**Subject 6: Bio plastic**

**Introduction**

During this project you are going to make a “pitch” (short and interactive presentation) for younger pupils (age 10-12).

The pupils will visit your pitch, in total 10 groups of each 10 pupils. So you have to do the pitch a total of 10 times! In the end each pupil will decide which pitch was the best/interesting/most informative, by putting a fiche in the box of the concerning Unit. The Unit with the most fiches in the end is the winner!

**Instruction**

Your topic is **Bio plastic.** Normal plastics are derived from oil,bio plastics are plastics derived from renewable biomass sources, such as vegetable fats and oils, corn starch, straw, woodchips, food waste, etc. Bio plastic can be made from agricultural by-products and also from used plastic bottles and other containers using microorganisms. Common plastics, such as fossil-fuel plastics (also called petrobased polymers) are derived from petroleum or natural gas. Not all bio plastics are biodegradable nor biodegrade more readily than commodity fossil-fuel derived plastics. As of 2014, bio plastics represented approximately 0.2% of the global polymer market (300 million tons).

**Some points of notice:**

* You are going to interview the instructors from the Science Truck, who know all about Bio plastics.
  + Time: Tuesday afternoon (go there on Monday to make arrangements)
  + Place: parking lot near the school
* Show the pupils during your pitch why bio plastic is sustainable and a better alternative for fossil-fuel plastic.
* Invent a captivating activity for the pupils to do during your pitch!

**Some sources you can use for this topic:**

* Science truck
* <http://www.hollandbioplastics.nl/english/>
* <https://www.jouwenergievanmorgen.nl/wp-content/uploads/2018/10/2018-RUG_Werkboekje_Bioplastic_Digi.pdf>
* Ted talk: <https://youtu.be/2wnsvYkzANk>
* <https://www.youtube.com/watch?v=gJEOGriA5Oo>
* <https://resource.wur.nl/en/show/Bioplastics-fact-and-fiction-.htm>

**Some sources with ideas for learning activities:**

* <https://globaldigitalcitizen.org/21-formative-assessment-tools>
* <http://www.queensu.ca/teachingandlearning/modules/active/12_exmples_of_active_learning_activities.html>
* <https://www.edutopia.org/blog/5-fast-formative-assessment-tools-vicki-davis>

**Schedule:**

**Quizizz in classrooms on Monday:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Group | Hour | | | | Time | Class | Teacher | Classroom |
| **2e** | **3e** | **4e** | **5e** |
| 6 | X | - | - |  | 9.20-10.10 | H2B | DDW | H109 |
|  | - | - | X | 12.40-13.30 | A3B | ZOM | H222 |

**Workshops:**

* Monday 10.30-11.30 Solar cell (Science Truck)
* Tuesday 10.30-11.20 Bioluminescence (Science Truck)
* Tuesday 11.20-12.10 Interviewing (H211)

**Monday** (H027, between 11.20 and 13.00 in HK24)

* 13.30-15.30: working on the science project:
  + Discuss with your unit what you want to show to the pupils
  + Make a start with the pitch (presentation + activity) of 8 minutes
  + Arrange an interview with company/organisation
  + Make a list of materials you need for the activity and make sure you have this materials in time!

**Tuesday** (Start in H101, from 11.00 in H027)

* 9.00-16.00:
  + Working on the pitch (presentation + activity) of 8 minutes
  + Afternoon: interview with instructors of the Science Truck

**Wednesday** (H027)

* 9.00-12.30:
  + Working on the pitch (presentation + activity) of 8 minutes

**Thursday** (H027)

* 9.00-14.30:
  + Working on the pitch (presentation + activity) of 8 minutes
  + 9.20-11.20: Rehearsal of pitch (lower class students)
  + Use the feedback to make adjustments to your presentations

**Friday** (H027)

* 9.00-9.30:
  + Last preparations
* 9.30-12.00:
  + Presentations for primary school pupils