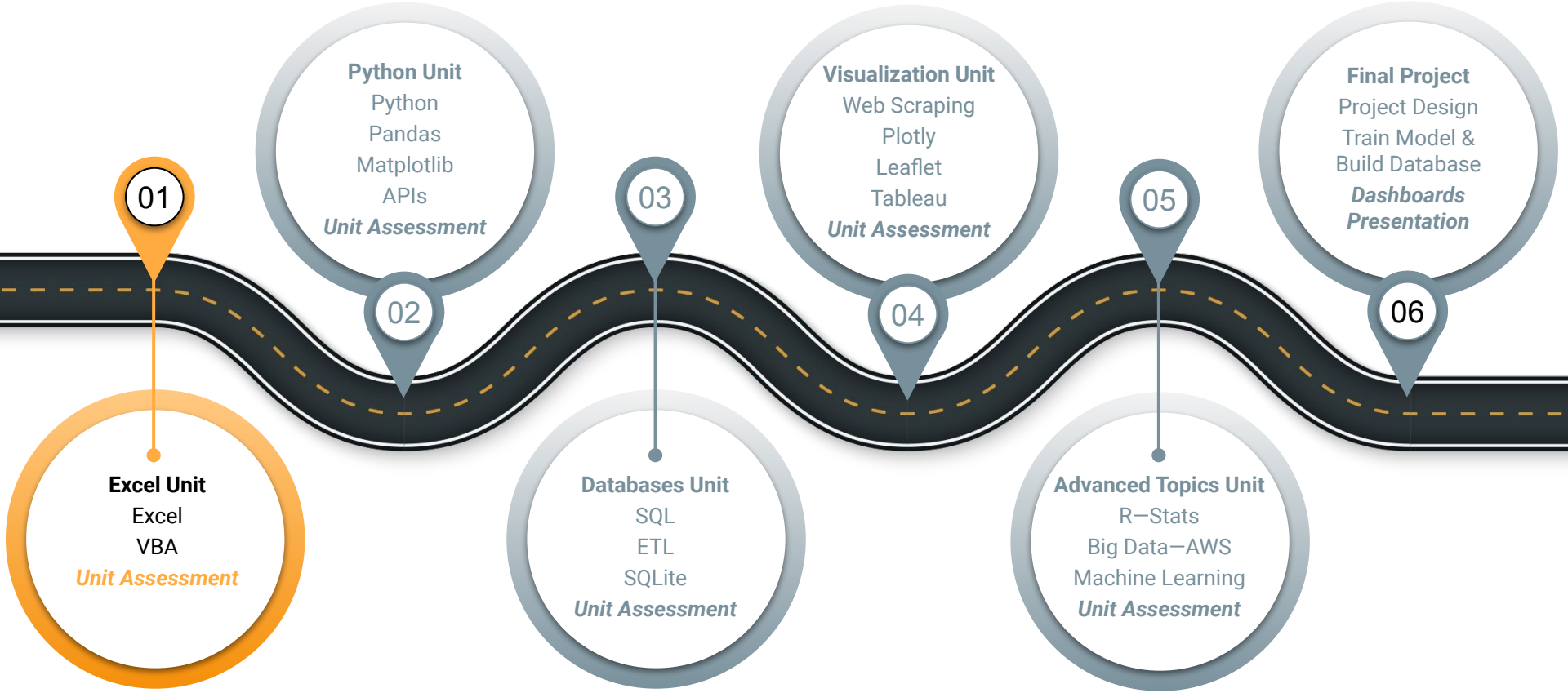
The Big Picture



Boot Camp Pointers

As you work through this module, remember the following:

01

Your Bootcamp Spot material is connected to the things we will do during class.

It's all part of the journey!

02

Your coursework this week will prepare you with all the skills that you need to succeed on your Challenge assignment!

03

Be proactive in using Office Hours to get help with any installation issues.

We're here to help!

