

# Graphing with Excel

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Microsoft 365

# After completing this module you will be able to:

Create and edit a graph in Excel

Export a graph from Excel in different formats

# We assume you already know:

The basics of plotting data points

How to identify dependent and independent variables

You can review these concepts in the Introduction to Graphing (A2) module

# What is the point of this module?

To create uncluttered graphs where it's easy to see any patterns in the data

“above all else show the data”

# Entering Data

The screenshot displays the Microsoft Excel interface with the following content:

- File Name:** AA49
- Worksheet Title:** Chemistry 101, Lab 1: Dissolved Oxygen Levels in a Closed System
- Author:** T Cruise, A Sandier
- Date:** 12/12/2012
- Table:** Trial 1
- Columns:** Time (Independent Variable), Dissolved O2 (Dependent Variable)
- Data Points:**

Time	Dissolved O2
1	1.5
2	3
3	5.5
4	4.2
5	6.3
6	8.3

Enter your data by inputting the independent variable (x-axis) on the left side and the dependent variable (y-axis) on the right side.

# Selecting Data for Graph

The screenshot shows the Microsoft Excel interface with a data table selected. The table is titled "Trial 1" and contains the following data:

Time	Dissolved O2
1	1.5
2	3
3	5.5
4	4.2
5	6.9
6	8.3

The Excel ribbon is visible at the top, showing the Home tab with various options like Cut, Copy, Paste, and Font. The status bar at the bottom indicates the current selection: Average: 4.15, Count: 14, Sum: 49.8.

Click and drag to select your data

# Inputting a Graph

The screenshot shows the Microsoft Excel interface with the 'Insert' tab selected. A green arrow points to the 'Insert' tab label. Another green arrow points to the 'Scatter' dropdown menu in the 'Charts' group. The spreadsheet contains the following data:

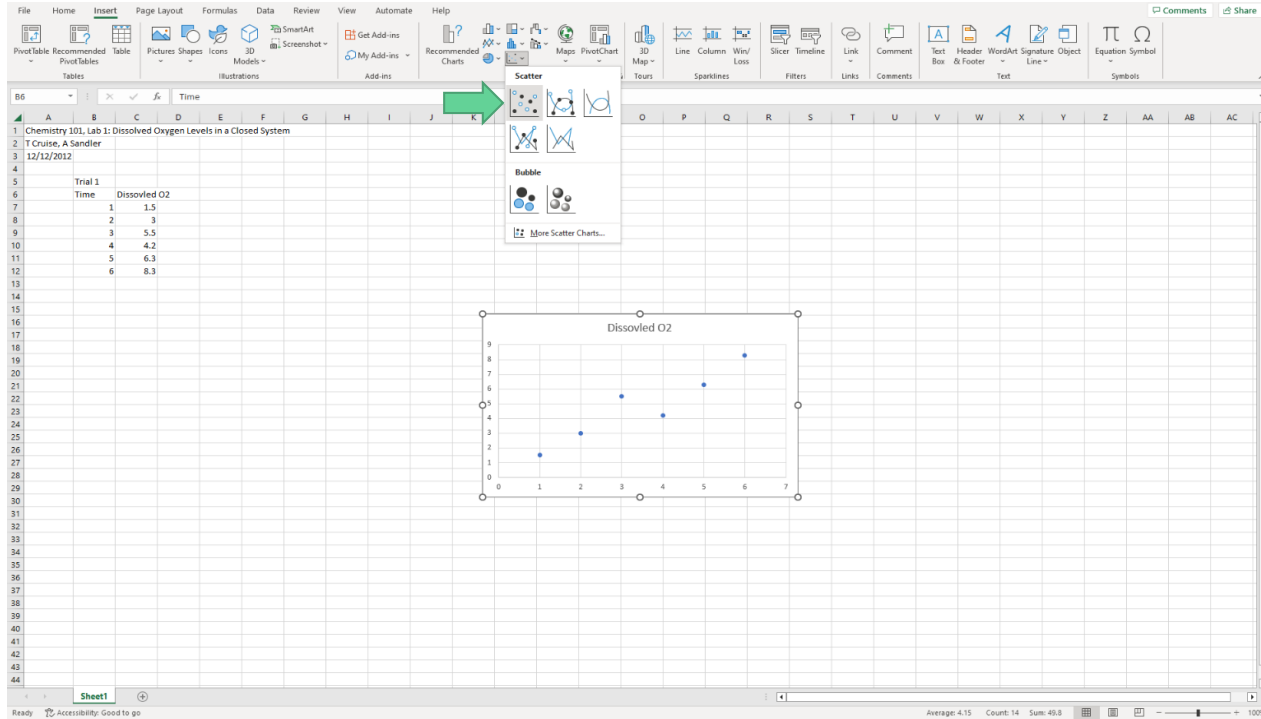
Trial 1	
Time	Dissolved O <sub>2</sub>
1	1.5
2	3
3	5.5
4	4.2
5	6.3
6	8.3

The status bar at the bottom indicates: Average: 4.15 Count: 14 Sum: 49.8

At the top of the screen, select “Insert”

