

Homeless

Corals and their Suffering

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珊瑚貳度C~「正視白化珊瑚的危機」~

我和另外二位夥伴以一組自己手製的象徵白化珊瑚的茶具組來說明展示，全世界都應該正視白化珊瑚的危機；珊瑚白化不等於死掉，白化指的是因外在環境改變，共生藻紛紛離開珊瑚，因此珊瑚的顏色從紅澄黃綠藍靛紫，褪回原本的珊瑚蟲顏色，也就是灰白色。除了氣候變遷，人為造成的泥沙淤積，乃至於貨輪漏油事件，都是導致共生藻離開或珊瑚生病的原因，若白化超過一週以上，以及珊瑚只要一超過攝氏溫度32度，就很容易死亡。

Motivation

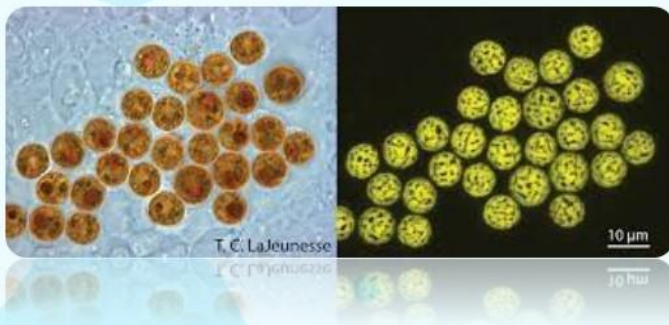
Due to the extreme climate phenomenon such as high temperature ,heat waves, storms and severe cold, we hope to warn people to take more care about the marine ecology



Symbiodinium left corals



The Mutual Benefits between Symbiodinium and Coral Reefs



What is the coral bleaching ?



在我們這組決定用全英文來呈現「正視白化珊瑚的危機及其處理方式」參賽時，首先取得英文老師的中英文翻譯與發音指導協助外，並獲得校長大力支持和實習主任的安排之下，先行舉辦在眾多老師及校長前進行宣講與對答，其次再至陶工科一年級新生各班級內進行實際的、面對面的講演和宣導，學弟妹們的反應也很熱烈響應，使我們的主題能讓大家覺得「淺顯易懂」，了解內容並且有興趣聽我們繼續講述下去，如此才能真正達到「正視白化珊瑚的危機」！這便是我們的目標與初衷了！

校長~顏龍源



實習主任~提出問題&建議

隊長~黃定佐負責講述與答詢

★國際青年MAGIC NTPC 專案設計與實作論壇~

新北市首創國際技職交流平台，這場活動已成為新北市每年技職的盛會，不僅是學生專題成果的展現，也代表新北市技職教育推動領先全國，重視技職教育不僅要適性發展、精熟技能，還要進一步回饋社會及重視國際議題。另外市府也積極跟產官學合作，共同推動國際技職教育，包含英國文化協會、國立臺灣師範大學等，期待透過各種資源及國際交流機會，本次活動邀請美國、德國、澳大利亞及我國師生約 80 人參與，讓新北市的孩子越來越有國際競爭力。









110/12/17 我和祐榮以及為勤代表我們新北市立

鶯歌高商陶瓷工程科出席這場盛會，我們以全英文來介紹「正視白化珊瑚的危機」之簡報和展示一組自己手製的象徵白化珊瑚的茶具組。用來呈現全世界都應該正視白化珊瑚的危機；珊瑚白化不等於死掉，白化指的是因外在環境改變，共生藻紛紛離開珊瑚，因此珊瑚的顏色從紅澄黃綠藍靛紫，褪回原本的珊瑚蟲顏色，也就是灰白色。

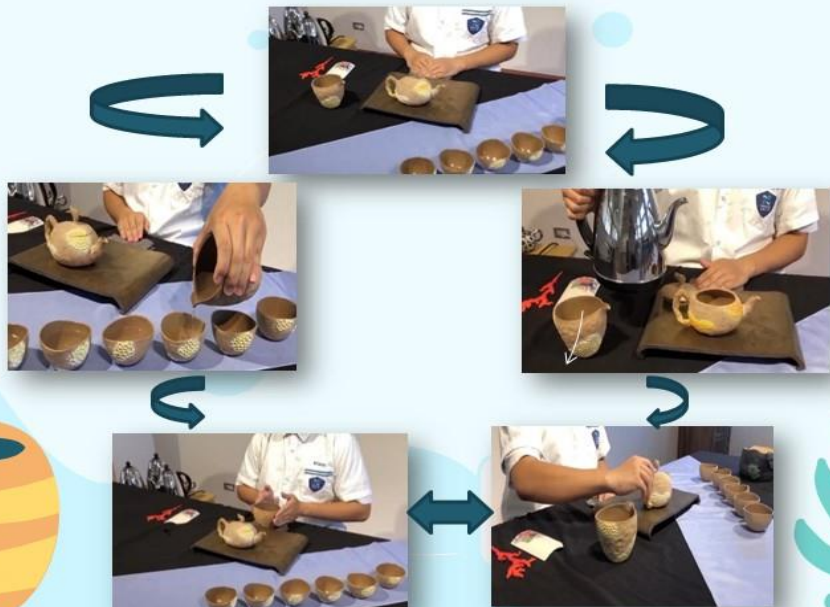
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<p style="text-align: center;">1</p> 	<p style="text-align: center;">2</p> 	<p style="text-align: center;">3</p> 
<p>Hello everyone I'm 定佐. We are from New Taipei municipal Yingge(鶯歌) vocational high school in Taipei. We will show you our motivation and works.</p>	<p>In recent years, extreme climate change has become one of the most serious issue of the century. So we want to warm human beings to think and care about marine ecology.</p>	<p>We applied ceramics and presentation techniques to our works and presented in a way of tea ceremony. We use sculpting and presentation skills learned in class to show our works.</p>

