

## Lesson 4.09 — Magpie Lab

### Overview

#### Objectives — *Students will be able to...*

- **Complete** a long-form lab, using if statements, algorithms, the Sting class, arrays, and ArrayLists.

#### Assessments — *Students will...*

- **Complete** College Board's AP CS A Magpie Chatbot Lab
- **Answer** assessment questions on the fourth class exam

#### Homework — *Students will...*

- **Complete** homework assignments as outlined in the Pacing Guide below

### Materials & Prep

- **Projector and computer**
- **Magpie Chatbot Lab Teacher's Guide**
- **Classroom copies** of the Magpie Chatbot Lab Student Guide
- **Associated Magpie Chatbot Files**

Read through the Teacher and Student guides ahead of time to familiarize yourself with the parts of this long-form lab. Using the guides, complete the lab on your own to spot possible challenges for your students. Upload all student files onto each computer desktop for student access.

### Pacing Guide: Day 1

Section	Total Time
Student Activity 1 & 2	Full class - students
Notebook checks	Full class - teacher
Homework: <i>Read Ch 6 (8th or later: ch 7) in the Barron Review Book</i>	TONIGHT

### Pacing Guide: Day 2

Section	Total Time
Student Activity 2, continued	Full class - students
Notebook checks	Full class - teacher
Homework: <i>Complete practice questions #1-18 in Barron 6 (8th or later: ch 7)</i>	TONIGHT

### Pacing Guide: Day 3

Section	Total Time
Student Activity 3	Full class - students
Notebook checks (if not completed)	Full class - teacher
Homework: <i>Complete practice questions #19-37 in Barron 6 (8th or later: ch 7)</i>	TONIGHT

### Pacing Guide: Day 4

Section	Total Time
Student Activity 4	Full class - students
Notebook checks (if not completed)	Full class - teacher
Homework: <i>Check and correct answers in Barron 6 (8th or later: ch 7)</i>	TONIGHT

## Pacing Guide: Day 5

Section	Total Time
Student Activity 5	Full class - students
Check for student review questions	Full class - teacher
Homework: <i>Check Barron Review Book for highlighting, note taking, and practice test completion/correction</i>	TONIGHT

## Procedure

All guides, sample code, answer code, and example code may be found in the folder “Milestone 1—Magpie Chatbot Lab.” Assessment questions included on the Teacher’s guide have been moved to the Unit 4 exam.

### About Barron’s

- Barron’s is an AP CS A review book that some schools provide students. If your school doesn’t provide Barron’s there are many alternative homework assignments that can be found at [codingbat.com/java](http://codingbat.com/java).
- Alternatively, you can save time spent on the lab by checking activities as homework.

### General Project Notes

- To help students start the lab smoothly, start Activity 2 as a whole group. Open Eclipse and guide students through opening the Magpie and Magpie Runner files.
- Encourage students to use their Tricky Code Cheat Sheets, 4 Commandments of Scope, notebooks, textbooks, classroom posters, and homework assignments.
- Offer occasional time-checks to help keep students on pace.
- Grade notebooks and review books in between helping students so students can keep notebooks for homework and studying in the evenings.

## Accommodation and Differentiation

In ELL classrooms, read all directions aloud before breaking into individual practice, and allow up to twice the amount of time for completion of the lab. As needed, allow students to pair up to help each other with reading comprehension (but remind students that they each must submit their own code). Each day that you begin the lab, start with a quick survey of student concerns and questions.

Differentiation of the lab assignment can be found on page 14 of the Teacher’s guide.

## Forum discussion

Lesson 4.09 Magpie Lab (TEALS Discourse account required)