

### CLIL Lesson Plan 3 – Grade 5 Unit 3 Lesson 1

<b>Subject:</b>	Science
<b>Time:</b>	40
<b>Theme:</b>	Ph. of Foods
<b>Lesson:</b>	Lesson 1 Introduction to pH
<b>Learning objectives:</b>	<p><u>Students will be able to:</u></p> <ul style="list-style-type: none"> <li>● Students will be able to understand that different indicators have a different color spectrum.</li> <li>● Students are able to understand the difference between acidic ph. 1.0 - 6.9 and alkaline ph.7.1 - 14.0 water solutions.</li> <li>● Students are able to understand that a neutral water solution has a “ph.” of 7.</li> <li>● Students will be able to understand that the more acidic a solution is the brighter the test color, the more alkaline the solution the darker the test color.</li> <li>● Students will understand that if they mix acidic solutions with alkaline solutions and the color turns green it is said to be neutral and have a pH of 7.</li> <li>● Students will understand that water and an indicator will have a green color, if you add an alkaline to it, it will turn blue, if you add enough acid to this solution, it will turn green again and if you add a further amount of strong alkaline to this solution it will turn dark blue.</li> <li>● Students will understand that water and an indicator will have a green color, if you add an acid to it, it will turn yellow, if you add enough alkaline to this solution, it will turn green again and if you add a further amount of strong acid to this solution it will turn dark orange.</li> <li>● Students are able to determine the difference between acidic, alkaline and neutral solutions through taste, observation</li> <li>● Students will be able to understand that acidic substances, like orange juice or tomatoes taste sour.</li> <li>● Students will be able to understand that alkaline solutions like that of baking soda solution or a soapy solution are bitter.</li> </ul>

	<ul style="list-style-type: none"> <li>● Students will be able to understand that the more acidic a solution is the brighter the test color, the more alkaline the solution the darker the test color.</li> <li>● Students will be shown toothpaste, lemon juice, vinegar, water and bleach then an indicator will be added to show students the pH of the substance.</li> <li>● Students will complete a worksheet on different foods that have different ph. and result in different ph. colors.</li> <li>● Students will understand that all foods both acidic and alkaline are important to maintain a healthy body.</li> </ul>
<p><b>Learning outcomes:</b></p>	<p><u>Students will be able to:</u></p> <ul style="list-style-type: none"> <li>● Students will be able to understand that different indicators have a different color spectrum.</li> <li>● Students are able to understand the difference between acidic ph. 1.0 - 6.9 and alkaline ph.7.1 - 14.0 water solutions.</li> <li>● Students are able to understand that a neutral water solution has a “ph.” of 7.</li> <li>● Students will be able to understand that the more acidic a solution is the brighter the test color, the more alkaline the solution the darker the test color.</li> <li>● Students will understand that if they mix acidic solutions with alkaline solutions and the color turns green it is said to be neutral and have a pH of 7.</li> <li>● Students will understand that water and an indicator will have a green color, if you add an alkaline to it, it will turn blue, if you add enough acid to this solution, it will turn green again and if you add a further amount of strong alkaline to this solution it will turn dark blue.</li> <li>● Students will understand that water and an indicator will have a green color, if you add an acid to it, it will turn yellow, if you add enough alkaline to this solution, it will turn green again and if you add a further amount of strong acid to this solution it will turn dark orange.</li> <li>● Students are able to determine the difference between acidic, alkaline and neutral solutions through taste, observation</li> </ul>

