**Lesson Name:** Categorization: Heavy Feeders, Light Feeders, Givers

**Main message:** Different plants take different nutrients out of the soil. This is important to know to manage soil fertility.

**Time:** 20 minutes

**Location (classroom/field):** classroom

**Audience (Level):** Beginning and Intermediate

**Literacy/Numeracy level:** low/zero literacy and zero numeracy

**Area of learning/Subject:** Production

**Competencies/Skills/Core Knowledge:**

Reading a table

**Related activities:**

Plant Families: Find your Family Member

Plant Families: Pin the Vegetable on the Family

Crop Rotation Crop Map Planning Activity

**Learning objectives**

***By the end of the lesson farmers will…*:**

* Practice categorizing crops into correct categories
* Practice using a table layout
* Know different crops use up different amounts of nutrients from the soil
* Gain exposure to the concept of plant families

**Assessment evidence**

***Farmers will demonstrate their learning by…*:**

Pinning the vegetable in the correct family name

**Pre-teaching Concepts:**

**ESL words of the Lesson:**

Heavy feeder

Light feeder

Giver

**Teaching Tips:**

**Background Notes/Reference Materials/Supporting Documents:**

|  |  |  |
| --- | --- | --- |
| **Heavy feeders** | **Light feeders** | **Givers** |
| Corn  Tomato, Pepper  Cabbage, Brocolli, Brussels Sprouts  Beets (argued)  Alliums: Leek, Onion (argued), Shallot  Melons | Parsnip, Turnip, Carrot  Potato  Garlic  Kale, Collard  Herbs  Eggplant | Beans  Alfalfa  Clover  Peas |

**Materials:**

Pictures of the vegetables in the chart above (those in families that you are using)

Whiteboard/Chalk board

Marker/Chalk/Pen

**Set-up:**

* Create a table with 3 columns with the following headings: Heavy Feeder, Light Feeder, Giver, and images representing each heading.

**Steps:**

*Preteaching*

* Ask if farmers have had experience noticing that some plants do certain things to soil fertility, and discuss
* Review/teach that different plants have different nutrient needs and take different things from the soil. Some plants take a lot of nutrients and are called **Heavy Feeders**. Others take some and can be called **Light Feeders**. Still others give some nutrients back and can be called **Givers.**
* Explain how each column represents a different thing, and that the top of the column tells what it is in it, either in words or pictures

*Activity*

* Divide class into 2 teams and ID runners for each team (or they can choose their own or alternate each round)
* Farmers are given a group of images of certain crops. As a group, discussing together, they are to guess to which category each belongs: light feeders, heavy feeders, and givers.
* When the group has decided on a plant and which it is, they send their runner up to the front of the class to tape it on the wall/whiteboard under each category.
* Alternate between teams to have them tape their card under the correct column
* Correct those that are wrong and ask if the other team has a guess of which column it goes in, until it is correctly placed.
* Optional—keep score of correct choices for each team, if you want it to be more competitive and game/like
* Discuss with farmers what similarities they see or notice between any of the crops.
* Bring up the fact that some of these plants (Solanaceae, Legumes) are in the same families. Circle them on the whiteboard. They are related to each other. You can talk about how we know they are related (resemblance of leaves, flowers, fruit type, nutrient needs). It is important to learn plant families, so you can plan farming and not plant a member of the same family again and again in one spot.
* Discuss why it might be important to know what plants are related to each other?

Just like related plants have similar physical characteristics, they also might have similar nutrient needs. Pests might be attracted to one type of family.

* Knowing that crops might share these two things will help you manage your whole farm better
  + Rotating crops to manage soil fertility
  + Rotating crops to manage pests

**Alternatives**

* This game can be done on an individual basis or divided into teams
* Instead of setting this up like a table chart, it could be run using a pie chart, to introduce the very basic foundation of concept of pie charts (simple version as all areas will be equal and they don’t necessarily make up a whole).
* The structure of this activity can easily be adjusted as needed, so that the group has to decide on all of their plants at once, and place them on the board, or each group can alternate one by one, or farmers can do this as an individual activity, in their own space.

**Reflection *What did farmers learn? How do I know? What did I learn? How will I improve my lesson next time?*:**

**Participant Evaluation**

How much did you like this activity?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
|  |  |  |  |  |
| **Comments:** |  |  |  |  |

Did you feel like you learned something?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
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| **Comments:** |  |  |  |  |

**Accompanying Photos:**