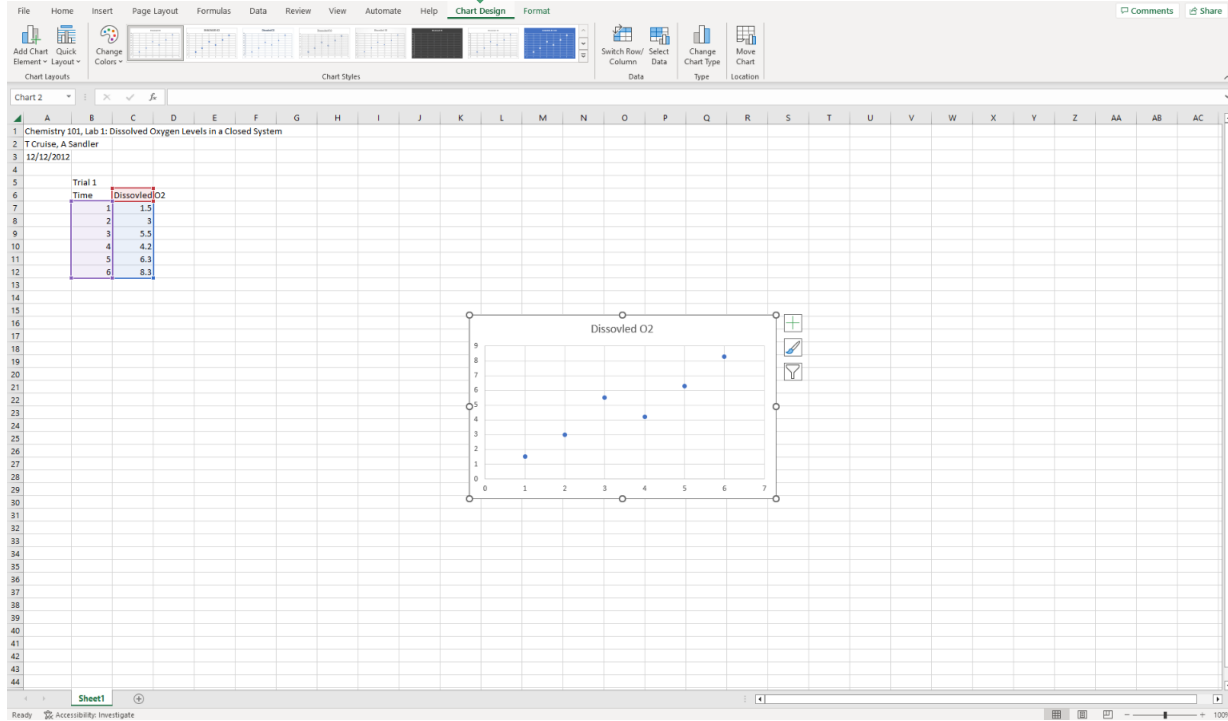
Under the Chart section, select the dropdown box labeled “Scatter”

# Inputting a Graph Continued



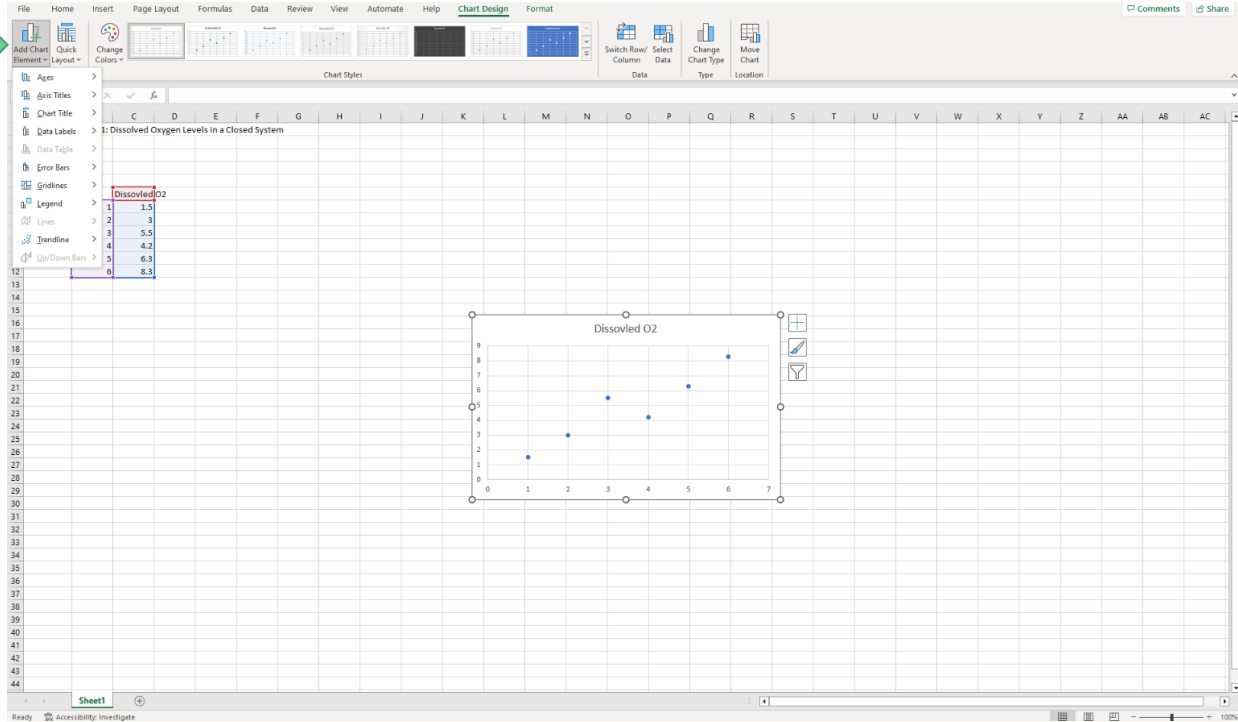
Select the graph labeled  
“Scatter”

# Editing Your Graph



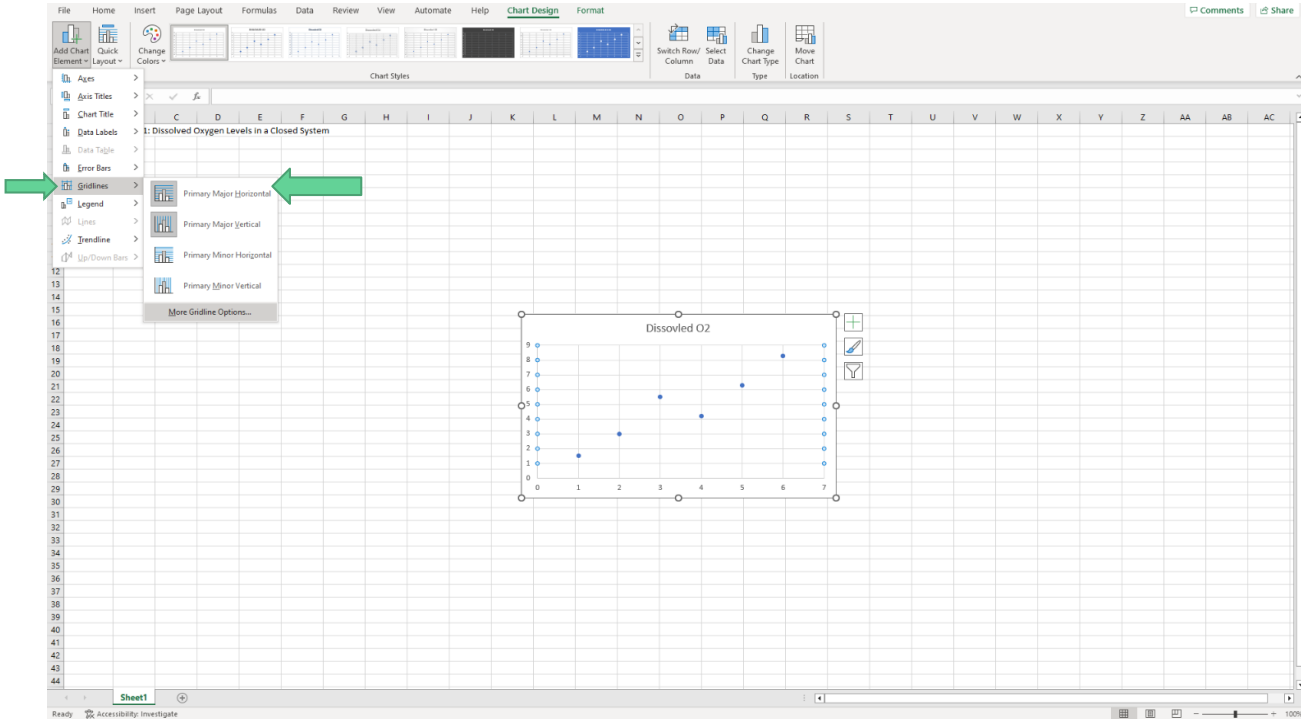
Click on the graph and select “Chart Designs” at the top of the screen