	<ul style="list-style-type: none"> <li>● Students will be able to understand that acidic substances, like orange juice or tomatoes taste sour.</li> <li>● Students will be able to understand that alkaline solutions like that of baking soda solution or a soapy solution are bitter.</li> <li>● Students are able to understand the difference between acidic ph. 1.0 - 6.9 and alkaline ph.7.1 - 14.0 water solutions.</li> <li>● Students are able to understand that a neutral water solution has a “ph.” of 7.</li> <li>● Students will be able to understand that the more acidic a solution is the brighter the test color, the more alkaline the solution the darker the test color.</li> <li>● Students will be shown toothpaste, lemon juice, vinegar, water and bleach then an indicator will be added to show students the pH of the substance.</li> <li>● Students will complete a worksheet on different foods that have different ph. and result in different ph. colors.</li> <li>● Students will understand that all foods both acidic and alkaline are important to maintain a healthy body.</li> </ul>
<b>Cognitive skills:</b>	Logic, reasoning, attentive, sequencing, working memory and previous lessons taught.
<b>Language function:</b>	<ul style="list-style-type: none"> <li>- Compare and contrast</li> <li>- Persuasion</li> <li>- Asking questions</li> <li>- Expressing likes and dislikes</li> <li>- Cause and effect</li> <li>- Summarizing</li> <li>- Sequencing</li> <li>- Predicting</li> <li>- Agreeing/disagreeing</li> <li>- Does water have a taste? No, because it is said to be neutral, no taste.</li> <li>- Does lemon juice have a taste? Yes, it does, we say it's sour so we say it's acidic.</li> <li>- Does baking soda have a taste? Yes, it does, we say it is bitter, so we say it is alkaline or basic.</li> </ul>

	<ul style="list-style-type: none"> <li>- What color does acid water turn with a color indicator?</li> <li>- What color did vinegar turn with the indicator?</li> <li>- What color does alkaline turn with a color indicator?</li> <li>- What color did bleach turn with an indicator?</li> <li>- Using your cognitive skills determine the list of foods as either acidic or alkaline.</li> <li>- Use the worksheet to give you a better understanding of what foods, items are acidic and alkaline and color ph. Spectrum in according to the information given.</li> <li>- Color in the pH spectrum according to the color spectrum shown on the PowerPoint.</li> </ul>
<b>Key language:</b>	<p><b>Vocabulary:</b> Ph. Alkaline, acidic, basic, indicator, reds, pinks, pale colors, light colors, yellows, oranges, greens, blues, bitter, sour, Vegetable juices, parsley, spinach, broccoli, celery, garlic, dried figs, watermelon, lemons, herb teas, lemon water, pickled vegetables, beef, pork, veal, shellfish, canned tuna, sardines, peanuts, walnuts and black coffee, ph. color spectrum.</p> <p><b>Verbs:</b></p> <ul style="list-style-type: none"> <li>- Like, don't like, drink, taste, test, touch, measure, make, hold, smell, look, color, talk, discuss, write, translate, watch, hand-out, see and observe.</li> </ul> <p><b>Language structure:</b></p> <ul style="list-style-type: none"> <li>- Does water have a taste? No, because it has a neutral ph. Does a lemon have a taste? Yes because it has an acidic taste. Does soapy water or baking soda have a taste? Yes, because it's bitter, so we say it has an alkaline taste.</li> <li>- To see which solutions are stronger than other we use a color test. This is done by using an indicator, which shows us how strong or how week a solution is according to its color we can tell what the pH of the substance is. Let's make a ph. Color scale.</li> </ul>
<b>Materials:</b>	Computer, projector, worksheets, PowerPoint.
<b>Assessment tool:</b>	Brainstorming, repetition, accuracy, worksheets, knowledge

