Lesson Printables

Be a rockstar and only print what you need!

Planners: 2-3

Pictograms
Sunlight: 4-6
Twilight: 7-9
Midnight: 10-12

Recording Logs
All 3 Pictograms (on 1 page)
Sunlight/Twilight: 13
Midnight: 14
OR
Individual pictograms
Sunlight/Twilight: 15-17
Midnight: 18-20

Answers
Sunlight: 21
Twilight: 22
Midnight: 23

**Printing in the US? Scale to 'fit to printable area' in order to get the best print.*

LESSON 1: Data Handling/Probability - Interpreting pictograms

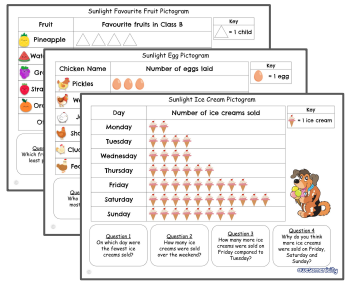
Starter	Main Activity and Input: Interpreting different pictograms.	Plenary
Double Decker: How many different two-scoop combinations is it possible to make? **To support:** 1. What double decker combination is the elephant eating? What is a different combo students could make? **To challenge:** 1. Students could add their own flavour to the scoops. How does this change how many unique double deckers they can make?	**Input:** 1. Slide 6 shows a pig who has a cupcake business. The pictogram shows information about its business. What data can students gather from the pictogram? As a class talk about observations that students could make. E.g. 'The key tells you that each picture represents 1 cupcake' or 'It looks like more cupcakes were sold on Saturday.' As a class, you could count and then write out the number of cupcakes that match each day. 2. Slide 7 has 3 questions for students to answer. Give them time to write answers on whiteboards and then share ideas as a class. The slide is animated to reveal the solutions. 3. This process repeats for a new pictogram on slides 8 and 9. What do students notice? Be sure to discuss the fact that the key tells students that each circle represents 2 donuts. What does half a circle represent? Elicit that half of a circle represents 1 donut. Slide 9 asks 3 new questions to connect to the pictogram and is animated to reveal the answers. **Activity: Reading pictograms and answering related questions.** 1. Print out the pictograms for each learning zone. You could print out several copies and stick them up around your classroom. Students could work in pairs or individually. They should pick a pictogram and record the data that it shows. Students could use the optional recording logs found in the printables to record their answers. These can be printed individually, to match each pictogram or you could choose the 'all 3' recording log that has all three recording logs on one page and connects to all of the pictograms for each learning zone. 2. Students could also answer the questions that relate to each pictogram. Students do not need to complete questions for all of the pictograms within their learning zone. **To support:** 1. Provide students with a recording log that matches the pictogram they are exploring. (Avoid the 'all 3' recording log as this might seem overwhelming.) 2. Sunlight Zone pictogram symbols always represent 1 item. **To challenge:** 1. Twilight and Midnight Zone pictograms use symbols that represent more than 1 item. 2. Students could create their own question that connects to the pictogram they are investigating.	**Missing Pictures:** Can students use the data to draw the correct pictures on the pictogram? **Check for understanding:** 1. As a class, ask students to come to the board and draw the number of circles that they think matches the information on the incomplete pictogram.

Things that might be useful for this lesson:

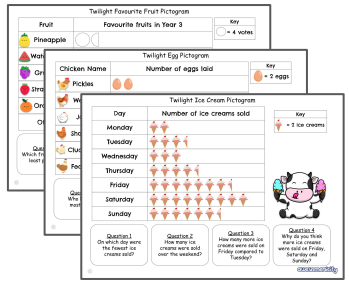
- Individual whiteboards:
  - ➔ Help students to record their thinking and share ideas with others.
- Examples of graphs in real life:
  - ➔ For students to explore and make real world connections.
- Rulers:
  - ➔ Help students to isolate/separate the data when reading the graphs.

Peek at the Printables:

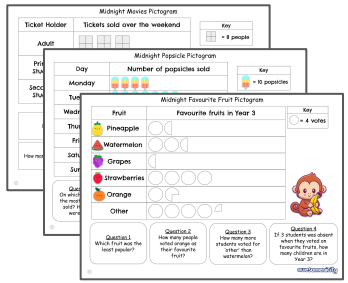
Sunlight Zone



Twilight Zone



Midnight Zone



Greener Alternatives:

➔ Print graphs and place them in stations. Skip printing the recording logs. Students can record their findings in their books.

Sunlight Ice Cream Pictogram

Day	Number of ice creams sold
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

Key
= 1 ice cream

Question 1
On which day were the fewest ice creams sold?

Question 2
How many ice creams were sold over the weekend?

Question 3
How many more ice creams were sold on Friday compared to Tuesday?

Question 4
Why do you think more ice creams were sold on Friday, Saturday and Sunday?

Sunlight Egg Pictogram

Chicken Name	Number of eggs laid
Pickles	
Wendi	
Jazz	
Shanice	
Cluckington	
Feathers	

Key
= 1 egg

Question 1
Who laid the most eggs?

Question 2
How many eggs did Feathers lay?