# Adding Features to Graph



Within “Chart Design”,  
select “Add Chart Element”

# Inputting/Editing Out Gridlines



The screenshot shows the Microsoft Excel interface with the 'Chart Design' tab active. The 'Add Chart Element' menu is open, and the 'Gridlines' option is selected. A submenu is displayed, showing 'Primary Major Horizontal' as the selected option. A green arrow points to the 'Gridlines' option in the main menu, and another green arrow points to the 'Primary Major Horizontal' option in the submenu. The chart area displays a scatter plot titled 'Dissolved O2' with data points and a grid.

X-axis	Y-axis (Dissolved O2)
1	2
2	3
3	5
4	4
5	6
6	8
7	9

Under “Add Chart Element”,  
select “Gridlines”

Then select “Primary Major  
Horizontal”

# Removing Gridlines

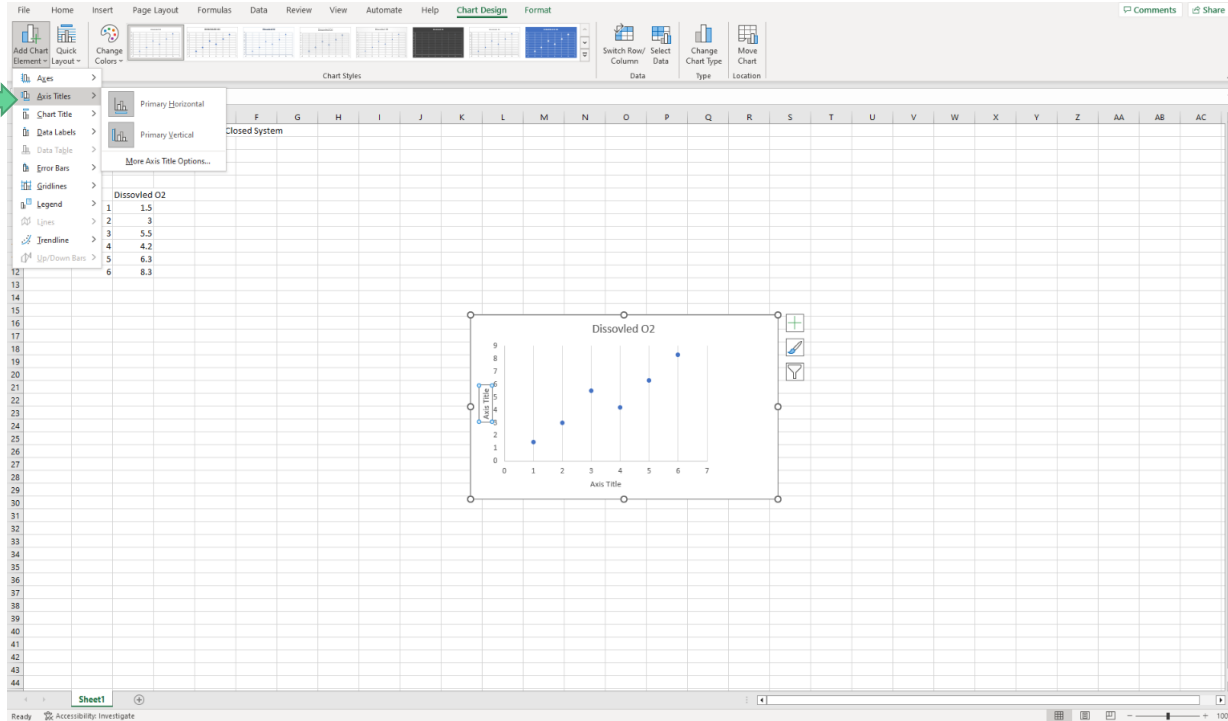
The screenshot shows the Microsoft Excel interface with a chart titled "Dissoved O2" (sic) plotted on a grid. The chart data is as follows:

Time	Dissoved O2
1	1.5
2	3
3	5.5
4	4.2
5	6.3
6	8.3

The "Format Major Gridlines" task pane is open on the right side of the screen. A green arrow points to the "No line" option under the "Line" section, which is selected. Other options include "Solid line", "Gradient line", and "Automatic".

Select “No line” in the directory on the right side of the screen to remove the horizontal gridlines

# Adding Axis Title



Under “Add Chart Element”, select “Axis Title”

To Add a title on the x-axis select “Primary Horizontal”

To add a title on the y-axis select “Primary Vertical”

# Opening Format Axis Menu

The screenshot displays the Microsoft Excel interface. The 'Chart Design' tab is active in the ribbon. A chart titled 'Dissolved O2' is plotted on the grid. The chart's x-axis is labeled 'Horizontal (Value) Axis'. A green arrow points to the x-axis with the text 'Double click' below it. The 'Format Axis' task pane is open on the right side of the screen, showing options for 'Axis Options' and 'Text Options'. The 'Axis Options' section includes 'Bounds' (Minimum: 0.0, Maximum: 7.0), 'Units' (Major: 1.0, Minor: 0.2), and 'Vertical axis crosses' (Automatic selected). The 'Text Options' section is partially visible.