	of foods, questioning, answering, reasoning, and previous lessons learned.
<b>Procedure – Lesson 4/4:</b>	
1. Lead-in (10 mins)	<ol style="list-style-type: none"> <li>1. Students are asked if they know what pH is?</li> <li>2. Students are asked if they know why pH is important.</li> <li>3. Students are asked if they understand the words pH, acid, alkaline, neutral, sour.</li> <li>4. Students are asked if water has a taste or a smell.</li> <li>5. Students are told that most foods have a pH. For example: lemons taste like? Lemons smell like...?</li> <li>6. Teacher explains tomatoes can have a sour taste.</li> <li>7. Teacher explains and shows them what an indicator is and explains that there are different kinds of indicators: one tests acidic and alkaline solutions, another tests only acidic solutions, and the third only tests alkaline solutions.</li> </ol>
2. Task 1 (15 mins)	<ol style="list-style-type: none"> <li>8. Teacher takes a lemon and squeezes the juice into a cup and adds an indicator to show that it's acidic. Teacher does the same with vinegar, to show that lemon juice and vinegar are both acidic and both have a sour taste.</li> <li>9. Teacher asks if they know what the opposite word of sour is. If the answer bitter is given teacher proceeds by showing the pH of bleach and toothpaste. If the answer is salty, teacher adds salt to water to show no change in the pH.</li> <li>10. While soapy water has a bitter taste. (Examples are given of a few sour (acidic) and bitter foods (alkaline)).</li> <li>11. Students are asked why we have acidic and alkaline foods and cleaning agents.</li> <li>12. Students are then assured that all food both acidic and alkaline are important to maintain a healthy body.</li> <li>13. Students are then shown samples of toothpaste, lemon juice, bleach, vinegar, and water. To these samples an indicator is added and the color produced is compared to that of the color spectrum on the indicator bottle and color spectrum on the Power Point.</li> </ol>

3. Task 2 (5 mins)	14. Students are given a worksheet with a list of foods on them (translated into Chinese too) in their groups students decide which foods are acidic and which are alkaline.
1. Wrap-up (10 mins)	15. Students are given a correct list of all the foods they listed and they check to see how many of them they classify correctly. 16. Students then color in the color spectrum according to the PowerPoint and color spectrum shown on the bottle and labeled to represent the foods they had seen been tested.

## CLIL Lesson Plan – Grade 5 Unit 3 Lesson 2

<b>Subject:</b>	Science
<b>Time:</b>	40
<b>Theme:</b>	Using Invisible Ink to Draw an Animal picture.
<b>Learning objectives:</b>	<ul style="list-style-type: none"> <li>● Students are able to name the materials used in the experiment.</li> <li>● Students are able to list the experimental steps.</li> <li>● Students are able to follow the steps to draw an animal using a colorless liquid and after being sprayed the animal will appear in a color form.</li> <li>● Students are able to understand and explain the outcome of the experiment.</li> <li>● Students will understand what an acid, an alkaline and an indicator are.</li> <li>● Students will understand that if you add an indicator - to a solution of baking soda (sodium bicarb) blue.</li> <li>●</li> </ul>
<b>Learning outcomes:</b>	<p><u>Students will be able to:</u></p> <ul style="list-style-type: none"> <li>● Students are able to name the materials used in the experiment.</li> <li>● Students are able to list the experimental steps.</li> <li>● Students are able to follow the steps to draw an animal using a colorless liquid and after being sprayed the animal will appear in a color form.</li> <li>● Students are able to understand and explain the outcome of the experiment.</li> <li>● Students will understand what an acid, an alkaline and an indicator are.</li> <li>● Students will understand that if you add an indicator - to a solution of baking soda (sodium bicarb) the color change will be blue.</li> </ul>
<b>Cognitive skills:</b>	logic, reasoning, attentive, sequencing, working memory
<b>Language function:</b>	Follow the steps of the experiment
<b>Key language:</b>	<p><b>Vocabulary:</b></p> <ul style="list-style-type: none"> <li>- Baking soda, animal picture, squares.</li> <li>- Five equal segments duplicate the picture.</li> <li>- Indicator, water, pink, color, lion, elephant, buffalo</li> </ul>

