Lesson 6.05: Dictionaries Project ## Learning Objectives Students will be able to... * Use dictionaries to create the game [Guess Who] ## Materials/Preparation * [Do Now] * [Project Spec - Buy an Umbrella] ([printable Spec])([editable spec]) * Alternate Project - [Project Spec - Guess Who] ([printable project Spec]) ([editable project spec]) * Solution (access protected resources by clicking on "Additional Curriculum Materials" on the [TEALS Dashboard]) * Read through the do now and project spec so that you are familiar with the requirements and can assist students. * Try creating your own variation on the Guess Who game so you are familiar with the potential challenges and bugs your students will hit. * Review [4 Steps to Solve Any CS Problem] * [Editable Grading Rubric](https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/6_unit/05_lesson/rubric.docx) ## Pacing Guide ### Day 1 | **Duration** | **Description** | | ---------- | ---------- | | 5 Minutes | Do Now | | 10 Minutes | Review | | 10 Minutes | Project Overview | | 30 Minutes | Project Planning | ### Days 2-7 |**Duration**|**Description**| |--|--| | 5 Minutes | Planning/Questions | | 10 Minutes | Review (if necessary) | | 35 Minutes | Project Work | | 5 Minutes | Wrap up | ## Instructor's Notes - Day 1 ### 1. Do Now * Display the Do Now on the board. * Students should take a few moments to rank which topics they found most difficult during this unit. ### 2. Review * Take time to review the concepts students found most challenging during this unit. ### 3. Project Overview * Go over the project spec details with the students. * Demo a completed project. ### 4. Planning * Have the students design the variables, functions, dictionaries, lists, and structure they need, using pseudo code to help them visualize. * Have the students write out a plan /outline for how they will spend time over next few days. * Any students that finish their plan and have it checked should begin project work. ## Instructor Notes - Days 2-7 ### 1. Planning/Questions * Have the students write down what they want to accomplish that day and any questions they have from the previous class. ### 2. Review (if necessary) * Go over any concepts or challenges that students are having. ### 3. Project Work * Students work independently to complete their projects and meet their daily goals ### 4. **Wrap Up** * Discuss common issues that students were having each day, provide suggestions for how to overcome those challenges. ## Accommodation/Differentiation * Some students may need a refresher on using a `while` loop to control whether the game is over or not. * Some students may also need additional assistance or scaffolding for how to randomly choose a character from the dictionary. * For students who are looking for more of a challenge, we have added a second project called [Project Spec - Buy an Umbrella] ## Grading [Editable Grading Rubric](https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/6_unit/05_lesson/rubric.docx) ### Objective Scoring Breakdown | Points | Percentage| Objective | Lesson | | :---: | :---: | --- | --- | |6 |20% | The Student uses dictionaries to create key-value pairs| 6.01| |9 |30% | The Student can use dictionary methods to update, add, and remove values from a dictionary |6.02 | |3 | 8%| The Student can utilize dictionaries of different types |6.03 | |3 | 8%| The student can use loops to traverse through key/value pairs in a dictionary|6.04 | |5 | 17%| Student can decompose a problem to create a program from a brief || |5 | 17%| Student uses naming/ syntax conventions and comments to increase readability| | |31| | **Total Points** | | ## Forums link [Lesson 6.05: Dictionaries Project (TEALS Discourse Account Required)](https://forums.tealsk12.org/c/2nd-semester-unit-6-dictionaries/lesson-6-05-guess-who) [Do Now]: do_now.md.html [Project Spec - Guess Who]: project.md.html [Project Spec - Buy an Umbrella]: projectb.md.html [TEALS Dashboard]:http:/www.tealsk12.org/dashboard [Guess Who]:https://en.wikipedia.org/wiki/Guess_Who%3F [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 project Spec]: https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/6_unit/05_lesson/project.pdf [editable project spec]: https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/6_unit/05_lesson/project.docx [printable Spec]: https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/6_unit/05_lesson/projectb.pdf [editable spec]: https://github.com/TEALSK12/2nd-semester-introduction-to-computer-science/raw/master/units/6_unit/05_lesson/projectb.docx