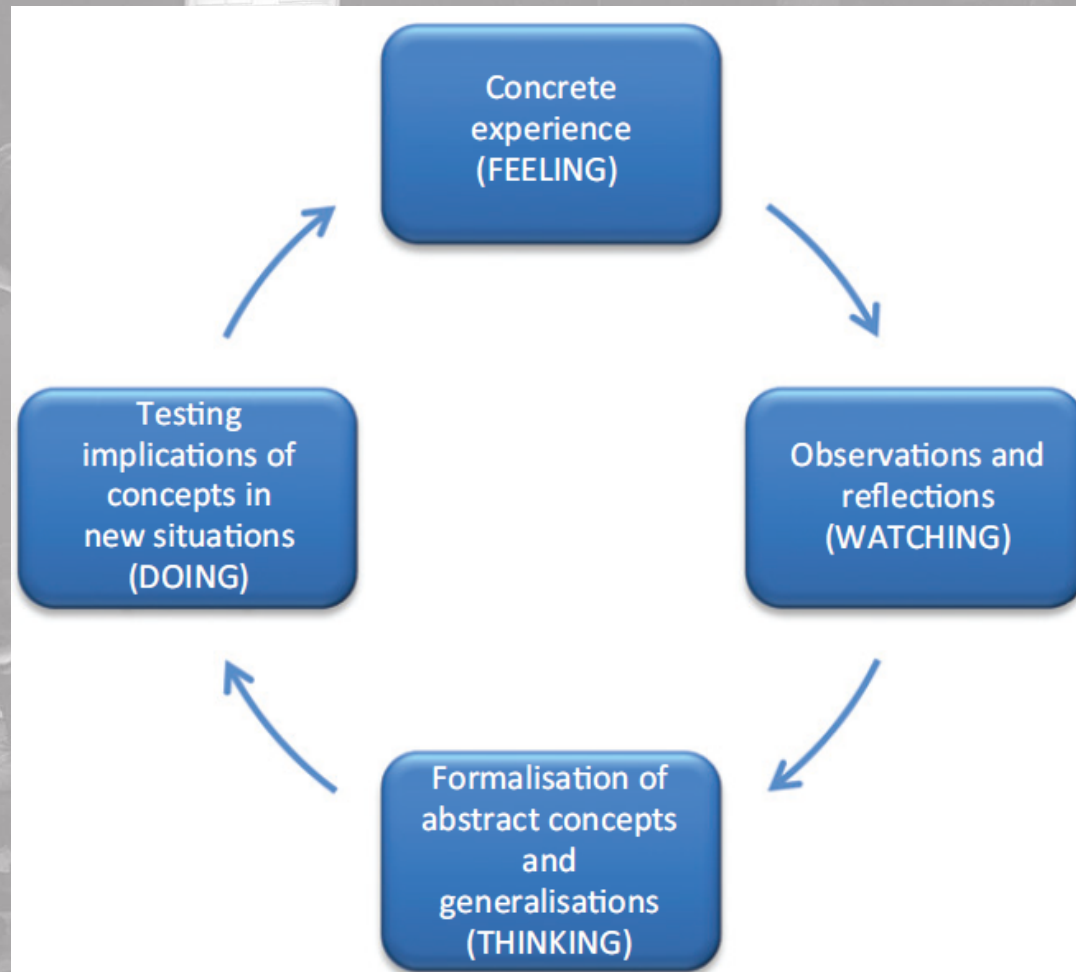
Learning
by Doing!





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David Kolb's Experiential Learning Model





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Experiential learning

v.s.

Traditional learning

Experiential learning	Traditional learning
Students are active learner	Students are passive participants
Students have self-motivation	Teacher center
Learning is real and meaningful	Learning theory may be unreal and meaningless
Reflection	Memories
Functional change	Not practical



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- To implement experiential learning by developing subject-based activities inside and outside classrooms

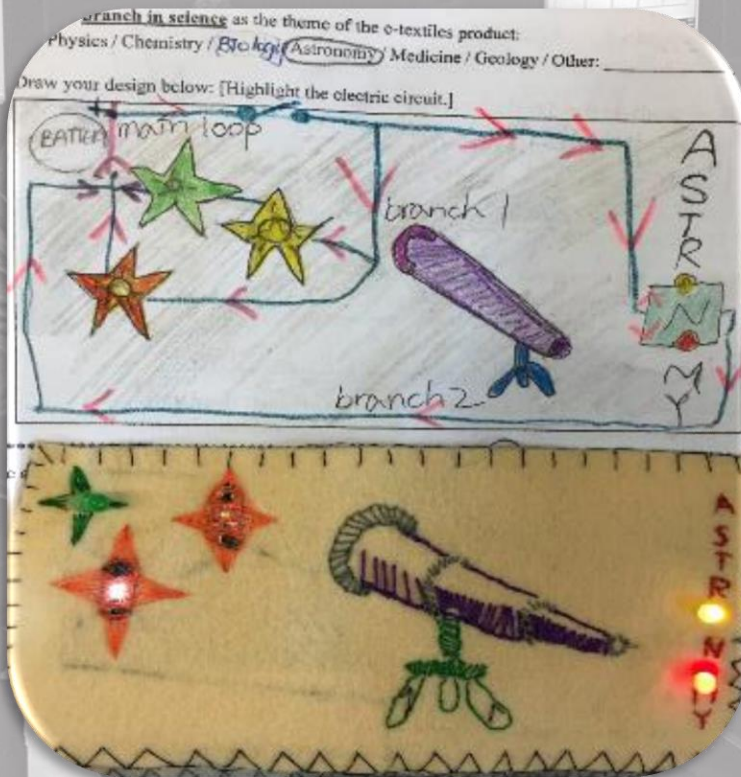
(以全方位科本活動，實踐體驗學習。)

