

Katie Southwick  
EDG637  
Performance Assessment  
Topic: Third Grade Graphing Unit

### Final Graphing Project

**Purpose:** The purpose of this summative assessment is to provide the teacher, student, and parents with information about student knowledge of the learning targets for this graphing unit. This performance assessment will come at the end of the unit and take about two weeks of class time to finish. Students will have to use their knowledge, reasoning, and skills they have gained from this unit in the culminating task of creating and analyzing a bar graph on a self-selected topic. Students will be collecting data in a data chart through a survey, constructing a bar graph from their data, and writing a paragraph where they analyze their findings. This performance assessment will have students create the product of a poster, which will display their data chart, bar graph, and typed paragraph of their analysis. Students will present this poster to the class. The assessment will be used to determine grades on report cards for the learning targets of this unit.

#### Michigan Grade Level Content Expectations (GLCEs):

**D.RE.03.01** Read and interpret bar graphs in both horizontal and vertical forms.

**D.RE.03.02** Read scales on the axes and identify the maximum, minimum, and range of values in a bar graph.

**S.IP.03.16** Construct simple charts and graphs from data and observations.

#### Student Learning Targets:

Target	Type of Standard	When Assessed
I can read and explain the data represented by a bar graph.	Skill	Day 5 and final graphing project rubric.
I can determine the maximum and minimum of a set of data from a bar graph.	Knowledge	Day 5 and final graphing project rubric.
I can determine the range of a set of data from a bar graph.	Knowledge	Day 5 and final graphing project rubric.
I can collect data through a survey.	Skill	Final graphing project rubric.
I can create a bar graph to represent data.	Product	Day 4 and final graphing project rubric.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

# Final Graphing Project

After working hard and learning a lot about graphing, we are ready to begin our final graphing project! This graphing project will take us about two weeks to complete, and it will be done in class. For this project, you are going to collect data, create a graph from that data, and analyze your data and graph in a written paragraph. You will be using this packet to record your progress as we go through all of the steps to complete this project.

## **Directions:**

**Goal:** You are to investigate how similar and different your classmates are from one another. You will get to pick your area of focus. For example, you could look at how our class is similar and different from one another in terms of choices in foods, hobbies, number of family members, types of pets, height, right-handed vs. left handed, favorite hot dog toppings, future careers, etc. The possibilities are endless!

**Role:** You will play the role as an investigator.

**Audience:** You are collecting this information for our class, and you will be presenting it to our class and our families.

**Situation:** You will be picking a topic of interest and then using a survey to collect data on your topic. You will be graphing this data and writing a paragraph analyzing the data to show how our classmates are different and similar from one another.

**Product/performance:** You will be creating a poster with your data chart, a graph of your findings, and a paragraph analyzing your graph and data. You will present your poster and share your paragraph to the class.

# Calendar:

## Day 1

- Brainstorming: pages 1-2

## Day 2

- Data Chart Construction: pages 3-5

## Day 3

- Data Collection: pages 5-6

## Day 4

- Making Your Graph: pages 7-8
- Graphing Checklist: page 9
- Partner Assessment with the Graphing Checklist: page 10

## Day 5

- Graph Analysis Questions: page 11
- Graph Analysis Paragraph: page 12
- Rubric for You Graph Analysis Paragraph: page 13

## Day 6, 7, & 8

- Poster construction: page 14
- Final Graphing Investigation Project Rubric: page 15
- Self-Assessment: page 16

## Day 9 & 10

- Graphing Presentations

\*Your final reflection on page 17 will be completed after I have scored your project.

# DAY 1

## Brainstorming!

**Question:** What is your topic you will be investigating?

We will take some time in class today to brainstorm and then choose our topics for our final graphing project. As you brainstorm ideas for your topic, please also consider how you will collect the data needed. We will follow the steps below to choose our topics.

**1. Individual Brainstorming:** First, you will have five minutes to complete some individual brainstorming. During this time, please work quietly so that everyone can concentrate. You will have time to share your ideas with a partner later! **Use the space below to brainstorm.** You may choose to make a list, a web, or another form of brainstorming that works best for you. Ready, set, begin!

**2. Think-Pair-Share:** Now that you have brainstormed individually, you are going to complete a Think-Pair-Share with a partner to discuss your ideas.