Question 3
What is the difference between the number of eggs Cluckington laid compared to Pickles?

Question 4
If each egg is sold for 6 pennies, how much money would Shanice make?

Sunlight Favourite Fruit Pictogram

Fruit	Favourite fruits in Class B
Pineapple	△ △ △ △
Watermelon	△ △ △ △ △ △
Grapes	△
Strawberries	△ △ △ △
Orange	△ △ △ △
Other	△ △ △ △ △

Key
△ = 1 child

Question 1
Which fruit was the least popular?

Question 2
Why do you think there is 'other' as a type of fruit?

Question 3
How many more students like watermelon than strawberries?

Question 4
How many children are in Class B?

Twilight Ice Cream Pictogram

Day	Number of ice creams sold
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

Key
= 2 ice creams

Question 1
On which day were the fewest ice creams sold?

Question 2
How many ice creams were sold over the weekend?

Question 3
How many more ice creams were sold on Friday compared to Tuesday?

Question 4
Why do you think more ice creams were sold on Friday, Saturday and Sunday?

Twilight Egg Pictogram

Chicken Name	Number of eggs laid
Pickles	
Wendi	
Jazz	
Shanice	
Cluckington	
Feathers	

Key
= 2 eggs

Question 1
Who laid the most eggs?

Question 2
How many eggs did Feathers and Wendi lay in total?

Question 3
What is the difference between the number of eggs Cluckington laid compared to Pickles?

Question 4
If each egg is sold for 2 pennies, how much money would Shanice make?

Twilight Favourite Fruit Pictogram

Fruit	Favourite fruits in Year 3
Pineapple	○ ◗
Watermelon	○ ○ ◗
Grapes	◗
Strawberries	○ ○ ○ ○
Orange	○ ○ ○ ◗
Other	○ ○ ○ ○ ○

Key
○ = 4 votes

<u>Question 1</u>
Which fruit was the least popular?

<u>Question 2</u>
How many people voted orange as their favourite fruit?

<u>Question 3</u>
How many more students like watermelon than pineapple?

<u>Question 4</u>
How many children are in Year 3?

Midnight Favourite Fruit Pictogram

Fruit	Favourite fruits in Year 3
Pineapple	○ ◗
Watermelon	○ ○ ◗
Grapes	◗
Strawberries	○ ○ ○ ○
Orange	○ ◔
Other	○ ○ ○ ○ ◔

Key
○ = 4 votes

Question 1
Which fruit was the least popular?

Question 2
How many people voted orange as their favourite fruit?

Question 3
How many more students voted for 'other' than watermelon?

Question 4
If 3 students were absent when they voted on favourite fruits, how many children are in Year 3?

Midnight Popsicle Pictogram

Day	Number of popsicles sold
Monday	4
Tuesday	7
Wednesday	3½
Thursday	5
Friday	½
Saturday	8½
Sunday	6½

Key
= 10 popsicles

Question 1
On which day were the most popsicles sold? How many were sold?

Question 2
How many popsicles were sold in total?

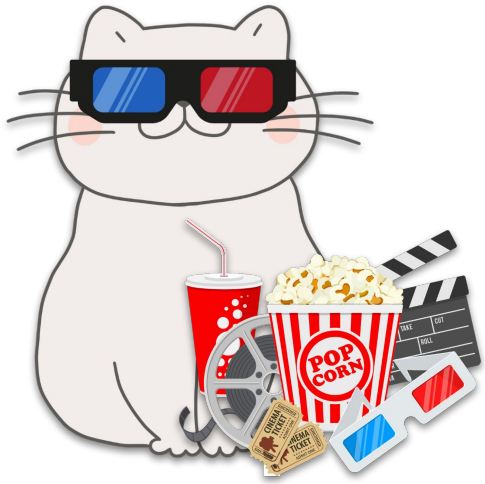
Question 3
How many more popsicles were sold on Sunday compared to Monday?

Question 4
How many popsicles were sold on Friday? Why do you think this might be?

Midnight Movies Pictogram

Ticket Holder	Tickets sold over the weekend
Adult	
Primary Students	
Secondary Students	

Key
= 8 people



Question 1
If cinema tickets cost $5, how much money did the cinema make over the weekend?

Question 2
How many *students* went to the cinema in total?

Question 3
How many more *students* went to the cinema than adults?

Question 4
Why do you think more students went to the cinema than adults?

Sunlight/Twilight All 3 Pictogram Recording Logs

Ice Creams	
Day	Total
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

Eggs	
Name	Total
Pickles	
Wendi	
Jazz	
Shanice	
Cluckington	
Feathers	

Favourite Fruits	
Fruit	Total
pineapple	
watermelon	
grapes	
strawberries	
orange	
other	

1.
2.
3.
4.

1.
2.
3.
4.

1.
2.
3.
4.

Midnight All 3 Pictogram Recording Logs

Favourite Fruits	
Fruit	Total
pineapple	
watermelon	
grapes	
strawberries	
orange	
other	

1.

2.

3.

4.

Popsicles	
Day	Total
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

1.

2.

3.

4.

Movie Tickets	
Ticket Holder	Total
adults	
primary students	
secondary students	

1.

