

# IIED: ICT in Education Lesson Plan Format

2017

## POLLUTION

YOUR NAME : REMIE WIRATMA

DATE: JULY 2017

### SETUP

Replace the text in the right-hand boxes with your own content

<b>Subject Area(s)</b>	ENVIRONMENT (NATURE AND TECHNOLOGY)
<b>Grade Level</b>	K-12
<b>Lesson Summary</b> (take this seriously)	Pollution has become a large problem and is causing great harm to our environment. Children of today need to know the different types of pollution and the sources of the pollution. They also need to know preventative measures so that they can protect the environment from further damage.
<b>Student Objectives &amp; Outcomes</b> (take this seriously)	In this lesson students will be able to: <ol style="list-style-type: none"><li>1. Identify and discuss different kinds of pollution.</li><li>2. Identify and discuss sources of pollution.</li><li>3. Discuss and explain why it is important to keep the environment free of pollution.</li></ol>
<b>Suriname Learning Outcomes</b>	What standards from Suriname learning lines does your lesson meet? <ol style="list-style-type: none"><li>1. Leerlijnenmatrix-5.4 Nature and Technology (Environment)</li><li>2. 302918218-Curr-Basisonderwijs</li></ol>
<b>Foundational STREAM Ideas</b> (pick at least two)	How does the lesson connect to a foundational idea in Science, Technology, Reading, Engineering, Arts or Mathematics? TECHNOLOGY : How technology can lead to pollution SCIENCE: ABOUT HOW POLLUTIONS LEADS TO GLOBAL WARMING. ARTS: making an art piece about pollution and how they can prevent it.
<b>Real World Connections or Applications</b>	ENVIRONMENTAL POLLUTION AND GLOBAL WARMING

## THE WAY IN

<p style="text-align: center;"><b>Checklist for Readiness</b></p>	<p>__ What I do to ensure that the students know          (a) what the lesson is all about (on the chalk-board or through other means          (b) what they are expected to learn, and          (c) what the outcomes will be.          Be clear about this. Make it openly available to the students</p> <p>__ I have a plan for assessing prior knowledge (see next box below)          __ All materials are set up so that I do not waste time          __ I have a plan for differentiating instruction          __ I know that students can understand what I am saying          __ My classroom is friendly, disciplined, and ready for learning</p>
<p style="text-align: center;"><b>Vocabulary</b></p>	<p>What vocabulary is connected with this lesson?</p> <p>ENVIRONMENT          POLLUTION          TYPES OF POLLUTION          POLLUTANT          AIR POLLUTION'          LAND POLLUTION          WATER POLLUTION          NOISE POLLUTION          LIGHT POLLUTION          SOURCES OF POLLUTION          REDUCE          REUSE          RECYCLE          LITTER          OXYGEN          CARBON DIOXITE          GLOBAL WARMING</p>
<p style="text-align: center;"><b>Lesson Outline</b></p>	<p>Launch/Warm-Up/Introduction          Questions are only for guide</p>
	<div style="border: 2px solid black; padding: 10px;"> <ul style="list-style-type: none"> <li>• SHOW A VIDEO/ANIMATION ABOUT POLLUTION  <a href="https://www.youtube.com/watch?v=5FWvbui6ook">https://www.youtube.com/watch?v=5FWvbui6ook</a></li> <li>• AM I POLLUTING THE ENVIRONMENT WITH MY ACTION?</li> <li>• HOW CAN I HELP TO REDUCE THIS POLLUTION BY REUSING OR RECYCLING MATERIALS.</li> </ul> </div>

	<p>Exploration(ONDERZOEK)</p> <ul style="list-style-type: none"> <li>• See the activities and scaffolding</li> <li>•</li> </ul> <hr/> <p>Explanation</p> <p>The students will always be asked why or how , after an answer they gave to explain the justification of their answer.</p> <hr/> <p>Elaboration</p> <ul style="list-style-type: none"> <li>• By giving examples and explain why this is to their opinion is right. they will have to the meaning or definitions of the terms.</li> </ul> <hr/> <p>Evaluation</p> <ul style="list-style-type: none"> <li>• They have to answer some questions and explain why they say that</li> </ul>
<p><b>Assessing Knowledge</b></p>	<p><b><u>Pre-Assessment</u></b></p> <p>Mostly i would use a question. In the scaffolding activities you can see that every next question has the prior knowledge embedded . You have to know what pollution is before you can name the types. You must know what the types of pollutions are before you can recite the sources.</p> <p><b><u>Post-Assessment</u></b></p> <p>The evaluation assessment by asking questions that leads to the summary of the lesson will show the knowledge the students have learn about this subject.</p> <p><b><u>Rubric</u></b></p> <p>Be clear on the rubric you use for doing the pre-assessment and post-assessment. Try to make it qualitative/quantitative. Here are some examples:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.exemplars.com/assets/files/Classic5LevelRubric.pdf">http://www.exemplars.com/assets/files/Classic5LevelRubric.pdf</a></li> <li>• <a href="http://www.exemplars.com/assets/files/science_rubric.pdf">http://www.exemplars.com/assets/files/science_rubric.pdf</a></li> <li>• <a href="http://www.exemplars.com/assets/files/rwr_reading_rubric.pdf">http://www.exemplars.com/assets/files/rwr_reading_rubric.pdf</a></li> <li>• <a href="http://www.exemplars.com/assets/files/rwr_comm_rubric.pdf">http://www.exemplars.com/assets/files/rwr_comm_rubric.pdf</a></li> </ul>