To enhance learning atmosphere and motivation by incorporating experiential learning into classroom learning & teaching:
Experience, Reflect and Share, Generalize, Apply



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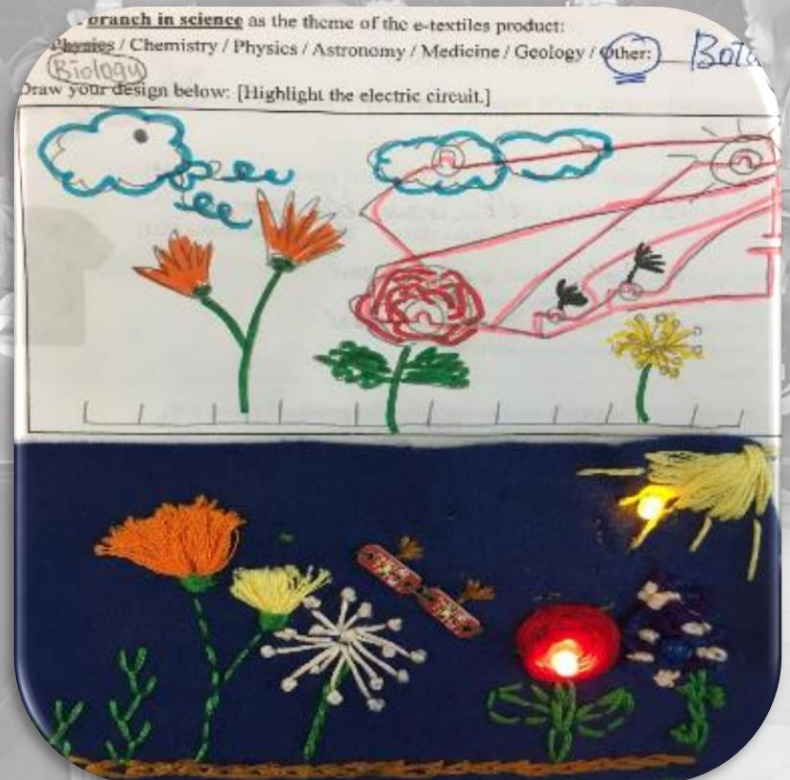
◆ S.2 Creative Science Project --- E-textile





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◆ S.2 Creative Science Project --- E-textile






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◆ S.2 Integrated Science --- Rib Cage Model

Making a rib-cage model by 3D printing

A. Rib-cage model (p.61)
 The diagram on the right shows a rib-cage model for students to understand our breathing action. Indicate the name of the parts in the space provided.



B. Planning for 3D printing
 1. The model can be divided into 2 parts:
 a. 4 strips with bases or sticks for connection
 b. 1 rubber band

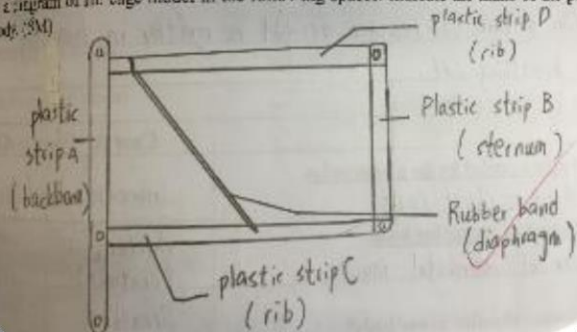
C. Table

Part represented by the strip	No. of strip	Thickness of the strip	Width	Length	Height	Color
Backbone	1	1cm	9cm	0.3cm		
Sternum	1	1cm	6cm	0.3cm		
Rib	2	1cm	9cm x 2	0.3cm		

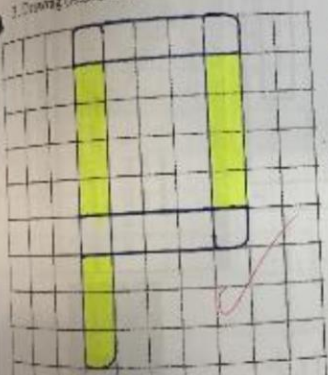
The maximum size of the printing platform is 10cm x 10cm.