	<ul style="list-style-type: none"> <li>- Rhino, leopard, hippo and giraffe.</li> <li>- Flask, cotton wool earbud and A4 paper.</li> <li>- Baking soda solution (sodium bicarb) spray bottle.</li> <li>- milliliters (ml.)</li> <li>- reaction, production, safety, gas</li> </ul> <p><b>Verb:</b></p> <ul style="list-style-type: none"> <li>- add, mix, write, place, soak, pour,</li> <li>- Observe, cover, clean, spray.</li> </ul> <p><b>Language structure:</b></p> <ul style="list-style-type: none"> <li>- Choose an animal picture.</li> <li>- Draw, using baking soda (sodium bicarb) what you see in your portion of the picture onto an A4 size paper.</li> <li>- Let it dry and then bring it to the teacher to get sprayed with an indicator.</li> </ul>
<b>Materials:</b>	computer, projector, experimental ingredients
<b>Assessment tool:</b>	Accuracy in doing the experiment.
<b>Procedure – Lesson 4/4:</b>	
1. Lead-in (10 mins)	<ol style="list-style-type: none"> <li>1. Recapping the students’ knowledge of alkaline and acidic solutions:             <ol style="list-style-type: none"> <li>1) What is an alkaline solution?</li> <li>2) What is an acidic solution?</li> <li>3) What ph. color is an alkaline solution?</li> <li>4) What ph. color is an acidic solution?</li> <li>5) Different indicators give a different color spectrum and are only used to test a certain ph. range.</li> </ol> </li> </ol>
2. Task 1 ( 10 mins)	<ol style="list-style-type: none"> <li>3. Students in a group chose an animal from a list of six animals.</li> <li>4. Each picture has been divided into “quarters”. Students play rock paper scissors to choose who gets to draw that part of the animal in their quarter.</li> <li>5. Reviewing the key language. The teacher shows the experimental ingredients and asks the students to name the ingredients and the classification of them (acidic or alkaline).</li> </ol>
3. Task 2 (15 mins)	<ol style="list-style-type: none"> <li>1. Assign one student from each group to collect the ingredients for the experiment.</li> <li>2. Students do the experiment with guidance from the</li> </ol>

	teachers. 3. Students observe their experimental results.
4. Wrap-up (5 mins)	1. Students conclude that using an indicator and sprayed over baking soda writing is made visible as a color. 2. Students clean up their desks. 3. Students finish drawing and coloring of their color spectrum given to them in the first lesson.

### CLIL Lesson Plan – Grade 5 Unit 3 Lesson 3

<b>Subject:</b>	Science
<b>teachers</b>	Lance Pohl, 黃鈺雯(co-teacher)
<b>Time:</b>	40
<b>Theme:</b>	Aqueous/Water/Acid/Alkaline Solutions
<b>Lesson:</b>	Lesson 3 of 4 lessons
<b>Learning objectives:</b>	<ul style="list-style-type: none"> <li>● Students will be able to understand that different indicators have a different color spectrum.</li> <li>● Students will understand that phenol is only used as an alkaline indicator only (the color change will be from colorless to dark pink).</li> <li>● Students will understand that vinegar is acid and bleach is alkaline and when using Phenol as an indicator, the solution added together is colorless.</li> <li>● Students are able to understand the difference between acidic ph. 1.0 - 6.9 and alkaline ph.7.1 - 14.0 water solutions.</li> <li>● Students are able to understand that a neutral water solution has a “ph.” of 7.</li> <li>● Students will be able to understand that the more alkaline the solution, the darker the test color (pink to dark pink).</li> <li>● Students will understand that acid added to alkaline will produce a neutral ph. (colorless liquid).</li> </ul>
<b>Learning outcomes:</b>	<p><u>Students will be able to:</u></p> <ul style="list-style-type: none"> <li>● Students will be able to understand that different indicators have a different color spectrum.</li> <li>● Students will understand that phenol is only used as an alkaline indicator only (the color change will be from colorless to dark pink).</li> <li>● Students will understand that vinegar is acid and bleach is alkaline and when using Phenol as an indicator, the solution added together is colorless.</li> <li>● Students are able to understand the difference between acidic ph. 1.0 - 6.9 and alkaline ph.7.1 - 14.0 water solutions.</li> <li>● Students are able to understand that a neutral water</li> </ul>