Module 1

This Week: Excel

This Week: Excel

By the end of this week, you'll know how to:

- Import data into Excel
- Apply filters, conditional formatting, and formulas to data
- Create and interpret charts and pivot tables in Excel
- Calculate summary statistics
- Characterize data to identify outliers in datasets
- Visualize the distribution of data using box plots

This Week's Challenge

Using pivot tables and functions to filter data, create charts that demonstrate an analysis of data sets to visualize business outcomes based on launch dates and goals.

Career Connection

How will you use this module's content in your career?

Module 1

How to Succeed This Week

Quick Tip for Success:

There are hundreds of Excel functions. You'll have to look some of them up. Consider this your first opportunity to dive into some documentation!

Module 1

Today’s Agenda

Today's Agenda

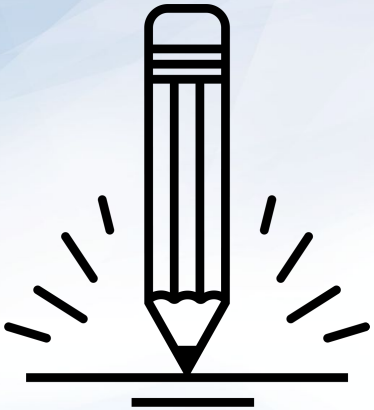
By completing today's activities, you'll learn the following skills:

01 Calculating Averages

02 Pivot Tables & Pivot Charts

03 `VLOOKUP()` & `HLOOKUP()`

Make sure you've downloaded any relevant class files!



Activity: Gradebook

Create a formula that calculates the final grade for a student based on their previous exams and papers.

