



BEE 8



STATISTICAL INVESTIGATION - LEVEL 1

A beehive is a busy living system. Inside and around the hive, bees are constantly moving, working, storing food, caring for young bees, and responding to changes in the weather.

One useful thing we can measure is temperature. Temperature data can help us understand what conditions are like for the bees at different times of the year.

In this investigation, you will look at temperature data recorded from a beehive over three months: August, September, and October.

These months take place during the change from summer into autumn. During this time, the weather can change, flowers may become less available, and bee activity may also change.



Why is tracking hive temperature important?

Scientists, beekeepers, and students can learn a lot by looking at hive temperature data.

Tracking hive temperature can help us:

- notice changes in the hive over time
- check if the bees are keeping the hive stable
- compare warmer and colder months
- spot unusual changes that might mean something is wrong
- make predictions about future hive temperatures

Data Detectives...

On the next page, you will look at temperature data from a beehive over three months: August, September, and October.

You will use the raw data to create a chart.

Then you will answer questions such as:

What happened to the hive temperature over time?

Which month had the highest temperature?

Which month had the lowest temperature?

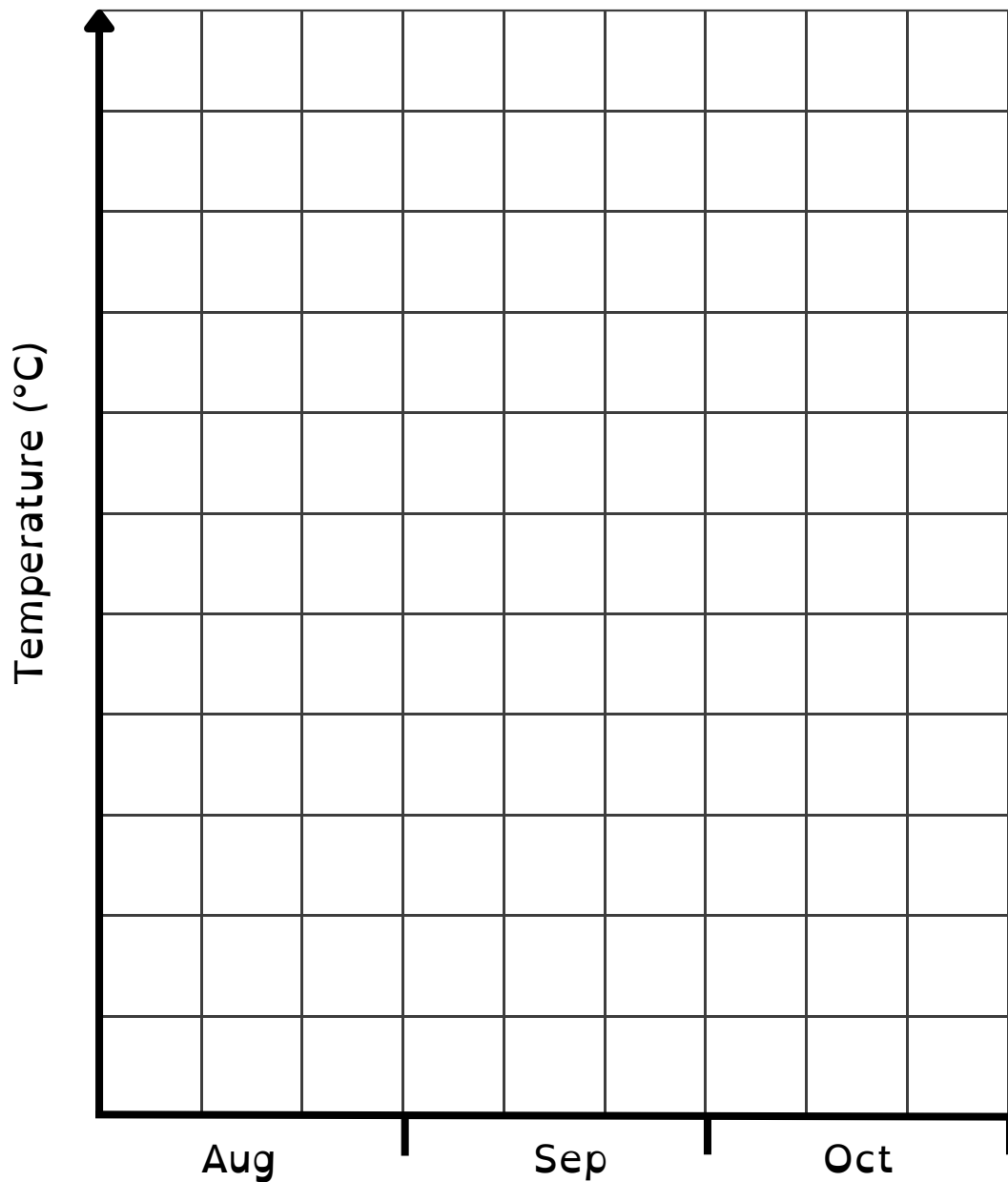
Can we use the pattern to predict what might happen in November?