	<p>solution has a “ph.” of 7.</p> <ul style="list-style-type: none"> <li>● Students will be able to understand that the more alkaline the solution, the darker the test color (pink to dark pink).</li> <li>● Students will understand that acid added to alkaline will produce a neutral ph. (colorless liquid).</li> </ul>
<b>Cognitive skills:</b>	logic, reasoning, attentive, sequencing, working memory
<b>Language function:</b>	<p>Add water into cup one, what do you see? Add the contents of cup one into cup two, what do you see? Add the contents of cup 3 into cup 4 what do you see? Try and duplicate what I have done using the dropper bottles given to you.</p> <p>Why did your experiment fail? Why did your experiment succeed? Please show the class how you did it?</p> <p>Can you explain what happened?</p>
<b>Key language:</b>	<p><b>Vocabulary:</b></p> <ul style="list-style-type: none"> <li>- pH, Alkaline, acidic, basic, bleach, vinegar, dropper bottle, bucket.</li> <li>- indicator, food, distilled water, cups, drops, colorless,</li> </ul> <p><b>Verbs:</b></p> <ul style="list-style-type: none"> <li>- Drop by drop, add, watch, see, discuss.</li> </ul> <p><b>Language structure:</b></p> <ul style="list-style-type: none"> <li>- Watch me closely and try to duplicate my experiment.</li> <li>- In your dropper bottles are phenol (an indicator), bleach (an alkaline) and vinegar (an acid).</li> <li>- To see which solutions are stronger than other we use a color test and this is done by using an indicator, which shows us how strong or how weak a solution is according to its color we can tell what its pH is and how strong/weak an acid it is or how strong/weak an alkaline it is. Let’s see what color the solutions in the cup turn? So what would you say I have added an acid or an alkaline?</li> <li>- Use the liquids in your dropper bottles sparingly, as you will not be given more solutions to work with!</li> <li>- Record everything you do, because if you succeed you may be called to duplicate your experiment in front of</li> </ul>

	the class.
<b>Materials:</b>	Computer, projector, worksheets.
<b>Assessment tool:</b>	Brainstorming, repetition, accuracy, worksheets.
<b>Procedure – Lesson 3/4:</b>	
1. Lead-in (5 mins)	<ol style="list-style-type: none"> <li>1. Students are told to focus on the teacher and the experiment that we will show them, as their task will be to duplicate his experiment.</li> <li>2. Students are shown 4 cups and three dropper bottles {with three different solutions in them, marked Phenol (an indicator) bleach and the third is vinegar}.</li> <li>3. Students are reminded that in the first lesson they were told that different indicators have different functions. The first indicator tested and showed acid and alkaline solutions, the indicator today is different from the first lesson.</li> </ol>
2. Task 1 (5 mins)	<ol style="list-style-type: none"> <li>4. Teacher places the 4 cups in front of him and adds water to the first cup. (<u>Before class started teacher had added 10 drops of phenol into the cup</u>).</li> <li>5. Into the first cup I add a little liquid (water). (No color change).</li> <li>6. Into the second cup {<u>I had, before the class started added about 5 drops of bleach (alkaline)</u> Students are <u>not told or shown this</u>}. I add the contents of the first cup, (the color turns pink).</li> <li>7. Into the third cup I add the contents of the second cup. (Into the third cup (<u>before class started, I had added 2 drops of vinegar (acid) into the third cup, students are not told or shown this</u>)). (The color turns colorless).</li> <li>8. Into the fourth cup, I add the contents of the third cup. {<u>I had, before the class started added 15 drops of bleach (alkaline) into the fourth cup, students are not told or shown this</u>}. (The color changes back to pink).</li> </ol>
3. Task 2 (15 mins) 4. Task 3 (7 mins)	<ol style="list-style-type: none"> <li>9. Students are given the four liquids (labelled on each bottle) + an indicator and asked to try and duplicate the experiment.</li> <li>10. The first group to succeed will come up to the front to demonstrate their successful experiment.</li> <li>11. If none of the groups succeed in the allotted time,</li> </ol>