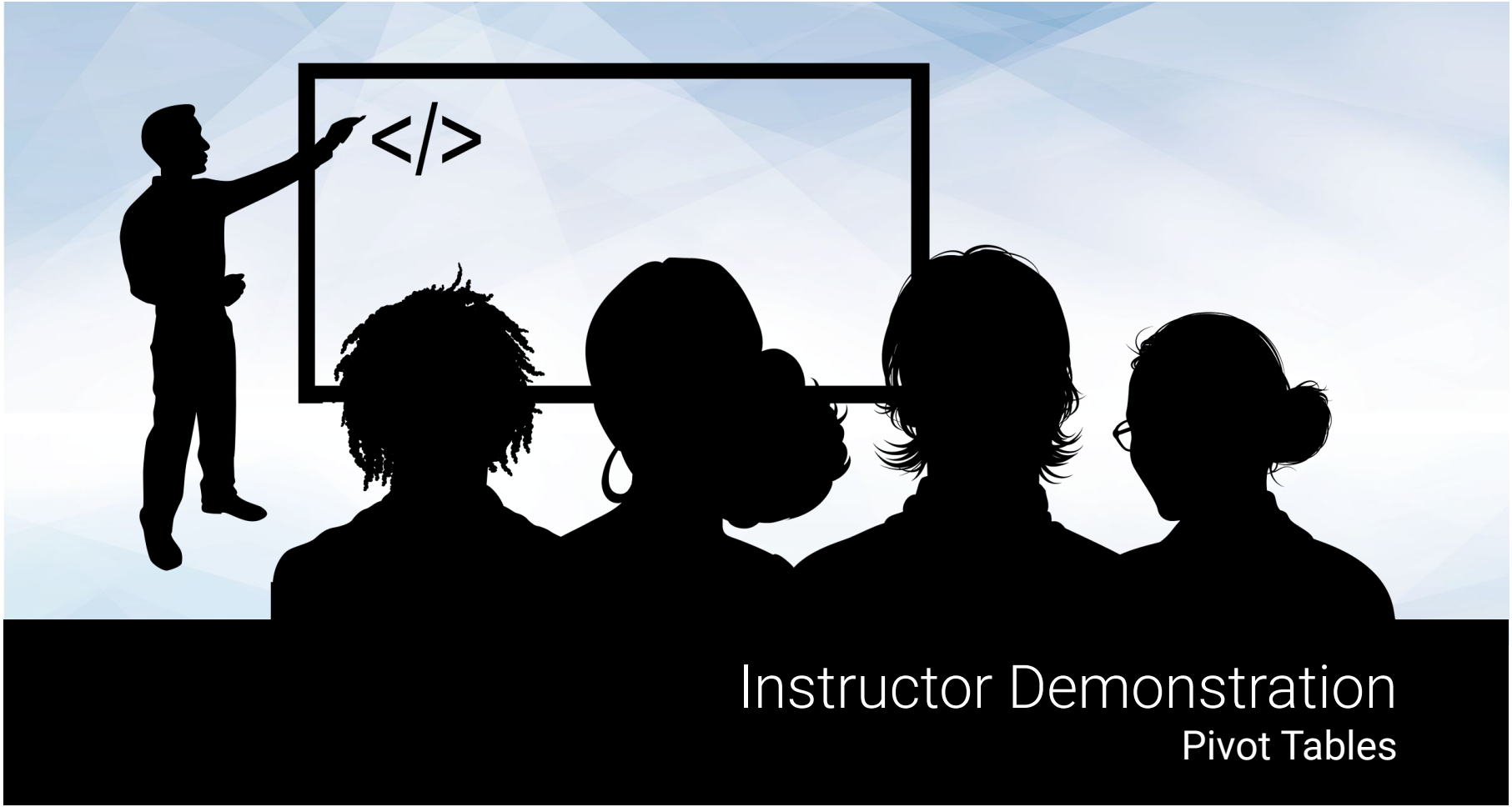
Suggested Time:
15 minutes

Activity: Gradebook

To do:	When making this calculation:	Bonus:
Create a formula that calculates the final grade for a student based upon their previous exams and assignments.	• Consider every assignment and exam to be equal in weight; each should comprise one-fourth of the overall grade. • Round the result to the nearest integer. • Using conditionals, create a formula that returns `PASS` if a student's final grade is greater than or equal to 60. If a student's final grade is below 60, the formula should return `FAIL`.	**Create a nested `IF()` formula that returns a letter grade based on a student's final grade.** • Greater than or equal to 90 = A • Greater than or equal to 80 and less than 90 = B • Greater than or equal to 70 and less than 80 = C • Greater than or equal to 60 and less than 70 = D • Anything less than 60 = F