Raw Data

Month	Minimum Temp	Maximum Temp	Average Temperature
August	12.71°C	31.7°C	20.3°C
September	7.12°C	26.75°C	14.93°C
October	5.41°C	21.85°C	14.11°C

Bar Chart

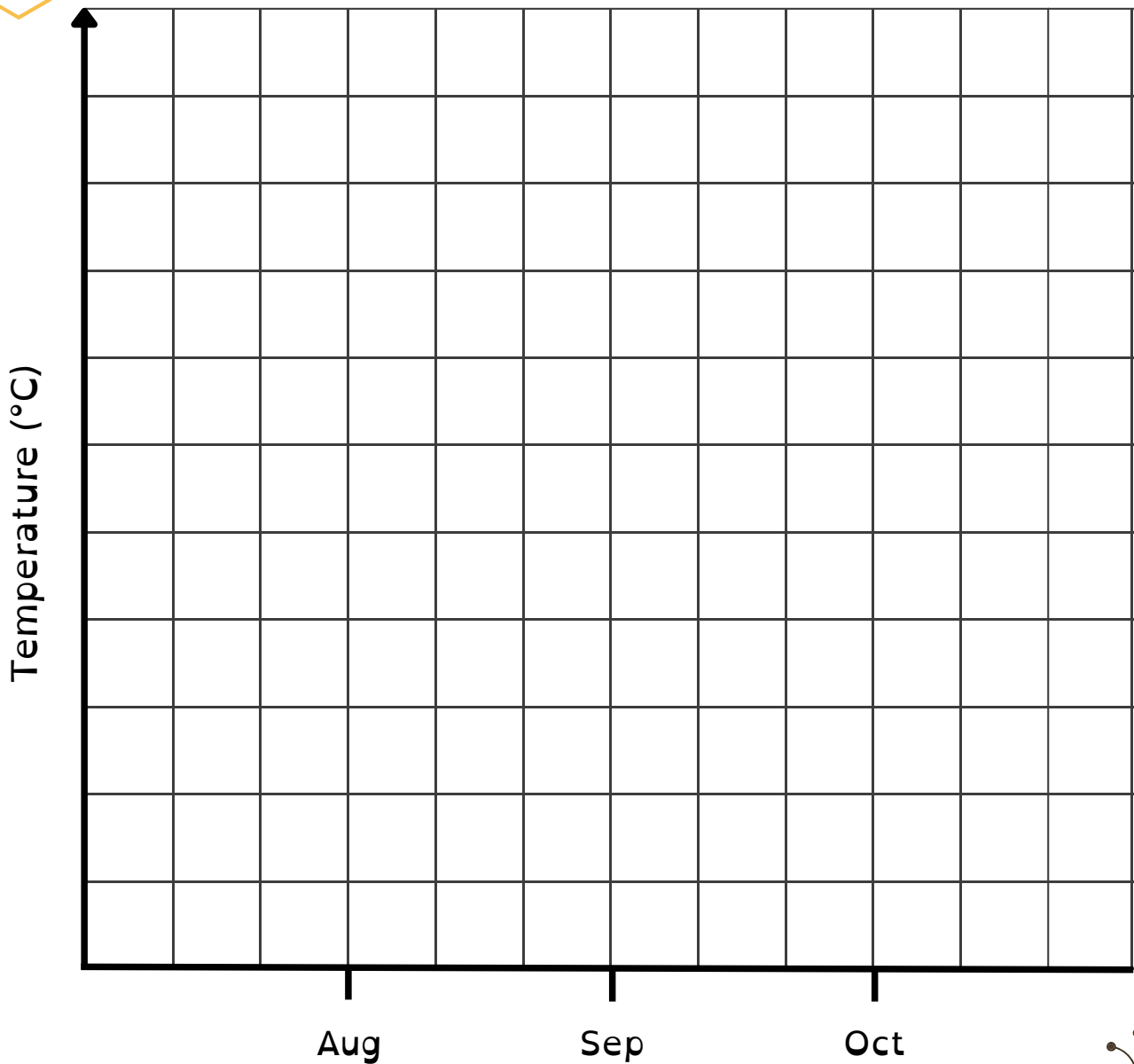


What have you learned about the hive from the data? Can you make any predictions about the hive temperature in November?

Raw Data

Month	Minimum Temp	Maximum Temp	Average Temperature
August	12.71°C	31.7°C	20.3°C
September	7.12°C	26.75°C	14.93°C
October	5.41°C	21.85°C	14.11°C

Trend Line



What have you learned about the hive from the data? Can you make any predictions about the hive temperature in November?



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STATISTICAL INVESTIGATION - LEVEL 2

A beehive is a busy living system. Inside and around the hive, bees are constantly moving, working, storing food, caring for young bees, and responding to changes in the weather.

One useful thing we can measure is temperature. Temperature data can help us understand what conditions are like for the bees at different times of the year.