## THE WAY THROUGH

<p><b>Activities and Scaffolding</b> (Be specific)</p>	<p>Watch video together ( 7 min)</p> <p>Q1: What is today 's topic? (2min) A1: Pollution</p> <p>Q2: What is pollution. When do we call something pollution? (2min) A2: when we make nature dirty</p> <p>Q3: What are the types of pollution mentioned in the video? (2min) A3: Air Pollution Land Pollution Water pollution Noise pollution</p> <p>Q4: What is an source? (2min) A4 the cause of a thing to happen.</p> <p>Assignment1 : The teacher already put on the tables a form with pictures of the four types of pollution. The students must write down the kind of pollution associated with the picture. Just on the line under the picture Next right down two examples of sources of each type of pollution under the name of the pollution. Look at your surroundings for sources. Think of Suriname.</p> <p>Work individually(2 min) After 2 min work in pairs and compare your answers.( 3 min) Take over from each other if your answers are not the same. Next compare in the group. (2min) Do the same here. Take over what you don't have in your lisi. Last: deliberate in the group if there are other sources then you already have and right them down</p> <p>Teacher: post a picture or poster of each type of pollution next to each other on the blackboard. Give the picture a number from 1 to 4.</p> <p>Assignment2: deliberate in the group which picture belongs to which type of pollution and right the number down accordingly.(1min)</p> <p>Teacher assigns a group to a type of pollution. A representative of the group steps forward.</p> <p>Assignment3 : the representative has to go to the picture and write down under the picture the name of the pollution and then the sources they have on their list. (2min) After that he will explain why these sources are pollutants. If they are finished the teacher points out four more groups to</p>
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talk about the answer of another group.(2 min)  
 They have to look of it is the right type of pollution.  
 If the sources are the right ones.  
 if they have other ones then somebody will step up and write it down.

After all is finished. The teacher asks all the groups if they agree with the answers.  
 If not then that group will say what is wrong and why.  
 Then the class will be discussing this.  
 If they have other sources then they can also write them down .  
 If the class are missing some sources the teacher can point it out with a question.  
 Then the class have one minute to take over the missing items.(1 min)

Q5: What can all these pollutions leads to?(2min)  
 A5: Global warming

Q6: What is Global warming? (2min)  
 A5: **Global warming**, also referred to as **climate change**, is the observed century-scale rise in the average temperature of the earth's climate system and its related effects

Q6: What is the relation between Pollution and Global warming?(2min)  
 A6: Pollutions leads to Global warming.

Q7: What are the 3 R's? (2 min)  
 Reduce, Reuse and Recycle

Assignment4: Discuss this in your group and come with an answer.

Teacher: Points out a group to give the answer  
 The class will judge the answer.

Evaluation: With questions the teacher will lead the class to evaluate the lesson for today : POLLUTION (2min)

Teacher will explain the next assignment and will give this to the students as their homework assignment.(3 min)  
 Assignment5:  
 Group assignment. Each group must create a product to help in eliminating or reducing, reusing and recycling materials that are sources of pollution. It could be a song, poem, a poster or other piece of art.  
 The title : SURINAME, STOP POLLUTING THE EARTH!

<p><b>Effective Pedagogies</b> (Be specific)</p>	<ul style="list-style-type: none"> <li>• What you do to encourage students to move through the material. Review what you have learned in Year 1 and Year 2 to date</li> <li>• How you use Multiple Intelligences to reach different learners</li> </ul> <p>• Wat u doet om studenten aan te moedigen om door het materiaal te gaan. Bekijk wat je geleerd hebt in jaar 1 en jaar 2 tot op heden</p> <p>• Hoe u meerdere intelligenties gebruikt om verschillende leerlingen te bereiken</p>
<p><b>Differentiated Instruction</b> (Be specific)</p>	<p>I make use of a video to explain the subject pollution.</p> <p>I make use of posters to demonstrate the types of pollution.</p> <p>I will ask several questions for the students to answer</p> <p>The students can see, hear and talk and write down things about the subject pollution</p>
<p><b>Use of ICTs</b> (Be specific)</p>	<ul style="list-style-type: none"> <li>• Laptop</li> <li>• Beamer</li> <li>• Video</li> <li>• i will show a video about pollution.</li> <li>• with this video i want to show the students the different types of pollution and their sources</li> </ul>

### **CLASSROOM MANAGEMENT**

*(Not applicable when practice teaching at IOL, but will be used for teaching in local classrooms)*