2.

3.

4.

Sunlight/Twilight Ice Cream Recording Logs

Ice Creams	
Day	Total
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

1.
2.
3.
4.

Ice Creams	
Day	Total
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

1.
2.
3.
4.

Ice Creams	
Day	Total
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

1.
2.
3.
4.

Sunlight/Twilight Eggs Recording Logs

Eggs	
Name	Total
Pickles	
Wendi	
Jazz	
Shanice	
Cluckington	
Feathers	

1.

2.

3.

4.

Eggs	
Name	Total
Pickles	
Wendi	
Jazz	
Shanice	
Cluckington	
Feathers	

1.

2.

3.

4.

Eggs	
Name	Total
Pickles	
Wendi	
Jazz	
Shanice	
Cluckington	
Feathers	

1.

2.

3.

4.

Sunlight/Twilight Fruits Recording Logs

Favourite Fruits	
Fruit	Total
pineapple	
watermelon	
grapes	
strawberries	
orange	
other	

1.
2.
3.
4.

Favourite Fruits	
Fruit	Total
pineapple	
watermelon	
grapes	
strawberries	
orange	
other	

1.
2.
3.
4.

Favourite Fruits	
Fruit	Total
pineapple	
watermelon	
grapes	
strawberries	
orange	
other	

1.
2.
3.
4.

Midnight Favourite Fruits Recording Logs

Favourite Fruits	
Fruit	**Total**
pineapple	
watermelon	
grapes	
strawberries	
orange	
other	

1.	
2.	
3.	
4.	

Favourite Fruits	
Fruit	**Total**
pineapple	
watermelon	
grapes	
strawberries	
orange	
other	

1.	
2.	
3.	
4.	

Favourite Fruits	
Fruit	**Total**
pineapple	
watermelon	
grapes	
strawberries	
orange	
other	

1.	
2.	
3.	
4.	

Midnight Popsicle Recording Logs

Popsicles	
Day	Total
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

1.
2.
3.
4.

Popsicles	
Day	Total
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

1.
2.
3.
4.

Popsicles	
Day	Total
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

1.
2.
3.
4.

Midnight Movie Ticket Recording Logs

Movie Tickets	
Ticket Holder	Total
adults	
primary students	
secondary students	

1.
2.
3.
4.

Movie Tickets	
Ticket Holder	Total
adults	
primary students	
secondary students	

1.
2.
3.
4.

Movie Tickets	
Ticket Holder	Total
adults	
primary students	
secondary students	

1.
2.
3.
4.

Sunlight Answers

Ice Creams	
Day	Total
Monday	2
Tuesday	4
Wednesday	4
Thursday	6
Friday	9
Saturday	11
Sunday	8

1. Monday
2. 11 + 8 = 19
3. 9 - 4 = 5
4. Answers could vary. E.g. More people buy ice creams on the weekend when they don't have to work.

Eggs	
Name	Total
Pickles	3
Wendi	4
Jazz	8
Shanice	3
Cluckington	7
Feathers	2

1. Jazz
2. 2
3. 7 - 3 = 4
4. 6 + 6 + 6 = 18

Favourite Fruits	
Fruit	Total
pineapple	4
watermelon	6
grapes	1
strawberries	4
orange	4
other	5

1. grapes
2. People might prefer a fruit that isn't on the chart.
3. 6 - 4 = 2
4. 4 + 6 + 1 + 4 + 4 + 5 = 24

Twilight Answers

Ice Creams	
Day	Total
Monday	4
Tuesday	7
Wednesday	6
Thursday	9
Friday	15
Saturday	18
Sunday	13

1. Monday
2. 18 + 13 = 31
3. 15 - 7 = 8
4. Answers could vary. E.g. More people buy ice creams on the weekend when they don't have to work.

Eggs	
Name	Total
Pickles	4
Wendi	7
Jazz	15
Shanice	13
Cluckington	9
Feathers	5

1. Jazz
2. 7 + 5 = 12
3. 9 - 4 = 5
4. 2 x 13 = 26

Favourite Fruits	
Fruit	Total
pineapple	6
watermelon	10
grapes	2
strawberries	16
orange	14
other	20

1. Grapes
2. 14
3. 10 - 6 = 4
4. 16 + 18 + 14 + 20 = 68

Midnight Answers

Favourite Fruits	
Fruit	Total
pineapple	6
watermelon	10
grapes	2
strawberries	16
orange	7
other	17

1. Grapes
2. 7
3. 17 - 10 = 7
4. 6 + 10 + 2 + 16 + 7 + 17
   58 students in total

Popsicles	
Day	Total
Monday	40
Tuesday	70
Wednesday	35
Thursday	50
Friday	5
Saturday	85
Sunday	65

1. Saturday. 85 popsicles.
2. 350
3. 65 - 40 = 25
4. Answers could vary. Only 5 popsicles might have been sold because it was cold or raining.

Movie Tickets	
Ticket Holder	Total
adults	24
primary students	30
secondary students	36

1. $450
2. 66
3. 42
4. Answers could vary. Families might go to the cinema together, so 1 adult might be with 2 or more students.