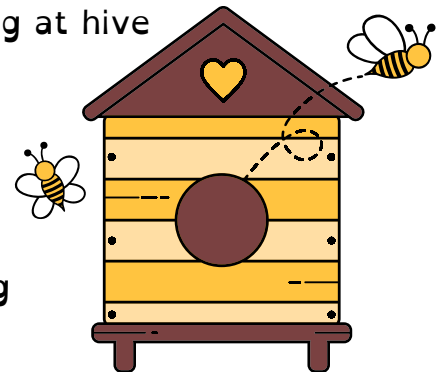
In this investigation, you will look at temperature data recorded from a beehive over three months of your choosing.

Why is tracking hive temperature important?

Scientists, beekeepers, and students can learn a lot by looking at hive temperature data.

Tracking hive temperature can help us:

- notice changes in the hive over time
- check if the bees are keeping the hive stable
- compare warmer and colder months
- spot unusual changes that might mean something is wrong
- make predictions about future hive temperatures



Data Detectives...

On the next page, you will look at temperature data from a beehive over three months of your choice

You will use the raw data to create a chart.

Then you will answer questions such as:

What happened to the hive temperature over time?

Which month had the highest temperature?

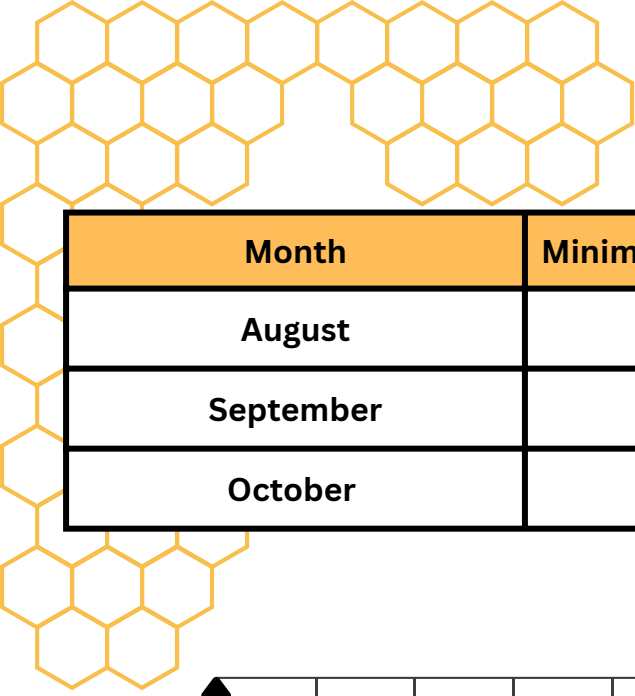
Which month had the lowest temperature?

Can we use the pattern to predict what might happen in the next month?