Suggested Time: 15 minutes

Let's Review

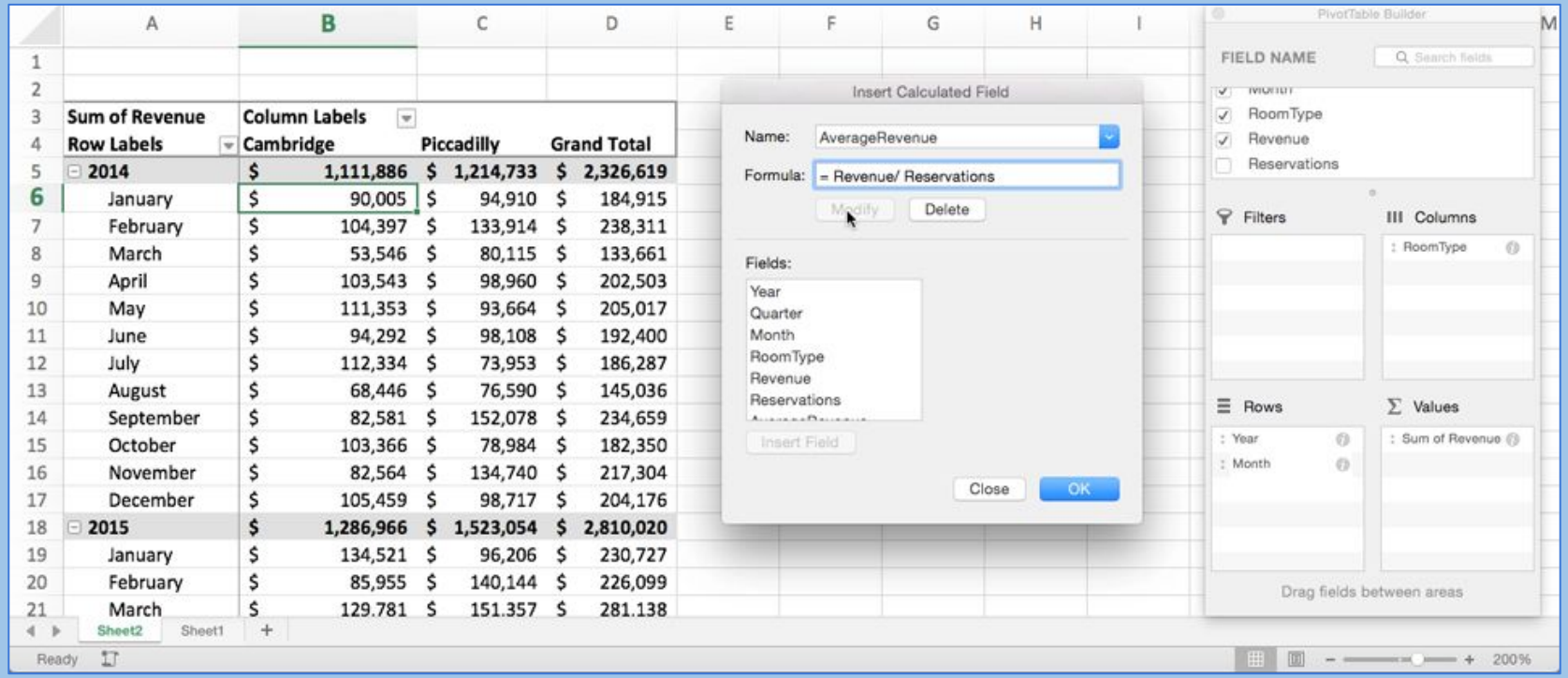


Instructor Demonstration

Pivot Tables

Get Pivot With It

Pivot tables are one of the most important data visualisation concepts to master in this class (don't worry, they are a cinch to deal with).



Get Pivot With It

Essentially, a pivot table is a **summative** analytic tool that allows us to perform aggregate functions that allow any combination of fields. The term *pivot table* comes from the fact that we are pivoting along a data axis.

Seller	Quantity Sold	Date
Joseph	$42.50	1/1/17
Jacob	$65.00	1/3/17
Jacob	$5.25	1/6/17
Joseph	$125.00	1/6/17
Jacob	$3.50	1/7/17
Matt	$32.00	1/9/17

