

# What's My Rule?

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## **Standards of Learning**

Science 6.1, LS.5

Mathematics 8.2, 8.14

## **Objective**

The student will

- generate MANY ways to categorize the produce and to justify/articulate the characteristics used to create those groupings

## **Materials**

- Produce with variations – gourds, apples, citrus fruits, seeds (important to use a variety)  
–6-8 pieces per group
- Venn Diagram or physical rings

## **Background Knowledge**

Using the wonderful variation found in nature, teachers can use produce to teach sorting, observation, logical thinking, the study skill of using Venn diagrams, the making of a dichotomous key, or set theory (intersections and unions).

## **Procedure**

1. Give each small group as many pieces of produce as possible (at least 6 – 8). Have the group work together to divide the produce into two groups. They should then articulate the characteristic they used to categorize the produce.
2. Now have one student split the produce differently into two piles and then ask the other members of the group to figure out “What’s My Rule?” – what characteristic was used to divide the produce.
3. Other students in the group should get a chance to divide the produce into multiple groups using multiple criteria. Each time the other members of the group are to determine “What’s My Rule?”
4. Now use the Venn diagram. Model the concept of intersection and union using an overhead diagram or two hula hoops on a table.
5. Let the student groups come up with their own way of using their produce to illustrate a 2 ring Venn diagram.

## **Extension**

1. Instead of the above procedure, the teacher can begin the lesson by making up a list of traits which can be written on cards and drawn out of a box by the groups. The students can organize the produce using these traits first. Example of traits include: red, yellow, green, multi-colored, round, oblong, irregular shape, edible skin, smooth skin, rough skin. An interesting example would be to use “yellow” and “red” as the traits. See if students would interpret the intersection of those traits as “orange”.
2. Increase the complexity to three rings.
3. Physically manipulate Venn diagrams using hula hoops, embroidery hoops or metal wreath rings.



4. For a biology or life science class have the students create their own dichotomous key using the produce. Start with the whole group of produce and name it. Then break it into smaller groups. Each time a subdivision is made, have the students Name the Rule. Eventually there will be a large number of groups and the students will have developed a list of rules. From this list, students should develop a list of “yes/no” questions which will become their own dichotomous key. Have groups exchange bags of produce/keys and follow the keys to sort other students’ produce. Did the dichotomous keys work?

What's the Rule

