

**Lesson Plan Ref:** Potions**Course Ref:** ABACWS**Subject:** Computer Science**Topic:** Linear Search and Algorithms**Lesson Title:** Potions**Level:** GCSE / A Level**Lesson Duration:** 50 Minutes**Lesson Objectives:**

Understand how the linear search method works, in what case it is used, and what are its best and worst case run times. Learners should also understand the importance of algorithms.

**Summary of Tasks / Actions:**

Learners should be initially introduced to the concept of linear search. Briefly talk about algorithms and how it is important to follow them in order to get the correct solution. Aim to cover this in approximately 15-20 minutes. It is not required to fully understand the concepts at this stage, they will be covered within the game where learners can experiment with the fundamental concept.

Once these concepts have been introduced, learners can start the game. They will need to start the potions class where they will be given a tutorial to follow. Refer to the answer workbook for how the code should look. Learners should attempt to implement the linear search method in order to receive ingredients. These ingredients can then be used to brew potions by following the recipes described on the chalkboards. To test their work and complete the class ask learners to create a “splash potion of strength 2”. Use 25-30 minutes for this entire activity.

Upon completion learners should be asked about how they implemented and used linear search and algorithms to create potions. This should be brief and only take a few minutes.

**Materials / Equipment:**

The world template file labelled ABACWS.mctemplate is required, import this in Minecraft for Education.

**Prerequisites:**

Ensure learners understand for loops.