

# Bay Area Scientists in Schools Presentation Plan

**Lesson Name:** Science and the Beanstalk!

**Presenter(s):** Adam Schawel

**Grade Level:** 1<sup>st</sup> Grade

**Standards Connection(s):** Live Sciences 1) Different external features of plants 2) Observe and record changes 3) Needs of living things (plants)

## **Vocabulary:**

Leaves  
Stem/Trunk  
Roots  
Fruits  
Seeds

## **Materials:**

### *In Classroom:*

Pencils and crayons would be nice to have handy.  
Sunny window to tape plastic baggies with seeds in them (not necessary)  
A garbage can or two would be helpful.  
Also a chalk/whiteboard with colored chalk/pens would be nice.

### *I will bring:*

- Science Notebook packet
- House plant you can keep if you want for the classroom
- Several fruits with seeds
- Paper plates or paper towels
- Lima beans- soaked (starting to grow) and dry (not growing)
- Plastic bags and papers towels to grow plants

## **Classroom Set-up:**

I imagine the kids will be sitting at desks or tables in groups of around 4 and I can talk up front at a board and walk around to show them things and see what they are doing. Set up is not too important.

## **Classroom Visit**

### **1. Personal Introduction:**

<5 Minutes

I am Adam and I am a scientist at UC Berkeley. I study how things live. (What are some living things? Dog, person, tree ...) Yes! and some scientists study plants and some study animals.



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Today we will be talking about plants. Scientists like to ask questions and do experiments and draw and write down what they see! So today we will be doing fun experiments with plants so we can learn about them.

**Topic Introduction:**

**10 Minutes**

Plants are everywhere! What are some of your favorite plants!? Yes, how about flowers or trees or grass or ... ? (if something nonliving is mentioned maybe explain that it does not grow or need energy or water) These are all plants, now let's draw a plant. Can you draw a plant with all its parts? (Draw a big tree on the board and show them the plant I bring.) What are the parts of a plant? (Guide them here) Leaves! Trunk/stem! and does anyone know what is underground a plant? (What happens when you pull up a plant?) Roots! (Show weed or something pulled out of dirt.) These are some parts of a plant! Can you label your drawings? (Walk around/set up demonstration.)

**2. Learning Experience(s):**

**30 Minutes**

There are other parts of plants too. Apples and oranges grow on trees! (show them apples and oranges and draw on big tree on board) What do we call them? (Fruits!) Does anyone know what is in the middle of apples and oranges? What about lemons, peppers? (Pass out or show small sections of bell pepper, lemon.) These are seeds and new plants grow from seeds. (Have them draw their lemon/pepper slice and show seeds). Now it's time to do an experiment with seeds! I have a type of seed called a lima bean. Here are dry lima beans. (pass out seeds that are cut in half) Here are lima beans that I put in water. Now let's open our seeds and draw what we see inside the dry and wet seeds (show them how to open them in half and then walk around and help). What do we see? What is different? Water helped the seeds grow! Just like us, plants need water to grow. Do you know what part of plants gets water for them? The roots. The roots take up water from the ground.

In addition to water, do you know what else plants need? Light. Plants use light to make energy. (Go out on a limb - anyone know what that is called? Cool big word! Photosynthesis.) Plants use their leaves to do this. So looking at our seed that started to grow- what do you think we will see grow? Roots for water and a stem with leaves for light. And then more beans! Now we are going to begin an experiment. We are going to start growing some seeds. We are going to try to grow some in the light with water. After a few days you can see if and how they grow and what they look like. Can you write down in your notebooks what you think will happen? Think about the roots and stem.

**3. Wrap-up: Sharing Experiences and Building Connections**

**5 Minutes**

Today we looked at the different parts of a plant. The roots that take up water, the leaves and stem that get energy for the plant from light and fruits and seeds that grow new plants. We did some experiments looking at seeds and will see how the seeds grow in a few days. Reflect on what we learned if time permits.



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#### 4. Close:

5 Minutes

Did you guys like the science we did? Science is cool and you can do many fun experiments and be a scientist. In your notebook are some directions so you can grow your own plants. All you need is seeds, water, dirt and light. Do you guys have questions about plants? You guys can keep this plant and watch it grow. Make sure to water it when it gets dry and make sure it gets some light.

TOTAL 50 - 60 Minutes

### Follow-up - After Presentation

Suggest students write a group letter explaining how their seeds grew and with any more questions. I can answer via email or perhaps in a follow up visit if the students and teacher would like it.

More on growing plants in the classroom:

[http://www.ehow.com/how\\_2247288\\_grow-plants-classroom.html](http://www.ehow.com/how_2247288_grow-plants-classroom.html)

#### Reading Connections:

- Plant Life Cycle Series by Linda Tagliaferro  
[http://www.lindatagliaferro.com/plant\\_life\\_cycles\\_51462.htm](http://www.lindatagliaferro.com/plant_life_cycles_51462.htm)
- From Seed to Plant by Gail Gibbons  
<http://www.scholastic.com/teachers/book/seed-plant>
- Eyewitness: Plant by David Burnie <http://www.amazon.com/Eyewitness-Plant-David-Burnie/dp/0789458128>
- Science with Plants (Science Activities) by Mike Unwin <http://www.amazon.com/Science-Plants-Activities-Mike-Unwin/dp/0746009763>



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