Consider these questions:

- What idea (or ideas) do you like the best?
- Can you collect data on this idea (or ideas)?
- How will you collect the data?

**3. Whole Class Discussion:** We will now share our ideas as a class. Feel free to write down any more new ideas you have if a classmate helps you think of something new.

**4. Topic Selection:** It is time to pick your topic. Please write your chosen topic below.

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**5. Teacher Approval:** I will collect your packets tonight to approve your topics. Once you have my initials, you may continue on to DAY 2 activities.

Teacher Initials: \_\_\_\_\_

Teacher Comments: \_\_\_\_\_

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## DAY 2

### Data Chart Construction!

Now that you have your topic, you are ready to begin gathering data. You will be using a **survey** to collect your data. Before we begin collecting data, we need to make sure that we have a **guiding question**. Your guiding question is the question that you will ask people as you gather your data that lets them know exactly what your topic is about.

**Example:** If you were surveying the class on favorite ice cream flavor, your guiding question would be: **What is your favorite flavor of ice cream?**

Now, let's create a guiding question for your survey. Based on your topic, brainstorm some possible guiding questions below:

Great! Now we will get together with partners and discuss your guiding questions. Circle the guiding question that you feel is best for your survey.

Now that you have your guiding question, let's brainstorm some possible categories.

**Example:** For the previous example, the guiding question was: **What is your favorite flavor of ice cream?** Now, you need some categories people have to choose from. You would construct a chart with at least 5 different ice cream flavors for students to choose from on your survey (but you could do more than 5 if you wished!). Some of the flavors you may have come up with when you brainstormed could have been:

- Chocolate chip cookie dough
- Vanilla
- Chocolate
- Strawberry
- Cookies & Cream
- Mint Chocolate Chip
- Moose Tracks
- Blue Moon
- Superman

Out of all of these ideas, you decided to choose five. Look below to see what your data chart for this survey might look like.

Guiding Question: What is your favorite flavor of ice cream?

Chocolate Chip Cookie Dough	Vanilla	Cookies & Cream	Mint Chocolate Chip	Superman

Use the space below to brainstorm some categories for your guiding question:

Now, it is your turn to construct your data chart. Use this page to write your guiding question and create your data chart. You will pick up a 5-column, 6-column, 7-column, or 8-column data chart template from the front table depending on how many categories you have in your survey and paste it on this page below your guiding question. When creating your survey on this page, make sure that you have:

- A **question** guiding your survey
- At least **five different categories** that you are collecting data on
- An organized **data chart** to collect your data from your survey in

**Guiding Question:** \_\_\_\_\_

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## Data Chart

Paste the data chart with the appropriate number of columns needed for your survey here.



# DAY 3

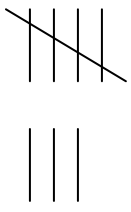

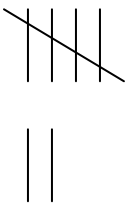


## Data Collection!

You are now ready to collect data for your survey! We will spend 20 minutes today collecting data in our classroom from our peers for our surveys. You are going to be using your Data Chart on page 4 of this packet to collect your data. Remember, you need to survey **at least 20 different** people. For each person you survey, you will record their response with a tally mark. In other words, **you will have at least 20 tally marks in your data chart.**

**Example:** If you were collecting data on the survey of favorite ice cream flavors, your data chart could look like the example below. Each tally mark represents a person that you surveyed.

Guiding Question: What is your favorite flavor of ice cream?

