



Title: What do you want to be when you grow up?



WHAT DO YOU WANT TO BE WHEN YOU GROW UP

Francis E. Madojemu,
Culled from Robert Kiyosaki's Rich Dad's PROPHECY



Subject area: Biology.

Educational stage: Secondary School.

Target grade: All of them, at the beginning of the year.

Made by: Rosa María Baos Laguna

Purpose: In this Unit I would like to share with you some ideas to engage the students at the beginning of the year, due the fact that it is the key for the whole year.

I am going to suggest you some activities that obviously, you can follow them, modify them or just ignore them.

I hope that it would be useful for as it has been for me.

<u>Desired Results</u>
<p>What is the goal of this lesson?</p> <ul style="list-style-type: none"> • Engage students to Science. • Make them observe objectively their environment. • Create their questions based on their own interests and observations. • Analyze their questions from a Scientific perspective and choose the most testable and relevant. • Know the classroom rules and the lab safety rules.
<p>Essential Questions:</p> <ul style="list-style-type: none"> • How do we know about the world? • How things have changed over the time? • How do individual people learn? And what about collective learning? • To a scientist, what makes a question a good question? • How could I improve the place where I live? (long term question- social project for the whole year).
<p>Understandings: Because of this lesson, students will:</p> <ul style="list-style-type: none"> • Know some scientists that made important discoveries (including some teenagers). • Also would be able to understand that anyone (no matter the age, environment and any other factor) could change the world, and for that reason, so they can make also a different. • Know the classroom rules, lab safety rules and the importance of collective learning (be kind, cooperate and respect: materials, yourself and each other). • Design their own experiment and create some questions that they would like to answer. • Acquire the ability to identify testable and relevant questions. • Draw their conclusions.
<u>Stage 2 – Assessment Evidence</u>
<p>Performance Tasks:</p> <ul style="list-style-type: none"> • Testable and relevant questions written about their observations. • Experiments designed to test their questions. • Explanations and expositions about their discoveries. • Critical thinking and reflections about some difficulties found through the process and their conclusions.
<u>Stage 3 – Learning Plan</u>
<p>Learning Activities:</p>

- Example of my introductory exposition: Link to a **TedTalk** using the Prezi app called: You can become a Scientist!
<https://prezi.com/view/Hndxj55iA2kVY9OosoNe/>
- Video with my exposition:
https://www.dropbox.com/s/1r2uhhx0npdxwez/MVI_0822.MOV?dl=0
- Questions:
 1. **Brainstorm** in groups “What is Science?” Have groups put their answer on whiteboards. Make a debate.
 2. **Blinds & Helpers Game** – This game is about communication. How would you do without the normal way of communicating (words and sight)? Discover some objects and “open” all your senses to analyze them.
 3. Discuss communicating with **drawings** – today with cameras but 1800s it was drawings. Make a detailed drawing – using art terms, create a detailed picture of the object you identified. Start by making a simple line drawing that accurately captures the basic shape, size and proportion of the object. Label it with the relative size.
 4. Animals/ plants. Generate **testable questions** about animals/ plants. Then, come up with a way to get an answer. Then, get the answers. Collect their descriptions, drawings, question, method of answering and answer (need their questions for testable question discussion next class).
- Objective observation. Show one image and answer just the chart (first page) of linked document:
<https://www.dropbox.com/s/hnyq3892zvdtdla3/My%20objective%20observation%20activity.pdf?dl=0>
- Exposition: what makes a good Scientific question?
https://es.slideshare.net/emteacher/science-questions?qid=533fc236-d36f-418f-88af-6b7524cf1b92&v=&b=&from_search=3
- Exposition: how to write a testable question:
https://www.dropbox.com/s/qqikshy1zexivct/how_to_write_a_testable_question.pptx?dl=0
- Safety Walk - Walk through room, supplies, safety, expectations.
Lab Safety rules: https://www.dropbox.com/s/9gwzdu1ffqzsjgu/English_Lab-SafetyFINAL.pdf?dl=0
- National Geographic magazine called: Science inquiry in which they can find several examples about questions and observation.
https://www.dropbox.com/s/7guskjal0ptkzqz/NG_Grade_5_Science_Inquiry_and_Writing_Book.pdf?dl=0