Trial	Time	Dissolved O2
1	1	1.5
2	2	3
3	3	5.5
4	4	4.2
5	5	6.3
6	6	8.3

To open the x-axis menu,  
double click the x-axis values

To open the y-axis menu,  
double click the y-axis values

# Changing Font Size on Axis

2

3

1

Double click

Trial 1	Time	Dissoved O2
1	1	1.5
2	2	3
3	3	5.5
4	4	4.2
5	5	6.3
6	6	8.3

Dissoved O2

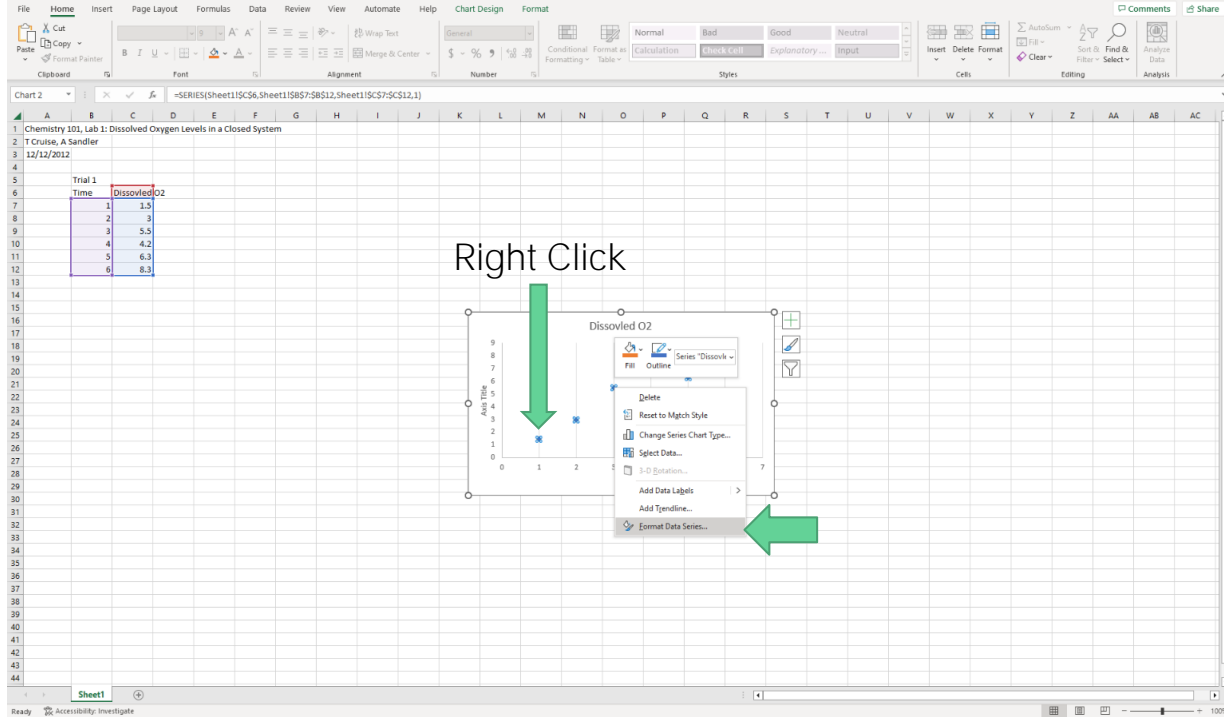
Axis Title

Axis Title

Double click the x or y-axis and highlight the text you want to change

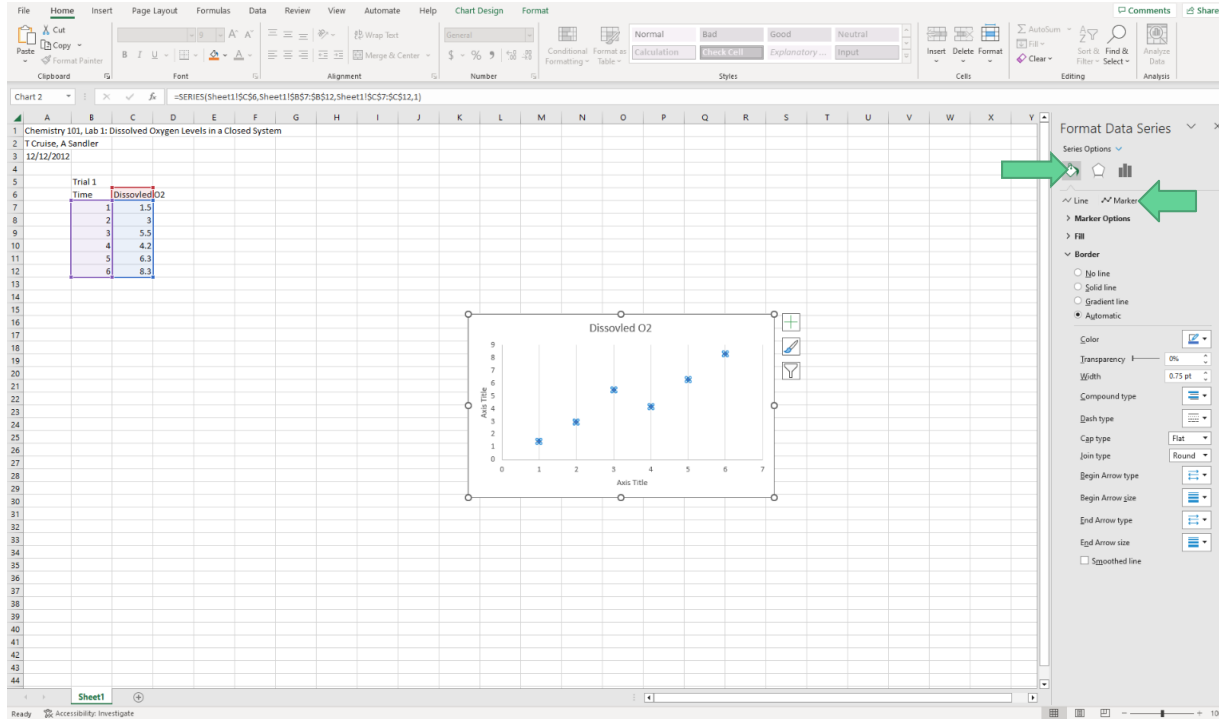
Select “Home” at the top of your screen and change your font by clicking the dropdown button labeled “Font Size”