<p style="text-align: center;">4</p> 	<p style="text-align: center;">5</p> 	<p style="text-align: center;">6</p> 
<p>And the most special one is that we add a new material—thermochromic ink. We use this to simulate coral bleaching. Later we will show you what it works.</p>	<p>It will disappear with the rising temperature which stand for symbiodinium left corals, not just giving the utensil functions but also showing the difficulties that corals are facing.</p>	<p>I think everyone must be greatly impressed by this work and knows corals better. Do you become curious about our works?</p>

茶席儀軌展示



白化珊瑚茶具組

CORAL BLEACHING

Have you ever wondered how a coral becomes bleached?

HEALTHY CORAL
1 Coral and algae depend on each other to survive.




Corals have a symbiotic relationship with microscopic algae called zooxanthellae that live in their tissues. These algae are the coral's primary food source and give them their color.

STRESSED CORAL
2 If stressed, algae leaves the coral.







When the symbiotic relationship becomes stressed due to increased ocean temperature or pollution, the algae leave the coral's tissue.

BLEACHED CORAL
3 Coral is left bleached and vulnerable.




Without the algae, the coral loses its major source of food, turns white or very pale, and is more susceptible to disease.

WHAT CAUSES CORAL BLEACHING?

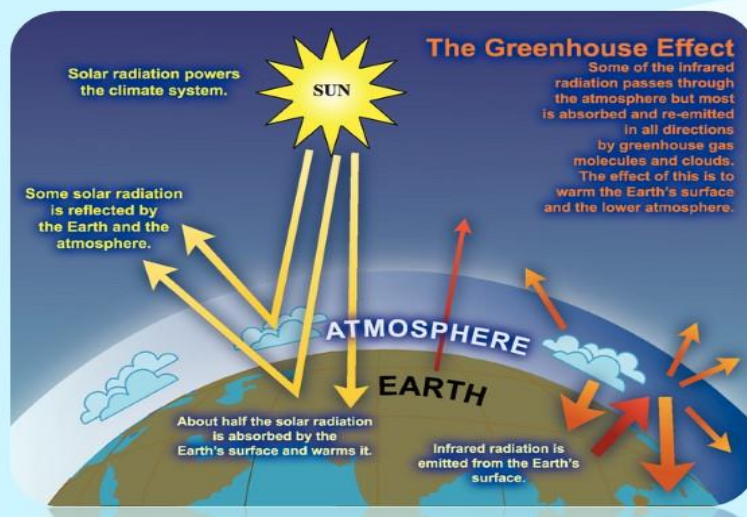
-  **Change in ocean temperature**
Increased ocean temperature caused by climate change is the leading cause of coral bleaching.
-  **Runoff and pollution**
Storm generated precipitation can rapidly dilute ocean water and runoff can carry pollutants — these can bleach near-shore corals.
-  **Overexposure to sunlight**
When temperatures are high, high solar irradiance contributes to bleaching in shallow-water corals.
-  **Extreme low tides**
Exposure to the air during extreme low tides can cause bleaching in shallow corals.


NOAA's Coral Reef Conservation Program
<http://coralreef.noaa.gov/>

Greenhouse effect



Greenhouse effect



The Greenhouse Effect
Some of the infrared radiation passes through the atmosphere but most is absorbed and re-emitted in all directions by greenhouse gas molecules and clouds. The effect of this is to warm the Earth's surface and the lower atmosphere.

Solar radiation powers the climate system.

Some solar radiation is reflected by the Earth and the atmosphere.

ATMOSPHERE

EARTH

About half the solar radiation is absorbed by the Earth's surface and warms it.

Infrared radiation is emitted from the Earth's surface.

Five ways to reduce Greenhouse effect

One
Commute by the public transportation or electric vehicles

Two
Using energy efficient appliances

Three
Eating more vegetable and less meat

Four
Reusing products instead of buying

Five
Renewable energy deployment



Solution One

Commute by the public transportation Or electric vehicles



Solution Two

Using energy efficient appliances



Solution Three

Eating more vegetable and less meat



Solution Four

Reusing products instead of buying



Solution Five

Renewable energy deployment



Our works

We use a series of ceramic works symbolized the situation that corals are facing



Tea pot



Tea serving pot



Tea cups



Our works



Tea pick



Tea spoon



The waste bowl



Our works



Vase



Tea Caddy



Tea Cup



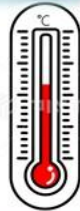
Our works



Tea pot



Tea serving pot



•Thermochromic Ink

Thermochromic inks are temperature sensitive compounds that change color or disappear with variations in climate. These changes can be temporary or permanent depending on the application. This technology is often employed in instances where products need to be stored in controlled environments.





Thermochromic Inks on our works

陶三仁	811092	黃定佐
陶三仁	811098	詹祐榮
陶二忠	911107	李為勤

Thank you !
Have a nice day !