Goals:

* To utilize maximum effort and thought to engage with the material from chapter 3 for the purpose of creating a highly organized document demonstrating mastery of the ideas and material in this chapter in a compelling and meaningful way.
* Also, to get an A on it, which requires great thought, organization, and effort.

Part 1.

1. Find a complex political, philosophical, literary, or popular culture statement. This statement will need to contain a (at least two (conjunctions OR disjunctions) AND a conditional statement) OR (at least four conjunctions OR disjunctions OR negations where you utilize at least two different connectives).

Type out this argument, if the quote comes from a video, transcribe it and provide a link to the video clip.

1. Using variables and let statements, deconstruct your statement into its equivalent symbolic logical form. (make sure each statement is capable of being classified as T or F)
2. Look up, research, and show evidence for your justification for the truth value of each of your component statements.
3. Create a complete truth table which will assess all possible truth values for the statement. Be sure to include truth values for *every* compound statement as well as for your variables.
4. Determine the truth value of your chosen statement by making clear your use of the truth tables. Be sure to include truth values for *every* compound statement as well as for your variables.
5. Now create a *different* compound statement, (YOUR EQUIVALENT STATEMENT), which is logically equivalent to the negation of your statement,~(YOUR STATEMENT). This statement cannot have the same form as ~(YOUR STATEMENT), but it must have the same truth values for all cases, AND you will demonstrate the logical validity by creating a truth table with~(YOUR STATEMENT) and next to it (YOUR EQUIVALENT STATEMENT)
6. Using logic gates create a circuit that replicates your statement. This can be an actual circuit with gates you purchase, a simulated circuit using virtual gates, or a very realistic drawing of your circuit using the proper shape of each type of gate. Then, for your truth values (as determined in D), clearly show how your circuit will produce the truth value you determined your statement to have in section D).

Part 2: Arguments

1. Find a complex logical political, literary, film, philosophic, or other argument. This argument should include multiple sentences, and arrive at some sort of conclusion that you are able to test the validity or non-validity of the argument. Again, transcribe or write out the entire argument. If the argument is from a video, then include a transcription of the argument and include a link to the video.
2. Using variables and let statements, deconstruct your statement into its equivalent symbolic logical form.
3. Determine the type of argument(s) that is being made, or what your interpretation of the argument is by fitting it into a specific argument type. Determine if this is a valid logical form or if it is a logical fallacy.

Part 3: For Teaching

1. Create a lesson plan for solving logic problems for students in your desired grade level.
2. Create a ready to use handout with a logic puzzle to be solved. Formatting, directions, puzzle statement and room to solve should all be accounted for. The puzzle does not have to be of your own creation, you can borrow the content from other sources. Make sure the puzzle is ready for use by a teacher, that they can simply take this document and know how to implement it, then have a handout for the students to work on. It needs to be “Plug and Play” easy for any teacher to just pick up and use. If you do take your puzzle from a source, include a link or make sure to give a works sited for it so that it can be looked up if desired.
3. Make a separate document where you have worked out the solutions (a key) to your handout if it was not included in your handout already.

Grading: This will be a 100 point project. You will be graded on:

* **5 points. Following directions**
* **10 points: Well explained and documented.** Your work should be very clear and should walk the reader through your final thoughts in detail. Be careful not to assume the reader already knows what you know.
* **10 points: Formatting is spacious and considerate of aesthetics as well as readability.** The entire project should be presented in one single word or pdf document, utilizing in page breaks to separate out topics, parts, and handouts. You will submit your document on Canvas as a word or pdf file only.
  + Include a separate SINGLE file for your entire Chapter 3 Project
  + For Part 3:
    - Attach a second file that includes your completed lesson plan.
    - Attach a third file that includes your completed handout and key.
* **60 pts. Effort**: I will be grading heavily on my perception of your effort for this project. This class has very little obligations and assignments (only attending class and doing some homework for which you have answers to in the back of your book), so these projects are expected to utilize the lion’s share of your total time requirements for this course for the entire semester. I will grade with a high standard. I am looking for statements and arguments that are clever, politically or personally or humorously relevant and meaningful to you. I do not want some simple “see dick run” style of simple statements and arguments or other sources where the deconstruction of the statement is unchallenging or obvious. I want this assignment to expand your knowledge, require thought and care, and force you to expand what you understand about this material. I expect that you will extend the ideas in the book into the everyday world around you, and make the reader of your project feel interest in what you are discussing. Your goal is to spark their interest and hold their attention. You must honor the spirit of the assignment to meet my expectations. Anything short of these expectations will result in a loss of points.
* **15 pts. Correctness**. Your work should be completely and totally logically correct.

Hints:

As a source, you could look at headline worthy statements in the news, favorite or other quotes, sports training books or other instructional materials (Ikea instructions?). Get creative, and have fun. But this assignment is heavily dependent on finding the perfect statement and argument! So find good ones!

HAVE FUN! I sure enjoyed everything I learned by making my example!