# Format Data Points



Right click one of the points on your graph, then select “Format Data Series”

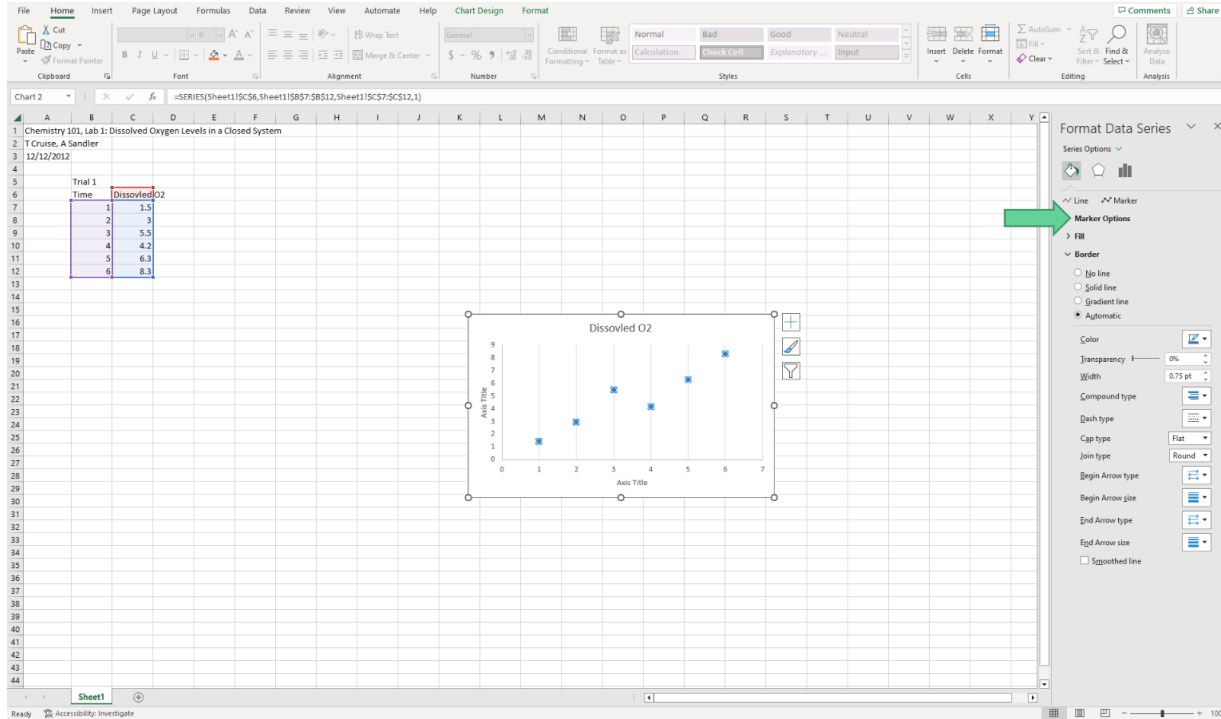
# Changing Markers



After selecting “Format Data Series” on the previous page, select the dropdown labeled “Fill & Line”

Under Fill and Line, select “Marker” to access marker features

# Changing Markers Continued



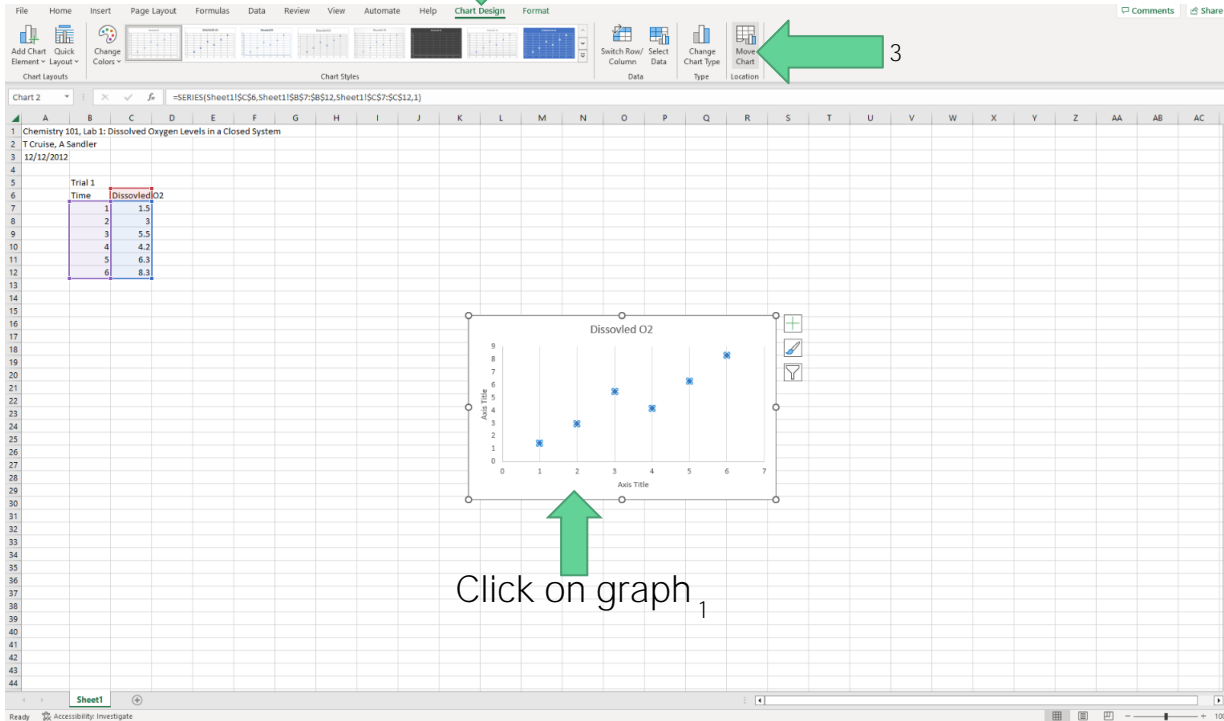
After selecting “Marker” on the previous page, select the dropdown labeled “Marker Options”

