City Backyard Science

Monday, June 10th, 2019

Hi parents!

We are really excited for our first City Backyard Science season!

We've put together a separate 'Welcome Packet' for your Junior Scientists, which contains fun activities, data sheets, and a few accessories. You should definitely plan to look it over!

We wanted to provide a few additional guidelines about data collection and care of the plants:

- We hope your kids will collect these data, but you should supervise them since the beds are located on the boulevard, and safety is a must!

- We have indicated dates on the data sheets, but these can be flexible ±1 day. For example, for data collection on June 15, you could do this on either June 14 or June 16. We will send out reminders a couple of days before each data collection date, and will collect the data sheets at the end of the summer.

- You will need a tape measure. Let us know if you don't have one, and we will get one to you as soon as possible!

- How to measure plant height with a tape measure
    - Measure from the soil to top of the tallest stem
    - Be sure to 'stretch' out the plant when you measure. This means if the plant has fallen over, pull it up and stretch it out to its maximum height before measuring. (We'll post some photos / videos on the website to show you how.)
    - Measure to the **nearest quarter inch** (science usually uses the metric system, but we thought it unlikely that you have a metric measuring tape!)

- Please keep watering sections **7**, **8**, **a**, **b**, and **c** (see map in your kids' packet) for the next couple of weeks to make sure the young germinants get enough water. Once the plants are established, watering will be minimal.

Thanks! As always, email us and let us know if you have any questions.

See you out there! Your friendly neighbourhood scientists,

John and Amanda

Hello Backyard Scientists!

Spring is here! Have you seen any bees flying around yet? Do all the trees around your house have their leaves back?

We are so excited that you're helping us do some science at your house. Together, we'll provide important food for local insects like bees, and you'll learn lots of cool stuff along the way!

You'll find a few things here in your welcome packet:

- A clipboard
- A magnifying glass with TWO magnification powers
- Your first data sheets
- A "map" of your raised bed
- Details on Experiment I: **Plants and bacteria — Friends Forever!**
- My Leaf Book
- Scientist Survey #1
- Native bee and plant guide

You'll notice plants tend to have two names. One, which we call the "common name," is kind of like a nickname. The **Latin name**, or the botanical name, is always two words, usually in *italics*, and at first, probably looks a little harder to say! But if you pretend it's a spell from Hogwarts it's a lot more fun to say, too!

Common name: **Prairie Phlox**
Latin name: **Phlox pilosa**
How to say it: **"flox pill-osa"**

For our first experiment, we're going to play with plants and microbes! See the preview card here in your packet.

If you could fill out the Scientist Survey, it would help us out a lot. **This is not a test**, so don't worry if you can't answer all the questions! **Please mail them back to us** with the stamped envelope provided.

Thanks so much for your help!

John and Amanda

City Backyard Science

Scientist Survey #1

1. We planted 10 *Chamaecrista fasciculata* seeds in rows 7 and 8 (so 20 seeds total). How many **germinants** (baby plants) do you see in between the yellow tags in your bed? They look like this:

The thicker "leaves" at the bottom are called **cotyledons** ("kah - tuh - lee - dons") — they're the first ones to pop out of the seed when it germinates. Then the plant starts to produce **true leaves** — those are the ones with the cute little **leaflets** spreading out like a fan.

So, how many germinants do you see?

Germinants in row 7: _____

Germinants in row 8: _____

2. How many **different kinds of trees** do you see in your yard and boulevard?

3. Can you name any types of bees? (for example, **honeybee**)

4. Why do bees visit flowers?

5. Do you have a question for us? It can be anything!

6. Is your *Phlox pilosa* flowering? If so, can you draw a picture of it for us below? If your *Phlox* isn't flowering, draw one of the trees near your house!

Scientist Name(s): _____

City Backyard Science 2019

| | | | June 15 | | July 1 | | July 15 | | August 1 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Plant # | Species | Flower Date | Size | # Open Flowers | Size | # Open Flowers | Size | # Open Flowers | Size | # Open Flowers |
| 1 | *Rudbeckia hirta* | | | | | | | | | |
| 2 | *Coreopsis palmata* | | | | | | | | | |
| 3 | *Coreopsis palmata* | | | | | | | | | |
| 4 | *Phlox pilosa* | | | | | | | | | |
| 5 | *Phlox pilosa* | | | | | | | | | |
| 6 | *Rudbeckia hirta* | | | | | | | | | |
| 7 | *Chamaecrista fasciculata* | | | | | | | | | |
| 8 | *Chamaecrista fasciculata* | | | | | | | | | |
| 9 | *Chamaecrista fasciculata* | | | | | | | | | |
| 10 | *Chamaecrista fasciculata* | | | | | | | | | |
| 11 | *Chamaecrista fasciculata* | | | | | | | | | |
| 12 | *Chamaecrista fasciculata* | | | | | | | | | |
| 13 | *Chamaecrista fasciculata* | | | | | | | | | |
| 14 | *Chamaecrista fasciculata* | | | | | | | | | |

Scientist Name(s): _____

City Backyard Science 2019

| | | August 15 | | September 1 | | September 15 | | October 1 | |
|---|---|---|---|---|---|---|---|---|---|
| Plant # | Species | Size | # Open Flowers | Size | # Open Flowers | Size | # Open Flowers | Size | # Open Flowers |
| 1 | *Rudbeckia hirta* | | | | | | | | |
| 2 | *Coreopsis palmata* | | | | | | | | |
| 3 | *Coreopsis palmata* | | | | | | | | |
| 4 | *Phlox pilosa* | | | | | | | | |
| 5 | *Phlox pilosa* | | | | | | | | |
| 6 | *Rudbeckia hirta* | | | | | | | | |
| 7 | *Chamaecrista fasciculata* | | | | | | | | |
| 8 | *Chamaecrista fasciculata* | | | | | | | | |
| 9 | *Chamaecrista fasciculata* | | | | | | | | |
| 10 | *Chamaecrista fasciculata* | | | | | | | | |
| 11 | *Chamaecrista fasciculata* | | | | | | | | |
| 12 | *Chamaecrista fasciculata* | | | | | | | | |
| 13 | *Chamaecrista fasciculata* | | | | | | | | |
| 14 | *Chamaecrista fasciculata* | | | | | | | | |