Data Chart

Chocolate Chip Cookie Dough	Vanilla	Cookies & Cream	Mint Chocolate Chip	Superman
				

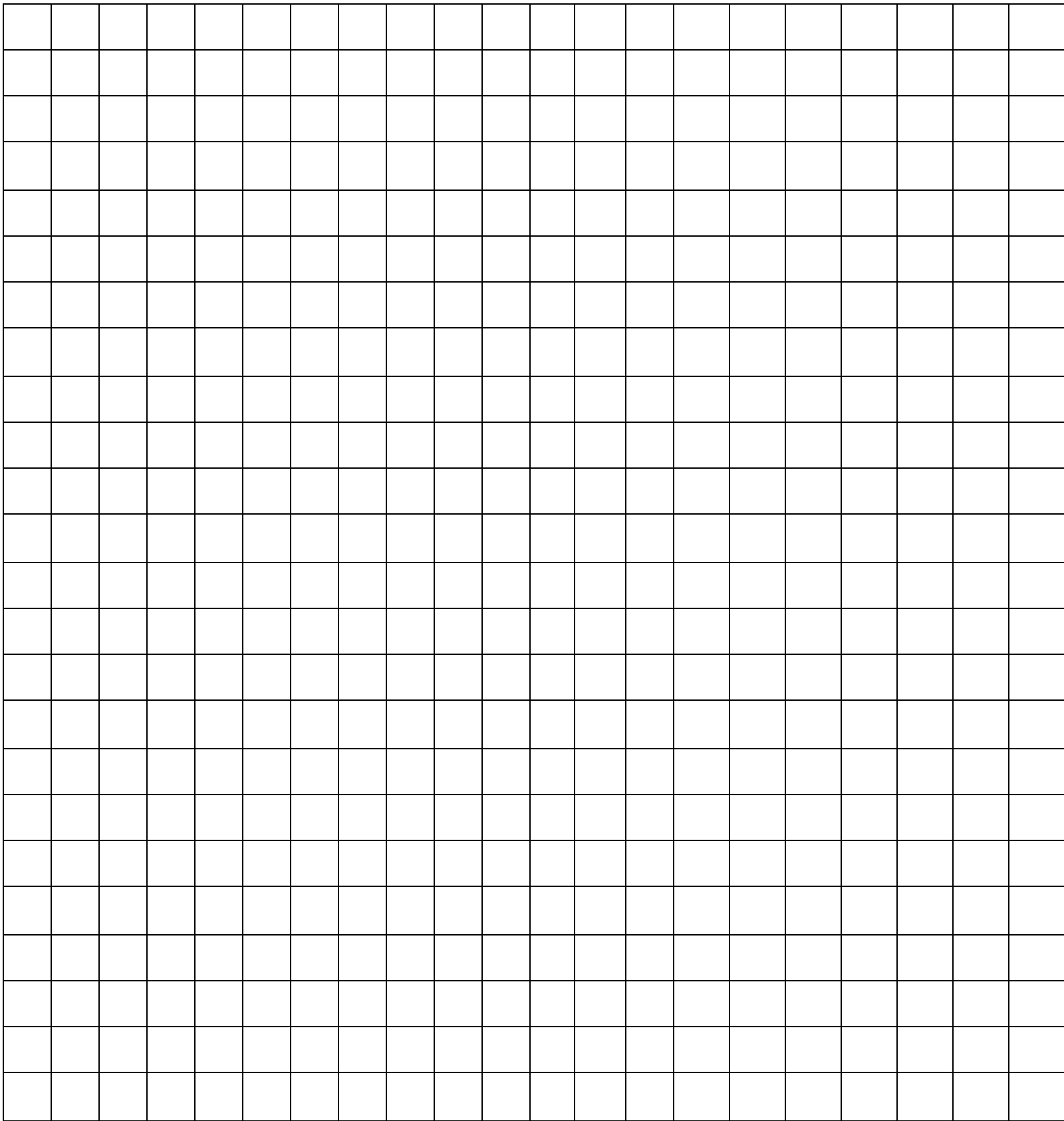
## DAY 4

# Making Your Graph!

**Graph Construction:** You are now ready to graph your data. Today, you are just making a **rough draft** of your graph. Your final graph will be on a large poster for your final project presentation. You will be using your data from page 4 of this packet to create the rough draft of your graph. You will be creating your graph on the next page of graph paper.

**Graphing Checklist:** As you make your bar graph, use the Graphing Checklist on page 8 to check that your graph has all of the parts and information that it needs. Check off each box on your Graphing Checklist as you complete each step. If you notice along the way that any information on your graph is missing, go back and fix or add it until you have checked off every single box on your checklist!

**Scoring Your Partner on the Graphing Checklist:** A peer will be completing a Graphing Checklist to score your graph, and you will use a Graphing Checklist to score your partner. This will help us make sure that we don't have any parts or pieces of information missing from our graphs!



# Graphing Checklist:

Check each box below for each item you have on your graph. If there is information that is missing or needs to be fixed, go back and edit your graph! You should have all of the boxes checked off on this page in order to be done with the rough draft of your graph.

I have a **title** that explains what my graph is about.

