Name: _____

CASE

Activity 2.2.1 Tasty Taxonomy

Purpose

Every day you classify items in your life into a variety of categories. For example, you may sort the items on the school lunch menu as desirable, edible, avoid if possible, or hazardous. Doing this allows you to plan the days to bring a lunch from home.

Classification is the sorting, grouping, or dividing of objects into classes based on common characteristics or attributes. The system of classification is based on taxonomy, form, use(s), growth type, or other purposes. Thus, items are classified in multiple ways depending on need. How can you use scientific classification in everyday life?

Materials

Per pair of students:

- M&M's® candy
- Starburst® candy
- Skittles® candy
- Peppermints
- Gumballs

- Saltine crackers
- Pretzels
- Wheat crackers
- Ritz® crackers
- Puffed-cheese balls

Per student:

- Pencil
- *Agriscience Notebook*

Procedure

You and your partner will classify snacks based on their features. Complete Part One with your partner. Your teacher will present *Scientific Classification and Taxonomy*. After the presentation, you and your partner will complete Part Two.

Part One – Classifying Snack Foods

Working with a partner, determine three ways to classify the snacks based on their features or characteristics. Define the categories of features for each system of classification and sort the snacks into the proper categories. Record your systems of classification in Table 1 of *Activity 2.2.1 Student Worksheet*.

> **Example**: Beverages
> **Classification Feature**: Packaging
> **Categories**: glass, plastic, paper, metal, fountain

Part Two – Using Taxonomy to Classify the Snack Kingdom

Due to all the varieties of snack foods, distributors and retailers need an organized method of classifying their inventory. Marketers in the snack food world want to use the hierarchy of classification of living organisms to sort their company's snacks. You and your partner have been asked to create a two phyla

system and classify the Snack Kingdom accordingly. You must follow the "rules" given in the *Scientific Classification and Taxonomy* presentation.

- Kingdom
- Phylum
- Class
- Order
- Family
- Genus
- Species

You may use whatever characteristics you choose to relate the above items into two phyla and corresponding categories. Below is an example from the Beverage Kingdom:

Kingdom: Beverage
Phylum: Sweetened
Class: Carbonated
Order: Can
Family: Cola
Genus: *Coca–Cola*®
Species: *diet*

Be sure the distributors and retailers can follow your logic and replicate your classification system. Record your classification of each item in Table 2 of *Activity 2.2.1 Student Worksheet*.

Conclusion

1. What are three systems of classification you use every day?

2. What challenges might a scientist encounter when discovering and naming a new species?

Name: _____

Directions: In Table 1, record the features you use to classify the snacks. Using the categories for each feature, classify the snacks accordingly.

Table 1. *Classifying Snack Foods*

Classification Feature:	**Classification Feature:**	**Classification Feature:**
Categories and Classification:	Categories and Classification:	Categories and Classification:

Directions: In Table 2, classify the snacks using the hierarchical categories.

Table 2. *Snack Taxonomy*

Common Name	Kingdom	Phylum	Class	Order	Family	Genus	Species