**TABLEAU INSTRUCTOR READ ME – TABLEAU DESKTOP LEVEL 2**

BOOK USED: Practical Tableau by Ryan Sleeper

Great Reference to give: [www.ryansleeper.com](http://www.ryansleeper.com)

This class will be split up into FIVE PARTS. The book is setup so that it is an amazing amount of hands-on work, designed because students gave feedback from Tableau Level 1, that they desired more hands-on. Students will be introduced into a rich set of exercises that should be very useful in their individual environments.

The MAIN topic for this entire class is to understand the “Business” need for everything you do in Tableau. The idea is that the “Business” will come to the Tableau writers for visual tools. They will be speaking English, and their needs will have to be translated into “Tableau” Lingo. What students will gain from this course is an arsenal of charting that can be used in any business scenario.

PART I – should stand as a review ONLY. People in this course should have attended either Tableau Desktop Level 1 course, OR the equivalent experience. Please make students aware that you will be rushing through this review and that they can go back and review. Also, any exercises in this chapter will be DEMOS in class only. Most of the items in this chapter are collegiate and meant only as a prep for Part 2 through Part 5

BEFORE you begin, have everyone turn to page XIX and explain the structure of the book/class, as follows:

Part 1 – Review- Pages 3 – 101 – Demos and Review with Instructor

Part 2 – Chart Types (HANDS ON SPECTACULAR) – the majority of this course will focus on Part 2 Charts- and Part 3 – Tips and Tricks. Students will mostly be on their own with labs. The instructor will perform Lab Chats about the various exercises. Pages 105-292

Part 3 – Tips and Tricks – More great hands on exercises. Most of these will be more interesting if you do a combination of hands on with the students and some independent labs as well. They are amazingly cool, quick samples of how to put their charts over the top!

**==========Parts 4 and 5 have no hands on exercises. Depending on your timeframe, you could have the students read these on their own (at lunch time), you could read over with the students just before leaving class, or you can do these two chapters BEFORE you complete Part 3, so that when the students finish Part 3 exercises, they can go home independently. This will vary with each class.**

Part 4 – No hands on – All conceptual. Best practice at a workflow of start to finish from the Business to Completion

Part 5 – No hands on – Best practices.

**LASTLY: MOST IMPORTANT – You will need to get the students to get their OWN files for class. This will also teach them how to do it, once they are back at work:**

1. **Have them go to: github.com/onlc-classes**
2. **Point out ALL the Tableau Classes for them and show the Tableau Desktop Level 2 selection. Have them click on this**
3. **Click the Green CLONE or DOWNLAD button and choose the ZIP option to save to the desktop.**
4. **Once the files have been saved, have the students extract all the files to a new folder on the desktop “Desktop Level 2”. Although they will get everything, including this readme file, it is perfectly fine because they may wish to browse through and remember your directions on it.**
5. **Once the files are in place, you are good to go.**

Chapter 1

This is a critical chapter because you must give the students the understanding of how the Lab Workbooks and Lab Instructions work together. In class, I would use the Microsoft Word documents, but explain to them that they can also use the web documents from github, if they prefer.

Have the students open the workbook “PartOne.twbx”, AND have them open the LAB\_Book\_Part\_1.docx file. Explain that in the future, they may wish to open the lab instructions on separate screen. The purpose is to teach them how to use the files and the instructions together. Explain that this will be particularly critical for them in Part 2 and Part 3 of the book.

With all of this being said, you are now ready to teach Part 1.

Part 1

No hands on work starts until “Chapter 8” of Part 1. So you will just read through the text with the students, hitting on any important points you feel are necessary.

On Page 15 – (Chapter 8) – the students will begin to work in their lab books WITH YOU (for the purpose of saving time). The workbook itself is done already, so you can choose to just look at the exercises and show the final product, or you can insert a worksheet here and there so nobody gets bored. Most students will appreciate this, as they have already taken the Desktop Level 1. If they are confused or overwhelmed, they will need to spend time at lunch hour, going through. You will only need a quick peruse of the lab book with them, just so they can see it. Mostly, just go over, using the book, asking students to turn to this page, and that page, etc.

Chapter 8 is cool because it is the “five ways to create a bar chart”. Since bar charts are the most common (and default) in Tableau, the students will appreciate the quick go over. Plus it is fun. The workbook has the final copy, so the students can see the result.

