

# Walla Walla School Garden Lesson

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## Title: 5<sup>th</sup> Grade Potato and Wheat Harvest Investigations

Standards addressed:

**4-5 INQA —Question—** Scientific [\*investigations\*](#) involve asking and answering *questions* and comparing the answers with [\*evidence\*](#) from the real world.

**4-5 INQB —Investigate—** Scientists plan and conduct different kinds of *investigations*, depending on the *questions* they are trying to answer. Types of *investigations* include systematic [\*observations\*](#) and descriptions, [\*field studies\*](#), [\*models\*](#), and [\*open-ended explorations\*](#) as well as [\*controlled experiments\*](#).

Unit connections: Science MSP preparation

**Description:** Students will design and complete an open-ended investigation or field study investigation as they harvest the wheat and potato crops that they planted last year in 4<sup>th</sup> grade.

**Objective:** The students will design an investigative question and follow the scientific process to develop a conclusion.

**Date:** September - October

**Time Required:** Pre-garden time: 30 min/Garden time: 45 min-1 hour

**Materials:**

- Science investigation form, 1 copy per student or pair of students
- garden plot with wheat and potatoes to harvest, garden tools
- measuring tools if needed (rulers, scales)

**Preparation:** Familiarize yourself with the investigation form. Make sure the wheat and potato crops are ready to be harvested.

**Class Discussion:** Ask the class if they have any questions or they wonder about anything pertaining to the wheat and potatoes they planted last year. Allow a few students to respond. If they are stumped, try these questions:

- How many potatoes will we be able to harvest?
- How tall is the wheat?

Tell them that today they will work on creating an investigation that will help them practice for the science MSP and will also help them study their crops.

**Action:**

1. Pass out the investigation forms and help the students develop their investigation questions. Remind them that the answer to their question needs to be something that can be measured by counting, measuring length, weighing, etc.

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2. Make sure some students choose to investigate wheat and others choose potatoes. Create a balance based on how big each crop is.
3. Help them develop a procedure for how they will investigate their questions.
4. Go out to the garden and allow the students to follow their own procedures!
5. Collect the harvest and if time allows, have them work on their scientific conclusions. This can also be done later with the teacher.

**Wrap Up:** Have the students discuss anything interesting that they discovered in their investigations.

**Extension Activities (See lessons):**

- Cook and eat the potatoes! Here is a recipe that has been used for roasted potatoes:
  - 8 potatoes
  - ½ cup of canola oil or other vegetable oil
  - 2 tsp garlic powder and/or herbs
  - ½ tsp pepper
  - 2 Tbsp grated parmesan
  - ½ tsp paprika
  - Salt sprinkled
  - Cut potatoes into fairly thin pieces, place in bowl with oil and spices/herbs mix and stir to cover the potatoes, place them on a baking sheet and bake at 425 degrees for 30 – 40 min. try other spices like curry powder!
- Separate the wheat from the chaff, grind it, and make flour. Then bake bread!