What is the aim of the **rib cage model**? (2M)
 To simulate the action of the intercostal muscle during breathing.

Draw a diagram of rib cage model in the following spaces. Indicate the name of the parts in the body. (5M)



D. Drawing (Also show the location of holes or sticks in your design.)



Backbone:
 0.3cm x 0.4cm (hole)

Sternum:
 0.3cm x 0.4cm (hole)

Rib: (x2) 0.3cm x 0.3cm
 0.4cm x 0.4cm x 0.3cm (stick)

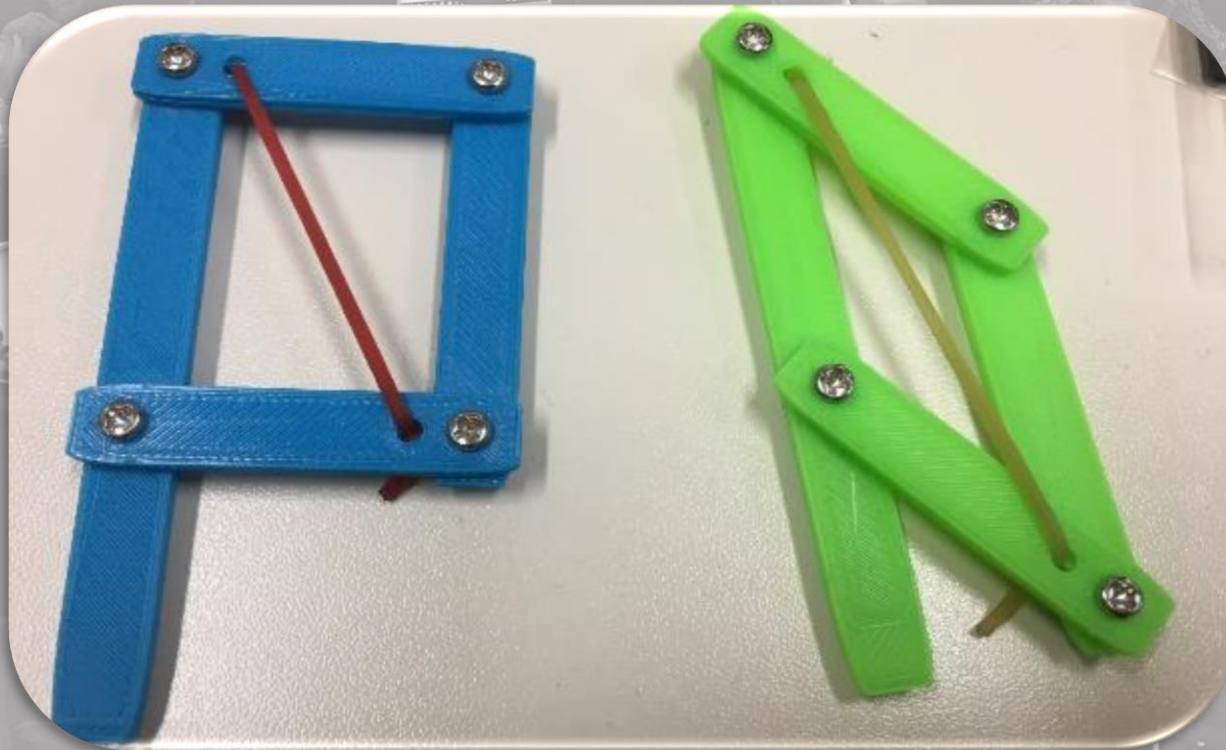
Whole model

Different parts in detail



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◆ S.2 Integrated Science Rib Cage Model





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- To foster good learning skills and strategies in experiential learning

(利用體驗學習，培育學生良好學習技巧和策略。)

- ◆ To build effective learning habits and study skills
- ◆ e-reading strategies and discussion forum
- ◆ Reading programs from various teams and departments
- ◆ To excel brotherhood through study groups (senior levels) and peer tutoring (seniors coaching juniors)



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- To foster good learning skills and strategies in experiential learning
(利用體驗學習，培育學生良好學習技巧和策略。)
- ◆ E-library was installed on e-Class platform

The screenshot shows the e-Class platform interface. The top navigation bar includes a menu with '電子圖書館' (E-library) circled in red. An arrow points from the text 'E-library' to this link. The right-hand sidebar contains several icons, with 'eLibrary plus' circled in red. Another arrow points from the text 'E-library' to this icon. The main content area displays a list of news items and announcements.



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- To develop the spirit of exploration and innovation by promoting STEM education and entrepreneurship experience (推展STEM教育和企業體驗，發展學生探索精神和創意。)

- ◆ Odyssey of Mind
- ◆ GreenMech
- ◆ First Lego League
- ◆ Creative coder Competition