Gathering your data:

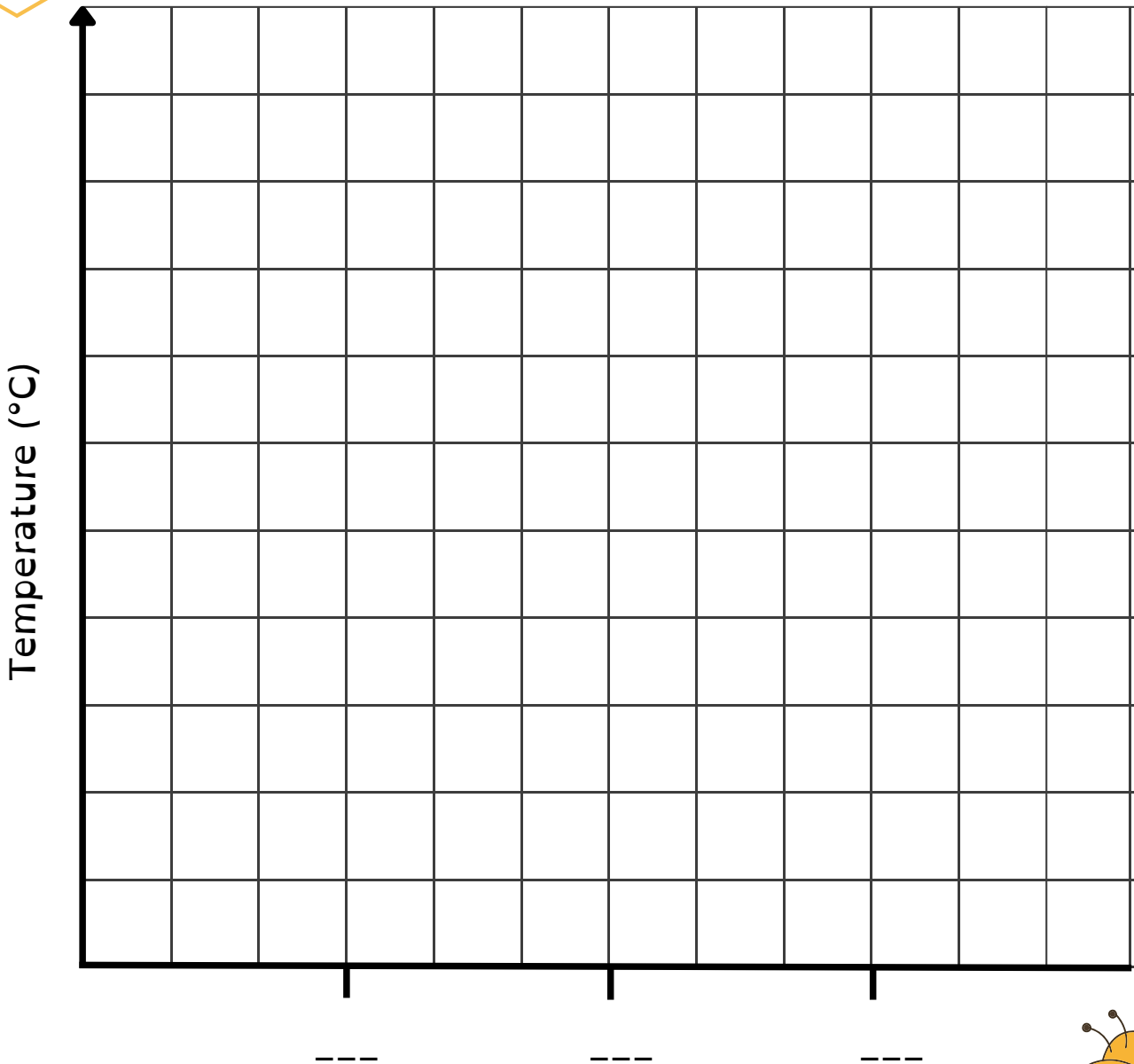
1. Visit https://bee8.vercel.app/bee_hives
2. Select one Bee8 beehive to investigate.
3. Download the data from this hive for a chosen time period.