In Part 1, just casually go over it all with more emphasis placed on:

Dimensions vs. Measures

Parameters – Explain that there are many more parameter labs coming, so do not spend insane amounts of time on this

Filters – Many more on the way

Calculated Fields – Many, many more – calculated fields are THE most important thing they will do, because THIS is how you customize the company “core” data for each piece of the business that needs it.

Chapter 10 - Page 48 – The Profit Ratio Formula is: Sum([Profit]) / Sum([Sales])

Page 49 – Data type is Decimal

All the exercises in Part 1 go very well and should not need much explanation. Get through it as quickly as possible and explain that this class is designed to give LOADS of Hands On exercises for students because of past survey experience. We are giving the students exactly what they wished for (And it is fabulous!)

If possible, you should be done with Part 1 before lunch. Even if you have to start lunch as late as 12:30.

Part 2

Part 2 should be broken into two sections. Regular charts and Advanced Charts. For the purpose of class, the lab instructions AND the workbooks have both been broken down in this way. You can use the time in between to demo/lab chat. You should be able to finish The Regular charts on day one and maybe even have your lab chat on day one. Also, at the end of the lab chat, give the students time to finish any labs in Part 2 (or even go back to part 1 if they desire)

You can break down the charts in two ways:

1. Let the students do by themselves
2. Do with them

Suggestions are given below for which charts should be with instructor. If not noted, then students should do independently.

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Chapters 19-30 - Independently

Part 2 – Regular Charts Pages 110-193 – Chapters 8 through 35

Chapter 23 is about Tree Maps. There are FOUR Tree maps to be made. Quite interesting and fun. On page 133, during lab chat, you can introduce ANNOTATIONS if desired. Have the students open up to that chart and show them the concept of annotations. Tree maps are very dense and cool, but annotations can give clarity in some cases.

Chapter 30 – It is suggested that pages 184-206 be done WITH the students. At the very least, 185 and 186 should be done with them. MapBox maps should be discussed from the standpoint of WEB SERVICES. There are millions around the world and programmers put them up so that we all may take advantage of “dynamic services”, in that they change when something changes (like a GPS system).

At this time in class, if you desire, you can take them to:

C:\program files\ Tableau\ Tableau 2018.1 \ MapSources and have them open the offline.tms to show the default map background and how it is NOT connected to the outside world.

THEN have them open Tableau.tms and show them the connectivity to a web service. You can also open the MAP LAYERS option and show them the Census Bureau information. Explain at this time how layers work (like putting pieces of paper on top of each other on a desktop). Explain that many companies in the world offer both background maps and layers. Some are free and some are paid for services.

A great reference for integrating Tableau and google maps, is here:

<http://thevizioneer.blogspot.com/2014/08/tableau-and-google-maps-finally-friends.htm>

and here is one for Google Maps and Parameters:

<http://dataremixed.com/2013/06/how-to-embed-a-google-map-in-tableau/>

Have the students correct their books on page 185 (Chapter 30) – The URL in Step #1 should be: [www.mapbox.com/maps](http://www.mapbox.com/maps)

If you want to finish up quickly with MAPPING, you could also do the remaining exercises hands on with the students.

Part 2 Charts – PartTwo.twb ends with the Dual Axis Map – Chapter 32 – Pairs up with Lab\_Book\_Part2

Part 2 Chart – PartTwo\_Advanced starts with Sequential Maps Chapter 33 - Pairs up with Lab\_Book\_Part2\_Advanced

Part 2 – Advanced – This Part and lab chat should take up the morning of the second day. There are not as many charts as Part 2 regular, but there is more work involved. The workbook and lab instructions start with Chapter 33 – Sequential Paths.

SKIP Chapter 35 exercise with the intention of saving time because they have already done so much with mapping. Also, this requires that the students create a custom data source (on page 208). I think they can do this on their own, if they desire. We should not overwhelm them with mapping.

Page 232 – Explain that Donut charts are the new Pie Charts. Pie charts are basically going out of style because the “experts” are saying that they are not accurate enough. This may be a style of choice, but the donut chart works very well.

Although the students will now be adept at creating layered charts, explain that the donut is one of “smoke and mirrors” in the sense that there are two layers, one on top of each other.