<p><b>Your Organization</b></p>	<ul style="list-style-type: none"> <li>• The students are sitting in groups of four.</li> <li>• The beamer is already set up for use</li> <li>• the Youtube film or video is also ready to be played.</li> <li>• the posters about the types of pollutions are already pinned to the wall</li> </ul>
<p><b>Your Instruction</b></p>	<ul style="list-style-type: none"> <li>• presenting the youtube film about pollution</li> <li>• the posters about the type of pollutions</li> <li>• I will mostly ask questions that leads to the answers</li> <li>• I will explain the assignments</li> </ul>
<p><b>Your Students</b> (You can demonstrate that...)</p>	<ul style="list-style-type: none"> <li>• the students are already accustomed to the discipline in the classroom</li> <li>• they already know how to answer the questions</li> <li>• they know how to approach their fellow students</li> </ul>

## 21<sup>ST</sup> CENTURY TEACHING AND LEARNING

**CHOOSE 3** of the following 21<sup>st</sup> Century Teaching and Learning teaching and learning concepts and briefly describe how your way in, through, or out demonstrated these concepts. Feel free to choose from the following list or add your own:

<p>Year 1 and 2 Canvas sites PLUS each of the following is a link from: <a href="http://edutopia.org">http://edutopia.org</a></p>	<p><a href="#">Brain-Based Learning</a>   <a href="#">Character Education</a>   <a href="#">Collaborative Learning</a>   <a href="#">Culturally Responsive Teaching</a>   <a href="#">Design Thinking</a>   <a href="#">Differentiated Instruction</a>   <a href="#">Digital Citizenship</a>   <a href="#">Environmental Education</a>   <a href="#">Flipped Classrooms</a>   <a href="#">Formative Assessments</a>   <a href="#">Game-Based Learning</a>   <a href="#">Health and Wellness</a>   <a href="#">Home-School Connections</a>   <a href="#">Inclusive Education</a>   <a href="#">Inquiry-Based Learning</a>   <a href="#">Learning Styles</a>   <a href="#">Maker Education</a>   <a href="#">Media Literacy</a>   <a href="#">Mobile Learning</a>   <a href="#">Multiple Intelligences</a>   <a href="#">Performance Assessment</a>   <a href="#">Problem Based Learning</a>   <a href="#">Project-Based Learning</a>   <a href="#">Rubrics</a>   <a href="#">Service Learning</a>   <a href="#">Social and Emotional Learning</a>   <a href="#">Social Media</a>   <a href="#">Special Education</a>   <a href="#">Student Engagement</a></p>
<p><b>21<sup>st</sup> Century Teaching and Learning Choice 1:</b></p>	<p><a href="#">Environmental Education</a></p> <p>My lesson is all about environmental education. Pollutions and the types of pollutions. The resources of the pollutions. What we can do to prevent or reduce pollution. The link between pollution and climate change.</p>
<p><b>21<sup>st</sup> Century Teaching and Learning Choice 2:</b></p>	<p><a href="#">Collaborative Learning</a></p> <p>The students first work individually and then in groups of four. They learn to work together and brainstorm about the subject and come with a group opinion</p>
<p><b>21<sup>st</sup> Century Teaching and Learning Choice 3:</b></p>	<p><a href="#">Inquiry-Based Learning</a></p> <p>The students will derive the answers of the questions out of the video that will be shown and come to a understanding of the subject POLLUTION and the effect of this POLLUTION to GLOBAL WARMING</p>

## THE WAY FORWARD

<p><b>Practice in class and at home</b></p>	<ul style="list-style-type: none"> <li>• In class the students will be answering questions about pollutions and do some assignments. ( See the chapter activities an scaffolding)</li> <li>• There is also an assignment for homework.</li> </ul>
<p><b>Where this Leads</b></p>	<p>After this lesson:</p> <ul style="list-style-type: none"> <li>• the students know what the several types of pollutions are and what are the sources of these pollutions.</li> <li>• the students knows what the three R's stands for and how they can use them to prevent pollution</li> <li>• the students know what the relation is between pollution and climate change</li> </ul>

	<ul style="list-style-type: none"> <li>• With all these knowledge the students become aware of pollution and the danger climate change and they can become ambassadors of a clean earth.</li> </ul>
<p><b>Ending class</b> (be specific)</p>	<ul style="list-style-type: none"> <li>• I will summarize the lesson with the help of the students. The students will answer questions to come to the summary</li> <li>• I will explain and discuss the homework assignment with the students</li> </ul>
<p><b>Handouts, Links and Resources</b></p>	<ul style="list-style-type: none"> <li>• a youtube video <a href="https://www.youtube.com/watch?v=5FWvbui6ook">https://www.youtube.com/watch?v=5FWvbui6ook</a></li> <li>• i will also download this video in case there is no internet available</li> <li>• a form with four pictures of the types of pollutions that will be taught . This form will be used for assignment 1</li> <li>• a printed handout with the vocabulary used in this lesson</li> <li>• meaning explanation of the words and the terms</li> </ul>