5. Task 4 (6 min)	teacher will show the students the experiment. 12. If students run out of chemicals, the experiment for that group is counted as unsuccessful. 13. After which the other groups discuss why their experiments were unsuccessful.
1. Wrap-up (2 mins)	14. Clean - up and return the chemicals and equipment back to the teacher.

### CLIL Lesson Plan – Grade 5 Unit 3 Lesson 4

<b>Subject:</b>	Science
<b>Time:</b>	40
<b>Theme:</b>	Different ways to test ph.
<b>Learning objectives:</b>	<ul style="list-style-type: none"> <li>● Students are able to name the materials used in the experiment.</li> <li>● Students are able to list the experimental steps to read invisible ink.</li> <li>● Students are able to know that by using a color indicator, acid solutions will produce a red color, alkaline solutions will produce a blue color and neutral solutions will produce a green color.</li> <li>● Students are able to understand that given a neutral solution with the addition of salt will produce a green color.</li> <li>● Students are able to list 4 ways in which solutions can be tested for ph.</li> <li>● Students are able to list the color and physical responses to solutions and food having a different ph.</li> <li>● Students are able to understand whether the tests are reliable or not.</li> </ul>
<b>Learning outcomes:</b>	<p><u>Students will be able to:</u></p> <ul style="list-style-type: none"> <li>● Students are able to name the materials used in the experiment.</li> <li>● Students are able to list the experimental steps to read invisible ink.</li> <li>● Students are able to know that by using a color indicator, acid solutions will produce a red color, alkaline solutions will produce a blue color and neutral solutions will produce a green color.</li> <li>● Students are able to understand that given a neutral solution with the addition of salt will produce a green color.</li> <li>● Students are able to list 4 ways in which solutions can be tested for ph.</li> <li>● Students are able to list the color and physical responses to solutions and food having a different ph.</li> </ul>

	<ul style="list-style-type: none"> <li>● Students are able to understand whether the tests are reliable or not.</li> </ul>
<b>Cognitive skills:</b>	Logic, reasoning, attentive, sequencing, working memory, information and experiments done in previous lessons.
<b>Language function:</b>	<ul style="list-style-type: none"> <li>• Students use their cognitive skills to answer the questions.</li> <li>• Compare and contrast</li> <li>• Persuasion</li> <li>• Asking questions</li> <li>• Expressing likes and dislikes</li> <li>• Cause and effect</li> <li>• Summarizing</li> <li>• Sequencing</li> <li>• Predicting</li> <li>• Agreeing/disagreeing</li> </ul>
<b>Key language:</b>	<p><b>Vocabulary:</b></p> <ul style="list-style-type: none"> <li>- Ph. baking soda, vinegar, salt water.</li> <li>- Red cabbage water, litmus paper, spray bottle.</li> <li>- Reaction, production, safety, test tube, red color.</li> <li>- Green color, blue color, sour, bitter, no taste.</li> <li>- Soapy, slippery, hot (feeling), dry, not reliable, reliable.</li> </ul> <p><b>Verb:</b></p> <ul style="list-style-type: none"> <li>- Taste, observe, smell, see (sight),</li> </ul> <p><b>Language structure:</b></p> <ul style="list-style-type: none"> <li>- Students discuss all questions asked by the teacher within their groups (group work) and answer in Chinese or English.</li> <li>- Does water have a taste? No, because it is said to be neutral, no taste.</li> <li>- Does lemon juice have a taste? Yes, it does, we say it's sour so we say it's acidic.</li> <li>- Does baking soda have a taste? Yes, it does, we say it is bitter, so we say it is alkaline or basic.</li> <li>- What color does acid water turn with a color indicator?</li> <li>- What color does alkaline turn with a color indicator?</li> <li>- Using your cognitive skills determine the list of foods</li> </ul>