You can change the Type and Size of your markers from there

# Sizing Graph to Full Page

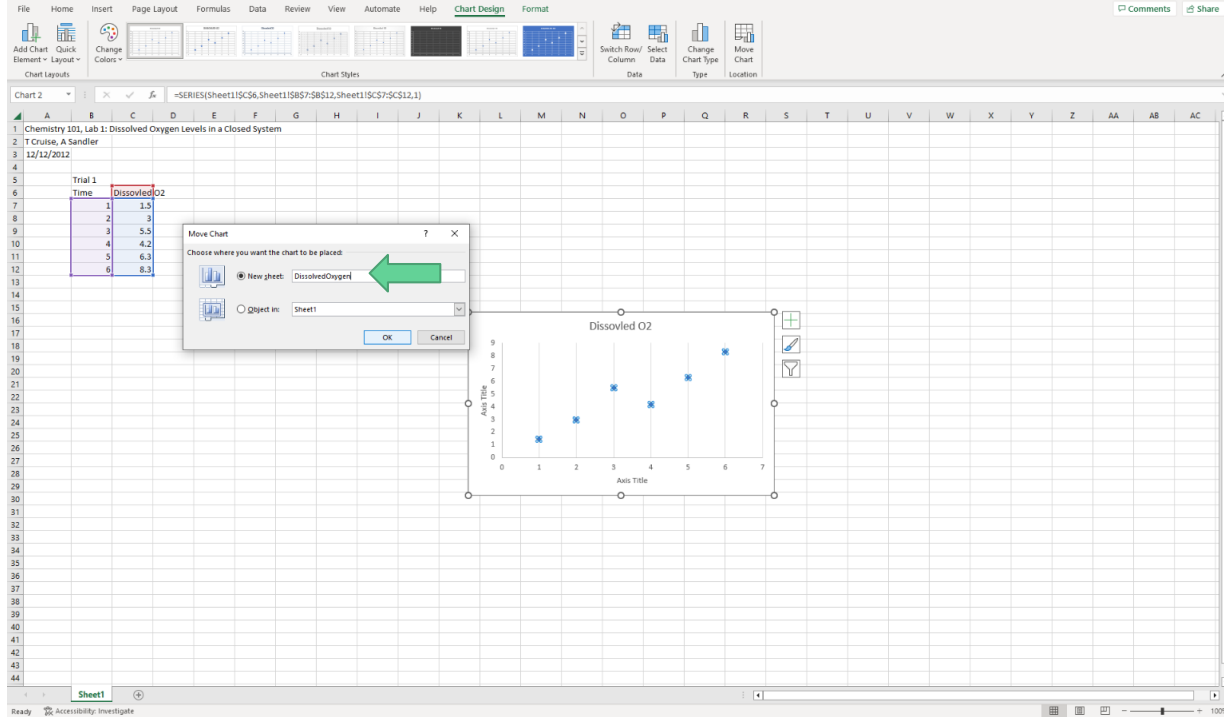


2



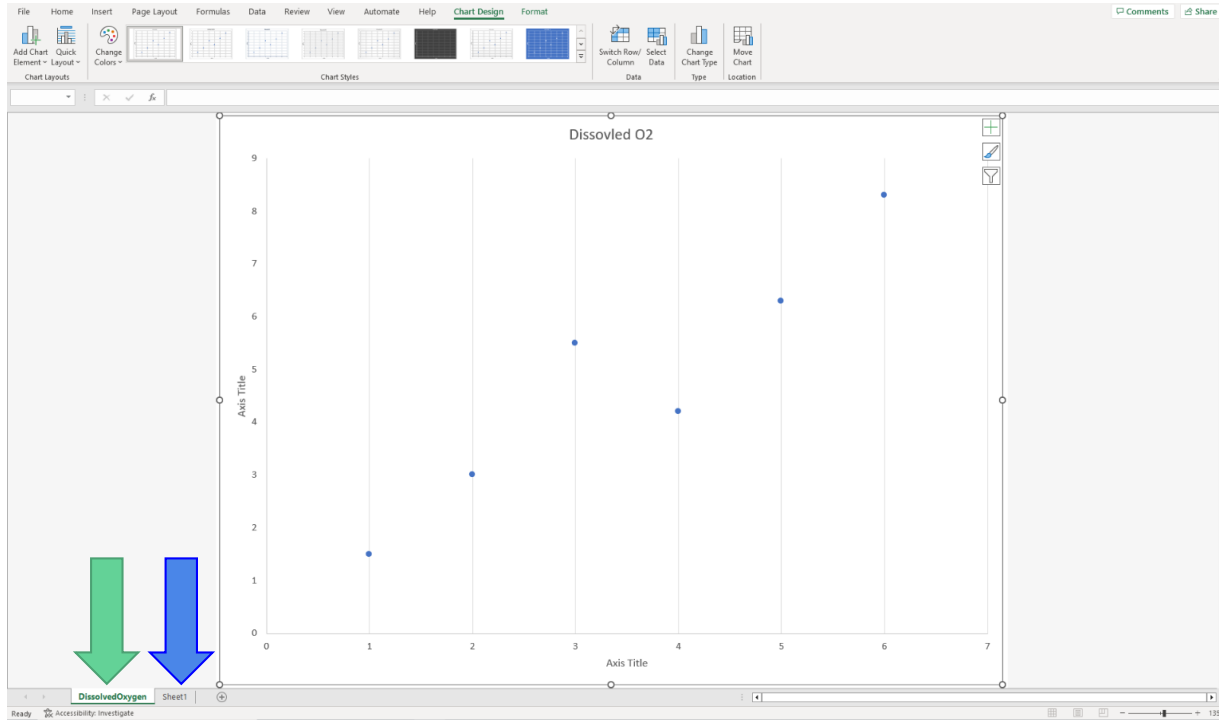
Make sure the Chart is selected.  
Under the tab “Chart Design”,  
select “Move Chart”

# Moving Graph to New Sheet



After selecting “Move Chart”, make sure “New Sheet” is marked and rename the graph. Press “Ok” to finalize.

