## S.T.E.A.M. Children Engineer Academy-Greek lesson plans

## LESSON PLAN: 1<sup>st</sup> year – 5<sup>th</sup> Lesson/Feb'18

| TITLE               | Condensation. Boiling and Evaporation review.  |
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|                     | COLD<br>GLASS<br>CONDENSATION<br>Furdue University<br>Condensation   |
| THEME               | Science/Technology   |
| GRADES              | 6 <sup>th</sup> Grades   |
| DURATION            | 90'(2X45 minutes approximately/per month)  |
| REALIA-<br>MATERIAS | <ul> <li>Beaker or pot</li> <li>Interactive board</li> <li>Experiment in the classroom, showing water condensation</li> <li>Video showing Boiling Evaporation and<br/>Condensation/Desalinization:<br/><u>https://www.youtube.com/watch?v=zNnytH2NsDo</u></li> <li>Video showing natural Evaporation and Condensation:<br/><u>https://www.youtube.com/watch?v=SfzUBe7lp44</u></li> <li>Video presenting condensation and its house avoidance:</li> <li><u>http://www.youtube.com/watch?v=bfUtBz8Pwyo</u></li> <li>Video showing the change of the natural condition:<br/><u>http://www.youtube.com/watch?v=wBUeXssJvz0</u></li> <li>Video showing how condensation works:<br/><u>https://www.youtube.com/watch?v=mjBiHCk2V2A</u></li> <li>Slide share task quiz on the Evaporation/Condensation</li> </ul> |
|                     | https://www.slideshare.net/gregzer/ss-2889139  |
| OBJECTIVES          | Through the lesson, pupils will be able:   |

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|             | <ol> <li>To review the boiling evaporation procedure. They then will watch the phenomenon of condensation and will remember the desalinization procedure.</li> <li>To review the two kinds of evaporation. The one that comes through boiling and the natural one that takes place above seas, lakes, rivers etc. (Natural Evaporation Laws)</li> <li>To learn how to avoid condensation inside the house, applying and following some practical advice.</li> <li>To review the change of the natural condition (water into vapor and back to water).</li> <li>To finally comprehend the phenomenon of condensation.</li> </ol>  |
| DESCRIPTION | Pupils will be shown the two first review videos on the Evaporation procedure and the Condensation as well as the desalinization. Then, they will be asked to execute an experiment on condensation through boiling. Afterwards, they will also execute another experiment on natural condensation. In addition, they will watch the 5 <sup>th</sup> video which is the same one as the experiment, they executed. After that, they will learn about the Natural Condensation Consequences and how they affect the house and its humidity. They will also watch (3 <sup>rd</sup> video) some practical ways to avoid it. Finally they will watch the 4 <sup>th</sup> video, in order to remember the change of the natural condition, in relation to the energy increase (liquid to vapor) and the energy decrease (vapor to liquid). At the end pupils will work on an interactive quiz based on the above. (https://www.slideshare.net/gregzer/ss-2889139) |
| EVALUATION  | <ul> <li>At the end of this two-hour presentation, pupils should be able to comprehend all the procedures so far:</li> <li>Boiling</li> <li>Evaporation through boiling</li> <li>Natural Evaporation</li> <li>Condensation (both natural and through boiling)</li> <li>The Water Cycle.<br/>They should also know that the natural condensation plays an important role in the humidity of the house and they</li> </ul>   |

| should follow some steps in order to decrease it, in their own |
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| houses.  |