

# Lesson 7.05: Pokemon Project ## Learning Objectives Students will be able to... \* Engage in \*\*class design\*\* before beginning coding \* Apply what was learned with respect to \*\*classes\*\*, \*\*methods\*\*, and\*\* inheritance\*\* to create an implementation of Pokemon ## Materials/Preparation \* [Project Spec - Pokemon] ([printable project Spec]) ([editable project spec]) \* [Alternate Project Spec - Mailing List] ([printable alternate project Spec]) ([editable alternate project spec]) \* Solution (access protected resources by clicking on "Additional Curriculum Materials" on the [TEALS Dashboard]) \* Read through the project spec so that you are familiar with the requirements and can assist students \* Try creating your own project so that you can Review [4 Steps to Solve Any CS Problem] \* [Editable Grading Rubric]([https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7\\_unit/05\\_lesson/rubric.docx](https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7_unit/05_lesson/rubric.docx)) #### Day 1 Pacing | \*\*Duration\*\* | \*\*Description\*\* | |-----| |-----| | 5 Minutes | Project Handout | | 5 Minutes | Mini-Lesson | | 15 Minutes | Project Overview | | 30 Minutes | Project Planning | #### Days 2-7 Pacing | \*\*Duration\*\* | \*\*Description\*\* | |-----| |-----| | 5 Minutes | Planning/Questions | | 10 Minutes | Review | | 35 Minutes | Project Work | | 5 Minutes | Wrap up | ## Instructor's Notes #### Day 1 ##### 1. Handout Project Specifications \* Read through the Project Spec with students \* Demo a completed project to show user experience. ##### 2. Mini-Lesson \* Discuss \*\*Class Design\*\* \* If you find yourself creating many classes with similar methods, use inheritance! \* Figure out the actual structure without writing code and use that to create your classes ##### 3. Project Overview \* Go over the Pokemon project spec \* Review the major aspects and requirements of the game ##### 4. Project Planning \* Have students write down the classes and methods they need to create \* Students should then outline what they will do each day in order to complete the project on time #### Days 2-7 ##### 1. Planning/Questions \* Have students review and update what they want to accomplish that day and any questions they have from the previous day. ##### 2. Review \* if necessary, review any concepts or struggles the class was having. ##### 3. Project Work \* students work on their projects independently. ##### 4. Wrap Up \* have the students write down what they struggled on or had a hard time doing. ## Grading #### Scheme/Rubric [Editable Grading Rubric]([https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7\\_unit/05\\_lesson/rubric.docx](https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7_unit/05_lesson/rubric.docx)) | Points | Percentage | Objective | Lesson | | :---: | | :---: | | --- | | --- | | 9 | 32% | The Student can create a class and an instance | 7.01, 7.02 | | 6 | 21% | The student can create methods for classes | | 3 | 11% | The student can correctly use inheritance | | 5 | 18% | Student can decompose a problem to create a program from a brief | | 5 | 18% | Student uses naming/ syntax conventions and comments to increase readability | | 28 | | \*\*Total Points\*\* | ## Forum discussion [Lesson 7.05: Pokemon Project (TEALS Discourse Account Required)](<https://forums.tealsk12.org/c/2nd-semester-unit-7-classes/lesson-7-05-pokemon>) [Project Spec - Pokemon]: [https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7\\_unit/05\\_lesson/project.md.html](https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7_unit/05_lesson/project.md.html) [Alternate Project Spec - Mailing List]: [https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7\\_unit/05\\_lesson/alternate\\_project.md.html](https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7_unit/05_lesson/alternate_project.md.html) [printable project Spec]: [https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7\\_unit/05\\_lesson/project.pdf](https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7_unit/05_lesson/project.pdf) [editable project spec]: [https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7\\_unit/05\\_lesson/project.docx](https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7_unit/05_lesson/project.docx) [TEALS Dashboard]: <http://www.tealsk12.org/dashboard> [4 Steps to Solve Any CS Problem]: <https://github.com/TEALS-IntroCS/2nd-semester-introduction-to-computer-science-principles/raw/master/units/4%20Steps%20to%20Solve%20Any%20CS%20Problem.pdf> [printable alternate project Spec]: [https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7\\_unit/05\\_lesson/alternate\\_project.pdf](https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7_unit/05_lesson/alternate_project.pdf) [editable alternate project spec]: [https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7\\_unit/05\\_lesson/alternate\\_project.docx](https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/7_unit/05_lesson/alternate_project.docx)