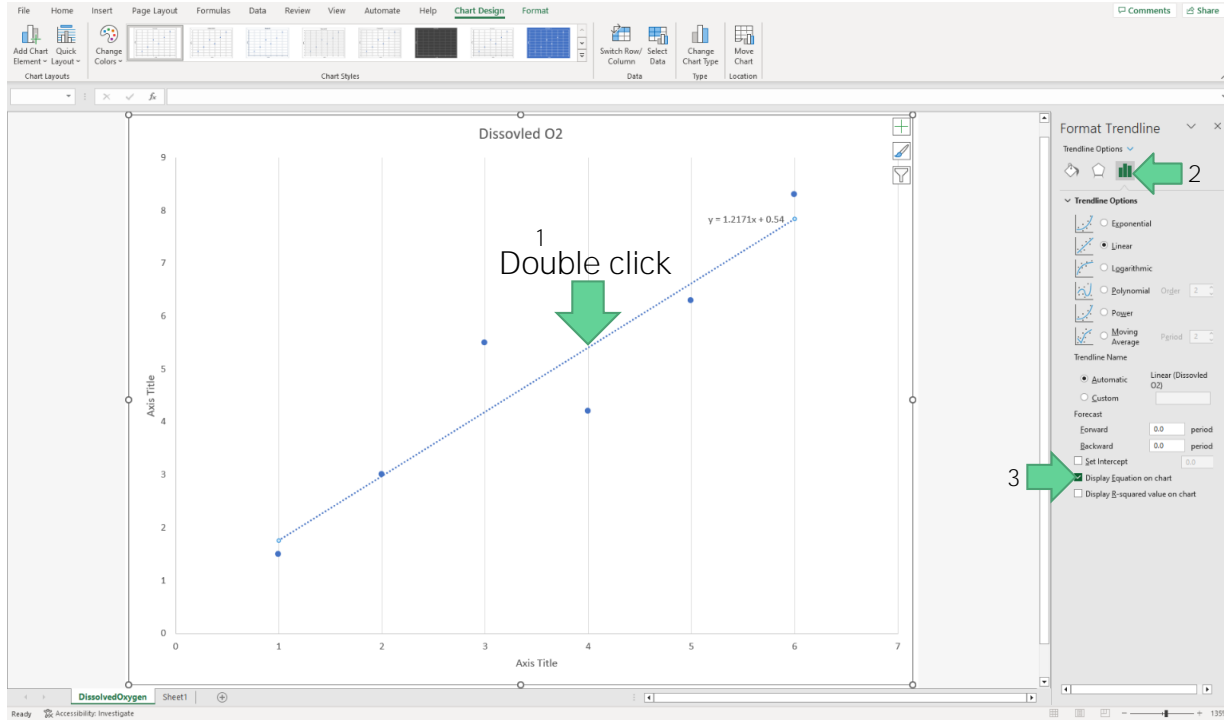
# Graph on Full Page



Your full page graph will be under the **first sheet**, and your data will be under the **second sheet**. You can toggle between the two



