

Sunflower Maths Sprout 1

Sunflowers are very tall plants.
They can grow taller than you.



Sample Questions:

- How can I use a piece of string or streamer to show how tall I am?
- Is this string longer than, exactly the same length as or shorter than a sunflower in our school garden?
- Which sunflower is the shortest? How do I know?
How can I measure its length?
- How can I use string to measure the difference between the heights of different sunflower plants in our garden?
- What else is as long as this sunflower?

Sunflower Maths Sprout 2

Sunflower seeds can grow up to 10 cm high in less than 10 days.



Sample Questions:

- On what day do we need to plant our seeds? Why?
- How do we know if our sunflower seeds are growing?
- How often should we look at our seeds?
- How can we keep a record of how tall our sunflower seeds grow?
- Do our sunflower seeds grow 10 cm in less than 10 days?
- How much taller do they grow in the next 10 days?
- How can we graph our discoveries?

Sunflower Maths Sprout 3

Most sunflowers grow between 150 to 250 centimetres tall.



Sample Questions:

- How tall do our sunflowers grow?
- What is the difference in height between 2 or more of our sunflowers?
- Are any of our sunflowers taller than me? If so, what is the difference in height in cm? How many of our sunflowers would fit end-to-end in our classroom? How can I find this out?
- Did all our sunflowers grow between 150 and 250 cm tall?
- What type of graph would best suit our data?

Sunflower Maths Sprout 4

The record for the tallest sunflower so far is 8.23 m.
It was grown by Hans-Peter Schiffer in Germany in 2012.



Sample Questions:

- How can we find photographs of the tallest sunflower?
- What is the difference in height between this sunflower and our school sunflowers?
- What was the tallest sunflower on record before this one?
- Is this the tallest plant in the world? If not, which plant is currently the tallest?
- What is the tallest flowering plant? The shortest flowering plant?

Sunflower Maths Sprout 5

A sunflower produces between 800 and 2000 seeds, depending on how large the flower head grows.



Sample Questions:

- How many seeds does one sunflower head have in our school garden?
- How can we count the seeds? Is there an easy way to do this?
- Do all our school sunflowers have between 800 and 2000 seeds?
- How can we record this data?
- What is the difference between the smallest and the largest number of seeds?
- How many sunflowers would we need to grow if we wanted 10 000 seeds?
100 000 seeds?
- What type of graph will best suit our data?

Sunflower Maths Sprout 6

The national flower of Ukraine is a sunflower.

In 2011, Ukraine produced 8.7 million tonnes of sunflower seeds.

In 2012, Ukraine produced 8.39 million tonnes of sunflower seeds



Sample Questions:

- What was the difference between the Ukraine's 2011 and 2012 productions?
- What factors might cause this difference?
- Which are the top 3 countries to grow sunflower seeds in the world today?
- Which country was the 10th largest producer in each of the last 3 years?
- What is the total number of tonnes of seeds produced by the top 10 countries last year?

Sunflower Maths Sprout 7

100 grams of sunflower seeds contain:

51 g oil

20 g carbohydrate

21 g protein



Sample Questions:

- What percentage of a sunflower seed is oil? Carbohydrate? Protein?
- How much oil can farmers get from 1 kilogram of sunflower seeds?
- How many kg of sunflower seeds do you need to produce 1 litre of sunflower oil?
- How can we find out how many kilograms of seeds are produced in one hectare on a sunflower plantation?

Sunflower Maths Sprout 8

Some people believe sunflower heads follow the direction of the sun each day.



Sample Questions:

- How will we find out if the sunflowers in our school garden follow the sun each day?
- In which direction do they face in the morning?
In which direction do they face in the afternoon?
- How can we track any movement if it does occur? How many days do we need to test this? How will we record our discoveries?
- Do we agree with this statement on *Sunflower Maths Sprout 8*?

Sunflower Maths Sprout 9

The average sunflower head is less than 30 cm across.
The largest sunflower head on record is 81 cm across.
It was grown by Emily Martin in Canada in 1983.



Sample Questions:

- What does average mean? How will we find out?
What is the average width of the sunflower heads grown in our school garden?
- How long is 81 cm? What else do we know that is as long as this?
- How does this record width compare with our sunflower heads?
- What is the difference in width in cm?
- What type of graph will best help us demonstrate our results?

Sunflower Maths Sprout 10

Sunflower seeds grow in spirals at the centre of each flowerhead. People say that there are usually 34 clockwise spirals and 55 anti-clockwise spirals. And 34 and 55 are part of the Fibonacci counting sequence.



Sample Questions:

- Where are the spirals on our sunflower heads? How will we count these?
- How many spirals go clockwise? Anticlockwise?
- How many times do we need to count these to know we are correct?
- How will we record this information?
- What is a Fibonacci Number? Did we find any Fibonacci numbers in our counting?
- Do we agree with that the spirals are part of the Fibonacci number sequence?

Sample sunflower seed spirals in a flowerhead

