

# The Snack Neutralizer – *Super Supper...and other meals?*

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## Introduction

This lesson has students using the snack neutralizer to evaluate certain foods. Based on their research, they theorize why it is they think that a particular food is a super food. The basic reason is the same; the ratio of micronutrients to macronutrients is high and each food contains a very large amount of an essential micronutrient. The details for each food will, of course be different. This is a great lesson for pair or groups of three. It lends itself to engaging discussions among the groups. Answers are not exact, nor should they be. All the answers are basically the same. (Each food has very little bad stuff and a whole lot of good stuff). It is discovering this information for themselves that is important and where the value of the lesson lies. Students, depending on age, time, computer access, etc. can research individual nutrients, in pairs or whole groups. The lesson will take 2-3 45 minute sessions.

## Objective

Students will know that there exists ‘superfoods’ (low caloric and nutrient dense food). Food that yield positive health benefits when consumed regularly. They will learn about 5 specific foods and what makes them ‘super.’

## Anticipatory Set

Ask...

‘Why is superman called **superman**?’ ‘How do you think he got his name?’

After a short discussion, ask...

“If I told you blueberries were a **superfood**, what would that tell you about blueberries?”

Discuss.

## Teaching

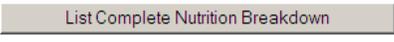
We will need to model the process. You may want to write it on the board so student can refer to it as they work. You are going to model it for them (next section).

### The Process

1. Compare and contrast equal quantities. Look at the list of nutrient and look for ‘standouts’, nutrients that appear to be abundant.
2. Investigate the individual nutrients – once you have identified the nutrient (s) you suspect make the food a super food use the ‘**Want to find foods high in a certain nutrient?**’ section of the site to confirm your findings.
3. Find the benefit – go to the National institute of health and research the benefits of the individual nutrient <http://ods.od.nih.gov/factsheets/list-all/>
4. Write a paragraph explain why each food is considered a superfood. Answering the following questions.
  - a. What are the nutrients each food is very high in?

### Teaching: Modeling

1. Show them to find the nutrition content

- a. Type ‘**Fresh cooked Mushrooms**’ →
  - b. Select ‘**Mushrooms, cooked, fresh, no fat added**’
  - c. Select portion weight ‘1 cup’. Let the class know we will always pick 1 cup as the portion size. You can take this opportunity to talk about controlling variables and why that is important. Press **Enter**.
  - d. Press the  bar and a nutritional breakdown will appear in a separate window.
2. At this point you can either..
    - a. Have your students do the same for the other 4 nutrients. Then place the 5 pages next to each other, comparing and contrasting foods looking for nutrient that are abundant in each. (For class discussion, if possible projected in front of the class)
    - b. Alternatively, have the students look at the individual lists and consider which nutrient might be in abundant. They will record these nutrients, to be confirmed in the next step



3. Use a different section of the snack neutralizer to confirm your findings. By using the 'Want to find foods high in a certain nutrient? We will confirm our finding.

1. Choose the nutrient

2. Choose the food group

The image shows a web form with a blue header that reads "Want to find foods high in a certain nutrient?". Below the header, the text "Find food high in -" is followed by a dropdown menu containing "Lutein + zeaxanthin" and a "Go" button. Below that is another dropdown menu containing "Vegetable Group Foods". Two arrows originate from the numbered instructions on the left: one points to the first dropdown menu and the other points to the second dropdown menu.

From your research you should have identified at least one of the follow as a key nutrient for mushrooms (**Selenium, copper, Riboflavin, niacin**)

If the food in question appear on the list generated you have confirmed that the particular food is high in the identified nutrient.

For example if you input Selenium and the vegetable group you will notice mushrooms in the middle of the list. This is confirmation that mushroom are a vegetable high in Selenium

4. Finally we need to research the benefit of the individual nutrient. Once we know the benefits of the nutrients that are abundant in a certain food, we can than conclude why the particular food is so good for you.

Oregon State has an excellent resource for this. I have included links for all the relavant nutrients on the teacher resource section of this document

## Teaching: Check for understanding/ Closure

Whole group discussions are encouraged. Each group should have an opportunity to share all they learned about each food and the nutrients within. End the discussion with the following question. Now that know what we have just learned, does anybody plan to eat any differently?

## Teacher Resources

These foods have many benefits. A list of vitamins and minerals that can be deduce from the snack neutralizer are list below. You may need to guide them depending on age and ability.

List of major nutrients

- **Avocado** – Potassium, Magnesium Zinc, Riboflavin, Vitamin B-6,
- **Pumpkin seeds**- Iron, Magnesium, Zinc Potassium, Phosphorus
- **Kale** vitamin k, vitamin A, beta-carotene, Lutein + zeaxanthin
- **Mushrooms** Selenium, copper, Riboflavin, niacin
- **Spinach**—magnesium , calcium , iron, Lutein + zeaxanthin

List of details information on each nutrient courtesy of Oregon State’s Micronutrient Information Center

- **Magnesium** <http://lpi.oregonstate.edu/infocenter/minerals/magnesium/>
- **Copper** <http://lpi.oregonstate.edu/infocenter/minerals/copper/>
- **Iron** <http://lpi.oregonstate.edu/infocenter/minerals/iron/>
- **Selenium** <http://lpi.oregonstate.edu/infocenter/minerals/selenium/>
- **Riboflavin** <http://lpi.oregonstate.edu/infocenter/vitamins/riboflavin/>
- **Niacin** <http://lpi.oregonstate.edu/infocenter/vitamins/niacin/>
- **vitamin k** <http://lpi.oregonstate.edu/infocenter/vitamins/vitaminK/>
- **vitamin A** <http://lpi.oregonstate.edu/infocenter/vitamins/vitaminA/>
- **beta-carotene** <http://lpi.oregonstate.edu/infocenter/phytochemicals/carotenoids/>
- **Zinc**-<http://lpi.oregonstate.edu/infocenter/minerals/zinc/>
- **Potassium**-<http://lpi.oregonstate.edu/infocenter/minerals/potassium/>
- **Phosphorus**- <http://lpi.oregonstate.edu/infocenter/minerals/phosphorus/>
- **Vitamin B-6** <http://lpi.oregonstate.edu/infocenter/vitamins/vitaminB6/>
- **Lutein + zeaxanthin** <http://lpi.oregonstate.edu/infocenter/phytochemicals/carotenoids/>