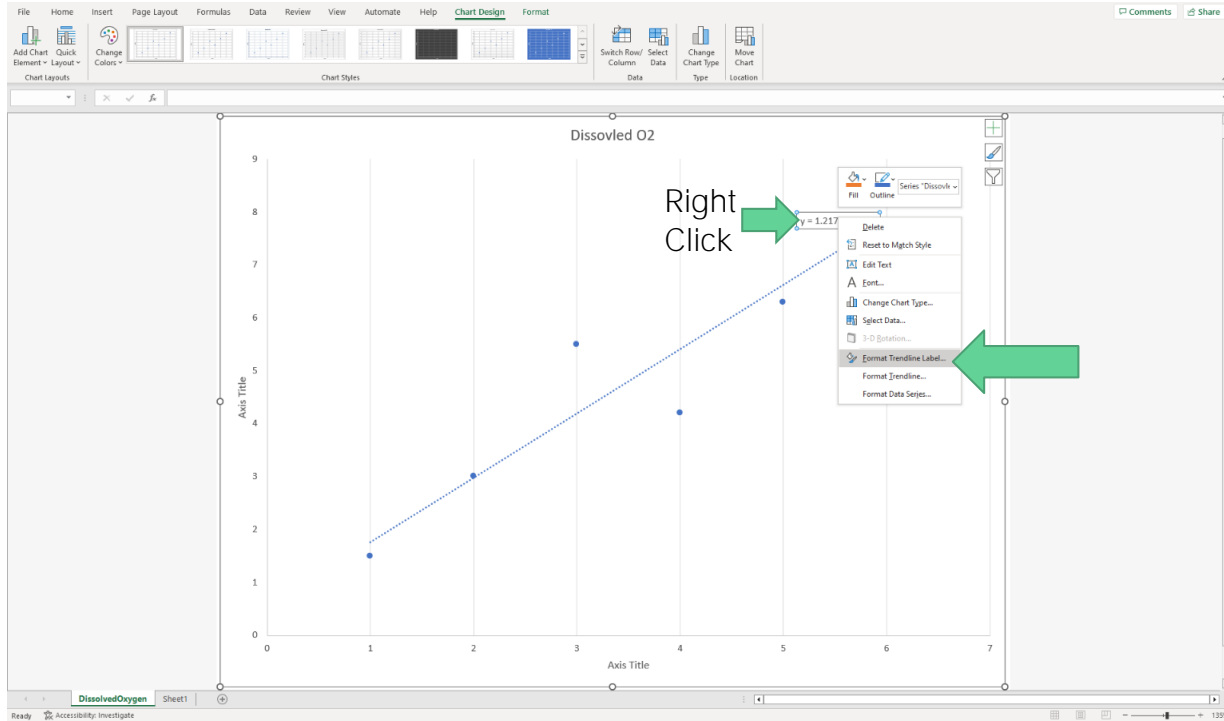
# Formatting Trendline



Double click the trendline shown on the graph

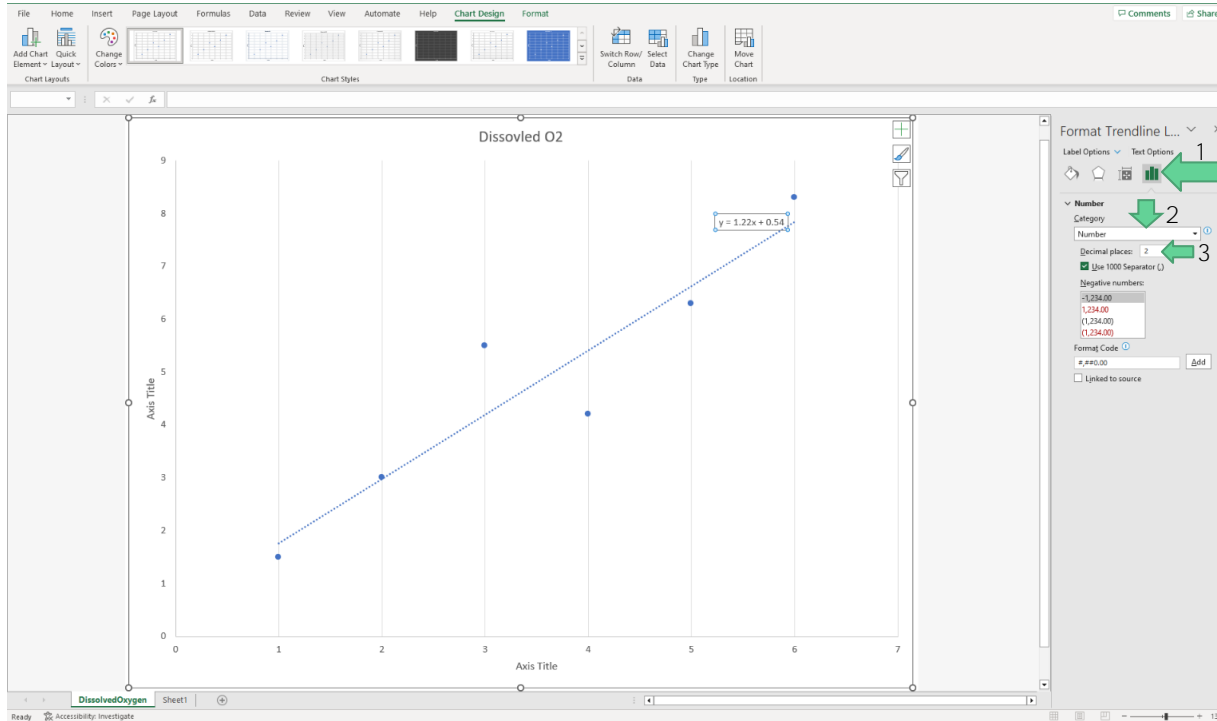
Select “Trendline Options” and click on “Display Equation on Chart”

# Formatting the Equation



Right click on the equation.  
In the dropdown, select  
“Format Trendline Label”

# Changing Significant Figures



Under **Category**, click the dropdown box and select “Numbers”

In the box next to **Decimal Places**, input the amount of significant figures you want

# Moving the Graph back

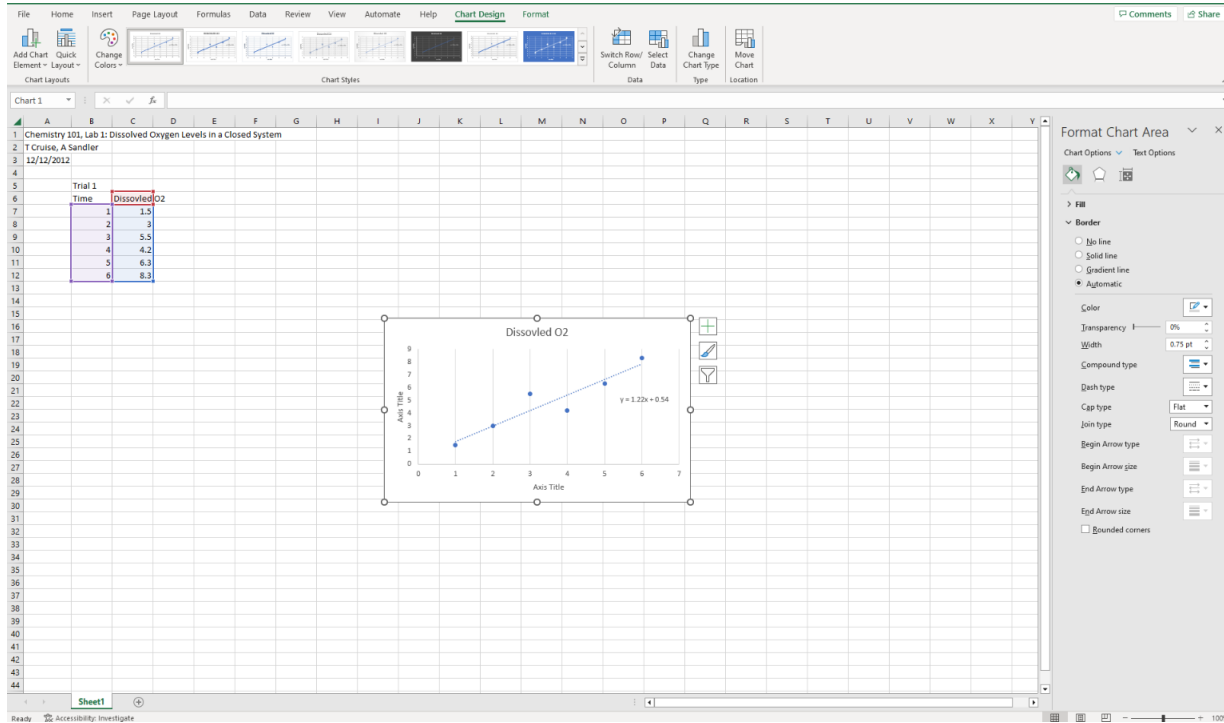
The screenshot shows the Microsoft Excel interface. The ribbon is set to 'Chart Design' and 'Format'. A chart titled 'Dissoved O2' is displayed on the worksheet. The chart is a scatter plot with a linear trendline. The x-axis is labeled 'Axis Title' and ranges from 0 to 7. The y-axis is labeled 'Axis Title' and ranges from 0 to 9. The trendline equation is  $y = 1.22x + 0.54$ . A 'Move Chart' dialog box is open, showing 'New sheet: Dissoved Oxygen' and 'Object in: Sheet1'. A green arrow points to the 'Move Chart' button in the ribbon.

Axis Title (x)	Axis Title (y)
1	1.5
2	3.0
3	4.5
4	6.0
5	7.5
6	9.0

To move the graph back to the original sheet simply press move chart

Then select “Object in:” and use the drop down to select where you would like the graph to be moved to

# Conclusion



Congratulations! You can now create a clear and useful graph in excel

You can copy the graph using ctrl+c and paste it using ctrl+v