I have an **X-axes label** that explains my data appropriately.

I have a **Y-axes label** that explains my data appropriately.

I have all of my **categories** labeled.

I have a **scale** that goes up by even amounts and is evenly spaced.

My data is represented in **bars** on my graph.

My bar graph accurately shows my data collected in my data chart.

My graph is neat and easy to read.

# Graphing Checklist: Partner Work

Switch packets with a partner and score one another's graphs using the checklist in each other's packets. **You will use the Graphing Checklist in your partner's packet to score your partner.** You will write your name in your partner's packet as the scorer. Check each box below for each item you see on your partner's graph. If there is information that is missing or needs to be fixed, do not check the box.

The scorer of this graph is:

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- The graph has a **title** that explains what the graph is about.
- The graph has **X-axes label** that explains the data appropriately.
- The graph has a **Y-axes label** that explains the data appropriately.
- The graph has all of the **categories** labeled.
- The graph has a **scale** that goes up by even amounts and is evenly spaced.
- The graph's data is represented in **bars** on the graph.
- The bar graph accurately shows the data collected in the data chart.
- The graph is neat and easy to read.

Comments: \_\_\_\_\_

# DAY 5

## Graph Analysis!

Today we are going to be analyzing our graphs and writing a paragraph of our findings. This will be a **rough draft**. We will be typing our finished paragraph for our final project. Answer the following questions below to help you to prepare for writing your paragraph.

1. What is the **maximum** on your graph and what **category** does it represent?

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2. What is the **minimum** on your graph and what **category** does it represent?

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3. What is the **range** of your graph? Explain how this relates to your data.

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4. What did your graph tell you about how your classmates are similar and different from one another?

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5. What surprised you about your data?

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6. Name two things you learned about graphing or yourself through this project.

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### Rubric for You Graph Analysis Paragraph

<b>5</b> I got it!	<b>3</b> I'm heading in the right direction.	<b>1</b> I still need some more work time.
<ul style="list-style-type: none"> <li>○ I thoroughly explained the topic of my investigation and my guiding question.</li> <li>○ I identified the maximum, minimum, and range of my graph, and I thoroughly explained how these numbers related to my categories of data.</li> <li>○ I thoroughly described how my classmates are similar and different from one another from my findings.</li> <li>○ I thoroughly described what surprised me about my data.</li> <li>○ I thoroughly described <b>two</b> things I learned about graphing or myself through this project.</li> </ul>	<ul style="list-style-type: none"> <li>○ I briefly explained the topic of my investigation and my guiding question.</li> <li>○ I identified the maximum, minimum, and range of my graph. I explained briefly how these numbers related to my categories of data.</li> <li>○ I described how my classmates are similar and different from one another from my findings.</li> <li>○ I described what surprised me about my data.</li> <li>○ I described one or two things I learned about graphing or myself through this project.</li> </ul>	<ul style="list-style-type: none"> <li>○ I did not explain my topic of investigation or my guiding question.</li> <li>○ I missed identifying the maximum, minimum, or range of my graph. I briefly explained or did not explain at all how these numbers related to my categories of data.</li> <li>○ I briefly described or did not describe at all how my classmates are similar and different from one another from my findings.</li> <li>○ I briefly described or did not describe at all what surprised me about my data.</li> <li>○ I described one thing or did not describe at all what I learned about graphing or myself through this project.</li> </ul>

I gave myself \_\_\_\_\_ because \_\_\_\_\_

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## DAY 6, 7, & 8

### Final Poster!

You are now ready to construct your final poster for your graphing investigation project! Your **final poster** will include the following three items:

- A **data chart** showing your information you collected from your survey
- A **graph** of your data
- A **paragraph** analyzing your findings

You have worked on all three of these items over the past week and have all the information you need here in your packet to create your poster.

You will have all the materials you need in class to create your poster. For your **data chart**, you will need to use a data chart template. For your graph, you will need to use **graph paper** so that is neat and easy to read. For your paragraph, you will need to use the **laptop** to type your findings.

We will all be working at our own pace for the next two days, so we may be working on different parts of our poster at different times. Take your time as you will be given as much class time as you need to finish.

During your work time, I will be coming around to conference with you. We will discuss your data chart, graph, and paragraph to make sure you are on the right track.