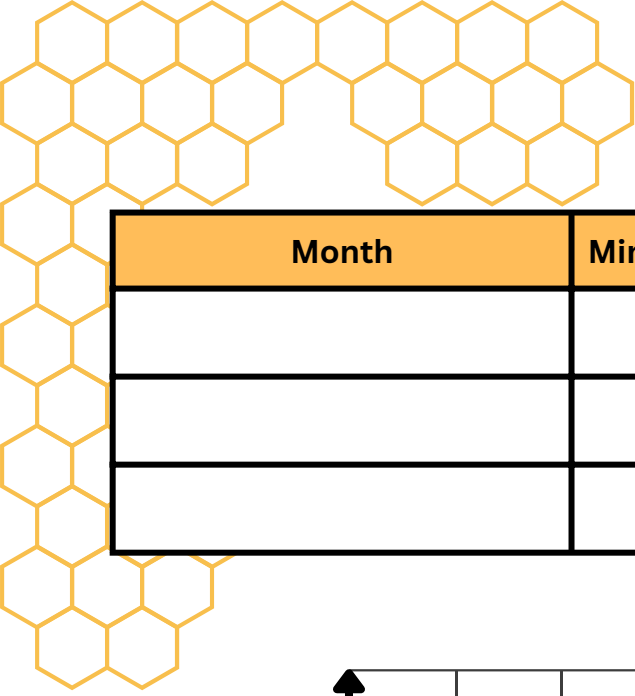
Raw Data

Month	Minimum Temp	Maximum Temp	Average Temperature
August			
September			
October			

Trend Line



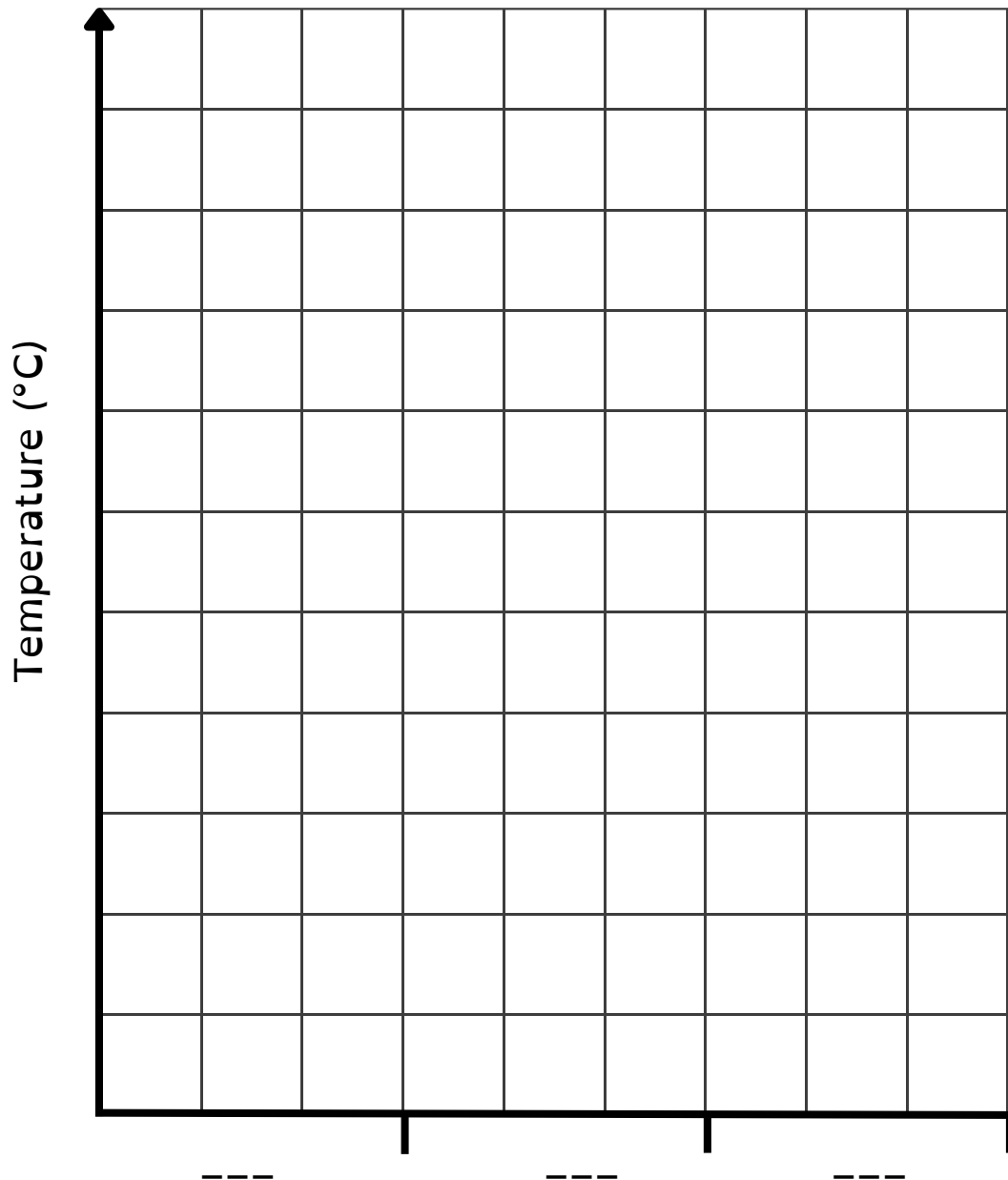
What have you learned about the hive from the data? Can you make any predictions about the hive temperature in the next month?