Chapters 44-46 are the Dual Axis Bump, Dumbbell and Jitter charts. These have already been done in variations in the lab. Have the students skip them. Later, if we feel we need more charts to fill time gaps, we can put them in. For now, it doesn’t add anything to the students’ new understanding of charts.

Overall, ALL the charts in Chapter 2 work GREAT. The regular and advanced. You should not have any issues with them.

During lab chats… it is imperative that you are asking students questions (not all, pick and choose) about their BUSINESS. This class is designed to help solve business problems. So for example, if the students are working for health care companies or financial companies, it is good to talk about compliance. How most charts will not contain personal information about customers or employees.

PART 3 – Tips and Tricks

This section will start directly after the lab chat for Part 2 Advanced.

This Part 3 encompasses Chapters 47- 75 HOWEVER, the students work should be a definite Chapters 47-50 as far as hands on labs. They will already have been through a bevvy of hands on work and will be ready for you to “entertain” them.

Chapter 50 and beyond - (the rest of the book) are full of tips and tricks and best practice.

Chapter 50 itself is definitely a repeat of Custom shapes and should be skipped.

Chapter 51 – 55 are definitely “read over” chapters.

Chapter 56 – If you want to do something fun with the students that shows the concept of Chapter 56, FIRST do the exercise below. It will show that you do not always need to have a dashboard to show multiple views. And, in some cases, they will not want a dashboard, but instead multiple views.:

(it is something we always demo’ed from the ugly website, but is quick, to the point and very useful for all:

DYNAMIC VIEWS:

Use Excel Sample Superstore

Create Parameter

1. Right Click White Area of Measures window and "Create Parameter".

a. Name: MeasureOptions

b. Data Type: Integer

c. Current Value (whichever value you wish to be default)

d. Display Format: Auto (can format numbers, dates, etc.)

e. Allow Values: LIST

f. Type the following:

Value DisplayName

Sales

Profit

Avg Discount

Count Quantity

Click OK

Create Calculated Field

Name: choiceofmeasure

Type in the following:

CASE [MeasureOptions]

WHEN 1 then Sum([Sales])

WHEN 2 then Sum([Sales])

WHEN 3 then Avg([Discount])

WHEN 4 then Count([Quantity])

END

Assemble:

Drag OrderDate Dimension onto Columns(change to continuous Month)

Drag your new Calculated Field (ChoiceofMeasure) to Rows

Drag Segment to Color

Right Click your Parameter(MeasureOptions) and SHOW PARAMETER CONTROL

COOL FORMATTING FOR IT:

Right Click Axis and Edit Axis. Delete Title

Double Click Title of Worksheet

Replace what is there with:

“You are now looking at: “ <Parameters.MeasureOptions> (you can use the insert menu to get to the parameters option.

Feel free to format with any options you desire.

Now, you get the option of more than one view!!!

Then, to continue…. Do pages 353-363 with the students. The book directions are VERY clear and if you prep them, then the students will enjoy doing these with you. NO instructions exist in the lab book for these exercises.

Starting on Page 365 ALL the rest of the book is best practice and ideas. Suggestion, finish Part 4 and Part 5 in book (as they are not hands on at all) – THEN at the end, leave the students with these choices:

The exception is Chapter 66 – You will already have done the concept here with them if you completed the Chapter 56 Extra Example provided called “Dynamic Views”.

OPTION 1

Do the following labs directly from the book (the directions are excellent):

Chapter 65 – Dynamically formatting numbers: Page 421-426 –

Chapters 67- 70 are all about “time” – they are excellent but only if students want to choose to do them: pages 431-458 –

Chapter 71- Cluster Analysis – they have already done this in the book. They should skip it

Chapters 72-75 should just be discussed. There are a few exercises in the book (directly from book) that students can use to use the concepts if they desire.

Option 2 – Re-do any labs in the book (including Part 1 if they desire)

Option 3 – Go home!

Through Parts 4 and 5, you can call on students and talk to them about their workflow. For example, do they have Test environments vs. Production. Are they allowed to put things into production, or do they have the need for administrators to do this?

Overall, the second part of Day two, should be an exchange of ideas and concepts with regard to the BUSINESS. DID the students learn how to solve their business problems/issues with this class?