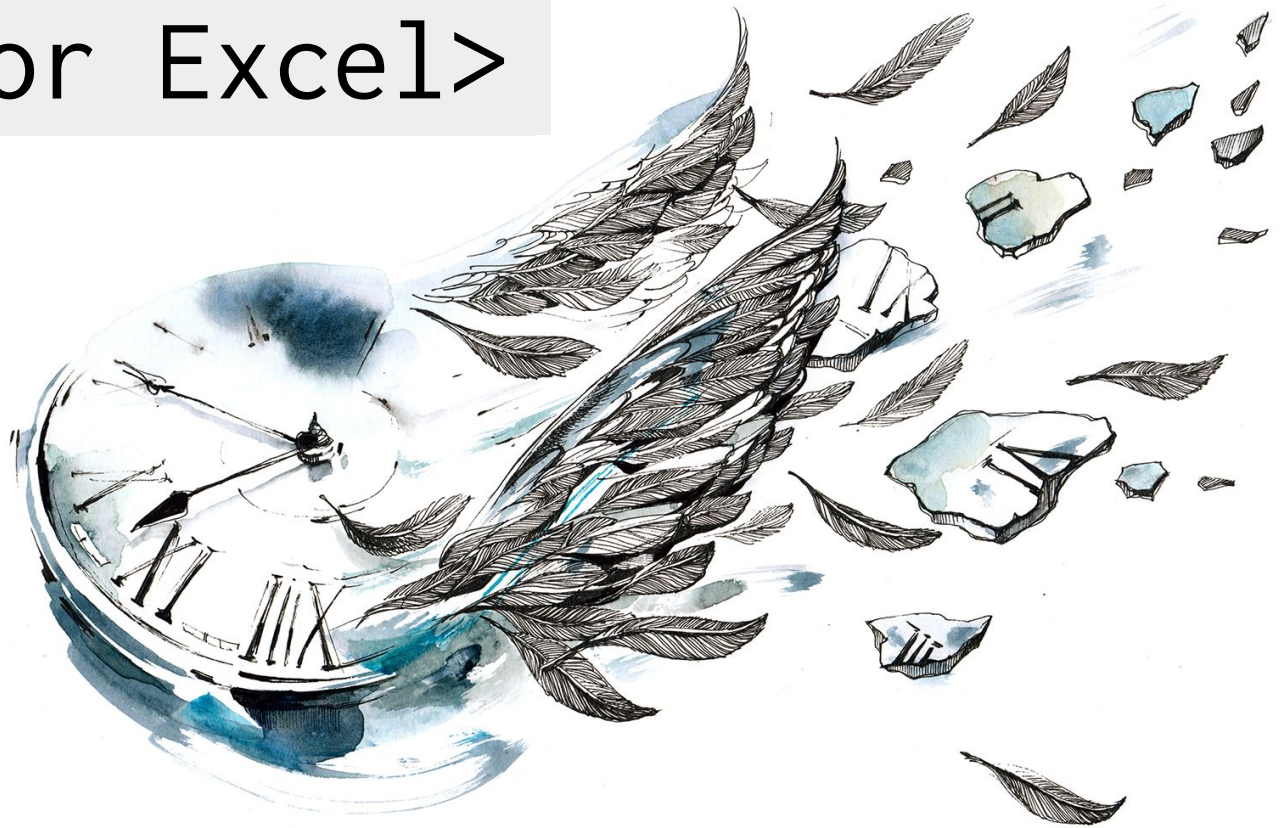
Seller	Total Sold
Joseph	$167.50
Jacob	$73.75
Matt	$32.00

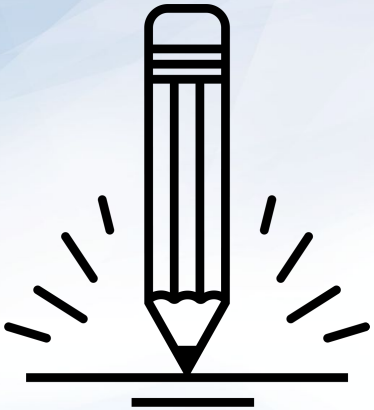
Word to the Wise: Keep It Flat!

Modern business intelligence (BI) tools like Tableau, Sisense, and Salesforce work best if data is stored in flat CSVs—meaning column headers represent fields (vertically) on the spreadsheet. This is largely because all of these technologies heavily utilise pivot tables as a tool for their visualisations. **Don't try to confuse this simplicity. "Spreadsheet magic" is a nightmare to analyze.**