Raw Data

Month	Minimum Temp	Maximum Temp	Average Temperature

Bar Chart



What have you learned about the hive from the data? Can you make any predictions about the hive temperature in the next month?

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STATISTICAL INVESTIGATION - LEVEL 3

Gathering your data:

1. Visit https://bee8.vercel.app/bee_hives
2. Select one Bee8 beehive to investigate.
3. Download the data from this hive for a chosen time period.
4. Choose one variable to analyse, for example: Hive temperature/humidity/weight
5. Decide on a question you would like to investigate using your data.

Examples:

- How did the hive temperature change over time?
- How did the weight of the hive change over time?
- How did internal humidity change over the time period?

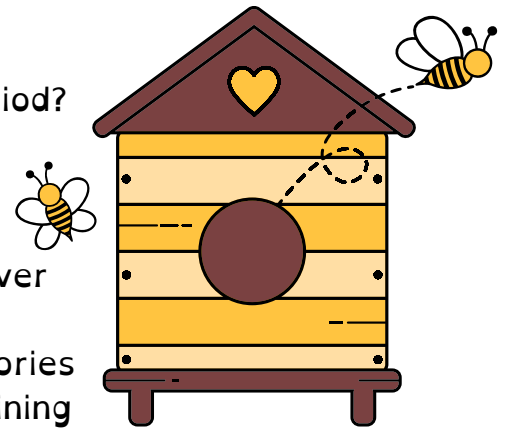
6. Document 20 data points

7. Choose a graph that best represents your data.

Examples:

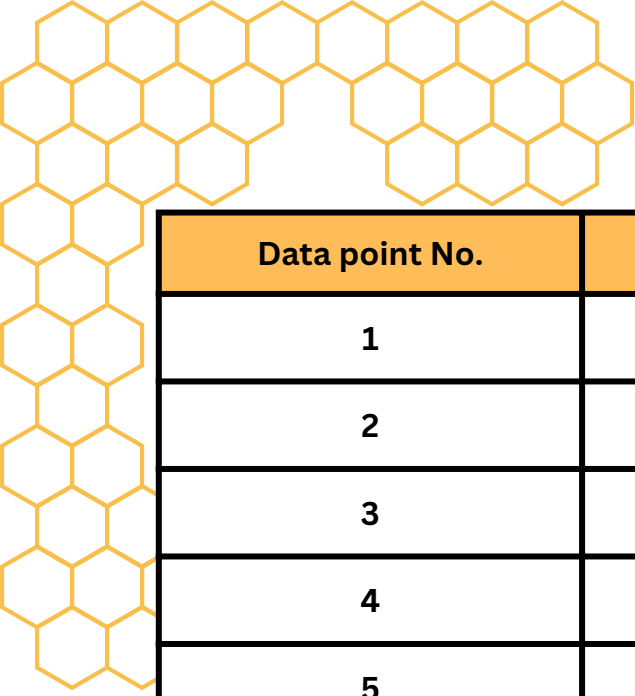
- Line graph / trend graph: best for showing change over time
- Bar chart: best for comparing days, weeks, or categories

8. Create your graph and write a short conclusion explaining what the data shows.



	Your Choices
Hive/Site chosen	
Variable	
Date range	

Question I am investigating....



Raw Data

Data point No.	Time/Date	_____
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