Once you are finished with your final poster, you will need to score yourself on the final rubric. **This is the rubric I will be using to score your final project.** You will explain why you gave yourself the score that you choose.

## Final Graphing Investigation Project Rubric

	<u>5</u>	<u>3</u>	<u>1</u>
Data Chart	<ul style="list-style-type: none"> <li>○ My data chart was filled out correctly with at least 5 category labels and tallies to mark my data.</li> <li>○ My data chart was neat and easy to read.</li> </ul>	<ul style="list-style-type: none"> <li>○ My data chart was filled out with one missing category label and/or tallies were missing to mark my data.</li> <li>○ My data chart was somewhat neat and easy to read.</li> </ul>	<ul style="list-style-type: none"> <li>○ My data chart was filled out with more than one missing category label and tallies were not used to mark my data.</li> <li>○ My data chart was not neat and was difficult to read.</li> </ul>
Graph	<ul style="list-style-type: none"> <li>○ My graph included all of the following:               <ul style="list-style-type: none"> <li>➤ Title</li> <li>➤ X-axes label</li> <li>➤ Y-axes label</li> <li>➤ Category labels</li> <li>➤ Scale (evenly spaced)</li> <li>➤ Bars to represent my data</li> </ul> </li> <li>○ My graph was neat and easy to read.</li> </ul>	<ul style="list-style-type: none"> <li>○ My graph was missing one or two of the following:               <ul style="list-style-type: none"> <li>➤ Title</li> <li>➤ X-axes label</li> <li>➤ Y-axes label</li> <li>➤ Category labels</li> <li>➤ Scale (evenly spaced)</li> <li>➤ Bars to represent my data</li> </ul> </li> <li>○ My graph was somewhat neat and easy to read.</li> </ul>	<ul style="list-style-type: none"> <li>○ My graph was missing three or more of the following:               <ul style="list-style-type: none"> <li>➤ Title</li> <li>➤ X-axes label</li> <li>➤ Y-axes label</li> <li>➤ Category labels</li> <li>➤ Scale (evenly spaced)</li> <li>➤ Bars to represent my data</li> </ul> </li> <li>○ My graph was not neat and was difficult to read.</li> </ul>
Paragraph	<ul style="list-style-type: none"> <li>○ My paragraph thoroughly explained all of the following:               <ul style="list-style-type: none"> <li>➤ Guiding question</li> <li>➤ The maximum, minimum, and range.</li> <li>➤ How your classmates are similar and different.</li> <li>➤ What surprised you.</li> <li>➤ <b>Two</b> things learned.</li> </ul> </li> <li>○ My paragraph was neat and easy to read.</li> </ul>	<ul style="list-style-type: none"> <li>○ My paragraph was missing one or two of the following:               <ul style="list-style-type: none"> <li>➤ Guiding question</li> <li>➤ The maximum, minimum, and range.</li> <li>➤ How your classmates are similar and different.</li> <li>➤ What surprised you.</li> <li>➤ <b>Two</b> things learned.</li> </ul> </li> <li>○ My paragraph was somewhat neat and easy to read.</li> </ul>	<ul style="list-style-type: none"> <li>○ My paragraph was missing three or more of the following:               <ul style="list-style-type: none"> <li>➤ Guiding question</li> <li>➤ The maximum, minimum, and range.</li> <li>➤ How your classmates are similar and different.</li> <li>➤ What surprised you.</li> <li>➤ <b>Two</b> things learned.</li> </ul> </li> <li>○ My paragraph was not neat and not easy to read.</li> </ul>

## Self-Assessment:

Score yourself a 5, 3, or 1 for each of the three following portions of your poster:

Data Chart: \_\_\_\_\_

Graph: \_\_\_\_\_

Paragraph: \_\_\_\_\_

Explain why you gave yourself these scores: \_\_\_\_\_

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# Final Reflection

We are now finished with our final graphing projects. Answer the following questions below as you reflect back on your project.

1. What were your strengths in completing this project?

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2. What was difficult about completing this project for you?

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3. If you could do this project again, what would you do differently?

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4. What did you learn about graphing or yourself through completing this project?

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5. If you had to give advice to a third grader who was about to start this project, what would you tell them?

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Supplemental Materials:  
Data Chart Templates

## 5-Column Data Chart Template

## 6-Column Data Chart Template

# 7-Column Data Chart Template




# 8-Column Data Chart Template