B	C	D	E	F	G	H
DateTime	Week #	Section?	Pace	Academic Support	Self-Mastery	Instructor Er
2016-09-11T04:00:00.000Z	18	RCB0503FSF - CCC	3	5	5	4
2016-09-11T05:00:00.000Z	6	UT0726FSF	3	5	3	4
2016-09-12T04:00:00.000Z	11	UCF062016FSF	4	4	3	5
2016-09-12T04:00:00.000Z	23	UCF0329FSF	2	4	5	1
2016-09-12T04:00:00.000Z	9	UNC0712FSF	3	4	4	3
2016-09-12T04:00:00.000Z	23	UCF0328FSF	4	3	2	3
2016-09-12T04:00:00.000Z	6	RUT0725FSF-NB	5	4	4	5
2016-09-12T04:00:00.000Z	6	RUT0725FSF-NB	5	5	4	5
2016-09-12T04:00:00.000Z	6	RUT0725FSF-NB	2	4	4	4
2016-09-12T04:00:00.000Z	11	UCF062016FSF	4	5	4	5
2016-09-12T04:00:00.000Z	13	UCF061416FSF	4	5	1	5

<Time for Excel>





Activity: Top Songs Pivot Table

In this activity, you will use a 5000-row spreadsheet containing data on the top 5000 songs from 1901 on. Using pivot tables, you will uncover which artists have the most songs in the top 5000, what the songs are, and what year they were released.