	<p>as either acidic or alkaline.</p> <ul style="list-style-type: none"> <li>- Is taste a good test for acid and alkaline foods? No, it isn't, as many foods have artificial flavors to hide its original taste.</li> <li>- Can we smell vinegar, yes we can. Can we smell baking soda or salt water? No, we can't. So smelling is not a reliable test, as many foods have no smell.</li> <li>- Can we touch acid, yes we can, but it isn't safe as acid burns our skin, strong alkaline solutions can also burn our skin, while weak acid, weak alkaline solutions and salt water, all feel the same. So touching is also not a reliable test.</li> <li>- What is the most reliable way to test the pH. of a substance? A machine is the most reliable and safest way to test the pH. of a substance.</li> </ul>
<b>Materials:</b>	Computer, projector, experimental ingredients, blackboard, chalk.
<b>Assessment tool:</b>	All correct answers are based on previous lessons learned, observation, previous knowledge, and cognitive skills.
<b>Procedure – Lesson 4/4:</b>	
1. Lead-in (10 mins)	<ol style="list-style-type: none"> <li>1. Recapping the students' knowledge of alkaline and acidic solutions: <ol style="list-style-type: none"> <li>1) What pH. color does an alkaline solution produce/show?</li> <li>2) What pH. color does an acidic solution produce/show?</li> <li>3) What pH. color is an alkaline solution?</li> <li>4) What pH. color is an acidic solution?</li> </ol> </li> <li>2. Reviewing the key language. The teacher asks the students to discuss 4 ways in which we can test an acid, alkaline and neutral solutions.</li> </ol>
2. Task 1 ( 5 mins)	<ol style="list-style-type: none"> <li>1. Students respond that the first way to test would be by using litmus paper</li> <li>2. Students answer that by using litmus paper, acid solutions would show a red color.</li> <li>3. Students answer that by using litmus paper, alkaline solutions would show a blue color.</li> <li>4. Students answer that by using litmus paper, salt water</li> </ol>

	would show no color change.
3. Task 2 (5 mins)	<ol style="list-style-type: none"> <li>1. Students respond that the second way to test would be using a color indicator like a red cabbage solution.</li> <li>2. Students answer that by red cabbage water acid solutions would show a red color.</li> <li>3. Students answer that by red cabbage water alkaline solutions would show a blue color.</li> <li>4. Students answer that by red cabbage water salt water would show a purple color.</li> </ol>
4. Task 3 (10 mins)	<ol style="list-style-type: none"> <li>5. Students respond that the third way to test would be by using your sense of taste.</li> <li>6. Students answer that acid solutions like lemon juice would have a sour taste.</li> <li>7. Students answer that alkaline solutions like baking soda water would have a bitter taste.</li> <li>8. Students answer that salt water would have a salty taste.</li> <li>9. Students would agree that tasting is very subjective and different opinions would arise, such that testing by taste is not reliable or safe.</li> </ol>
5. Task 4 (10 min)	<ol style="list-style-type: none"> <li>10. Students respond that the third way to test would be by using your sense of touch.</li> <li>11. Students agreed that acid solutions would feel hot to the touch as acid tends to burn our skin.</li> <li>12. Students agreed that alkaline solutions like baking soda solutions would feel soapy/slippery to the touch.</li> <li>13. Students agreed that saltwater would feel dry to the touch as salt tends to dry out food.</li> <li>14. Students agreed that this test is not reliable as many solutions would have no feeling at all.</li> </ol>
6. Wrap-up	15. Students agreed that the best ph. test would be by a machine.