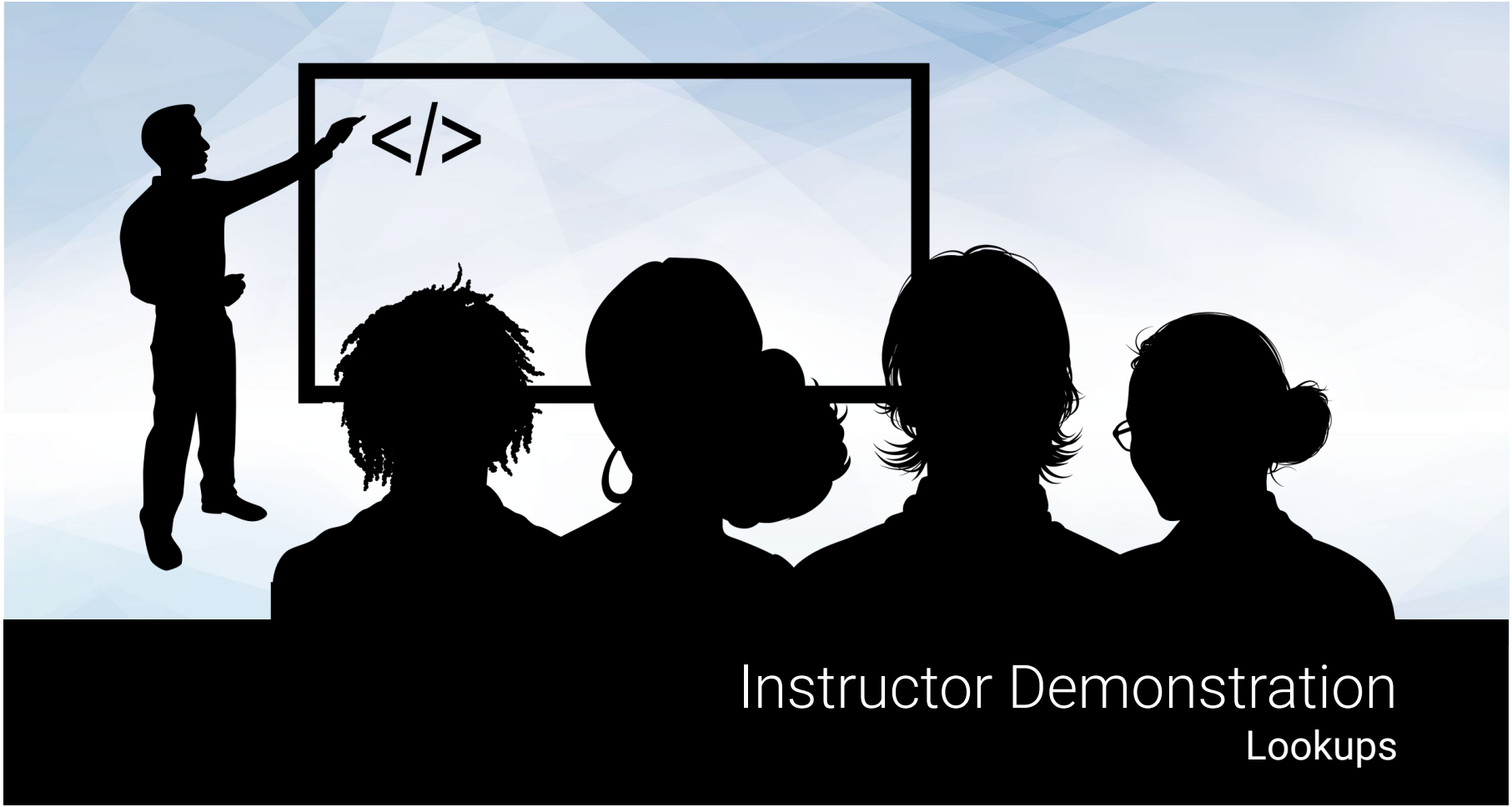
Suggested Time:
15 minutes

Top Songs Pivot Table Instructions

- Select all of the data in your worksheet and create a new pivot table.
- Make a pivot table that can be filtered by year and contains two rows: *Artist* and *Name*.
- All of an artist's songs should be listed below their name.
- Update your pivot table to contain values for:
    - How many songs an artist has in the top 5000
    - The sum of the final_score of their songs.
- Sort your pivot table by descending sum of the final_score.

Suggested Time: 15 minutes

Let's Review



Instructor Demonstration

Lookups

Look It Up with Lookups

Assume this table is gigantic. How would we **retrieve** the population of a specific planet for use in another formula?

Planet	Population
Zeelo	5020
Merinoa	380
Cardboard Box	2
…	…
Asteroid 9	95

Look It Up with Lookups

Assume this table is gigantic. How would we **retrieve** the population of a specific planet for use in another formula?


```
=vlookup( <value>, <full table>,
<column to retrieve>,<match parameter>)
```

Planet	Population
Zeelo	5020
Merinoa	380
Cardboard Box	2
…	…
Asteroid 9	95

Look It Up with Lookups

What will this yield?

```
=vlookup( “Asteroid 9”, Planets, 3, FALSE)
```

Planet	Population	Species
Zeelo	5020	Zoltans
Merinoa	380	Murphies
Cardboard Box	2	Hambones
…	…	
Asteroid 9	95	Asterisks

Look It Up with Lookups

What will this yield?

```
=vlookup( “Asteroid 9”, Planets, 3, FALSE)
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Planet	Population	Species
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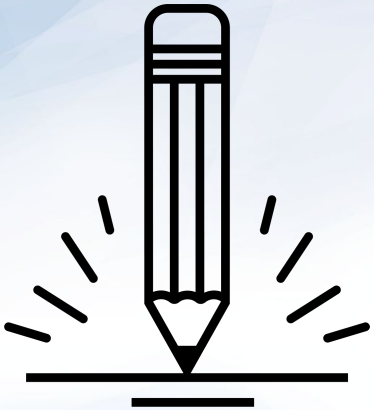
Asteroid 9	95	Asterisks

Asterisks

<Time for Excel>



Activity: Product Pivot

A small company selling electronics and electronic media has asked our class to create a table that visualizes the cost of their recent orders. Using lookups, create a pivot table that serves this purpose.

Suggested Time:
15 minutes

Activity: Product Pivot

- Determine the “Product Price” of each row in the “Orders” sheet by using a `VLOOKUP()` that references each row's “Product ID.”

  The “Product Price” of a row does not include shipping.

- Determine the “Shipping Price” of each row in the “Orders” sheet by using a `VLOOKUP()` that references each row's “Shipping Priority.”
- Select all of the data on the “Orders” sheet and create a new pivot table that calculates the sum of both “Product Price” and “Shipping Price” for each “Order Number” and “Product ID.”

Suggested Time: 15 minutes

Let's Review