

# Challenging tasks

## Early Stage 1

Name:

Class:

### Activity 1

During this activity you will be answering a Fermi question. Fermis questions are questions that make you think like a mathematician.



Resources – a paper to record your thinking and a bowl, pieces of string (to represent spaghetti)

Activity 1 – How many pieces of spaghetti can fit in your bowl? <https://www.teachertoolkit.co.uk/2017/04/28/fermi-questions/>





Advice for parents: encourage your child to explore ‘how many?’ by having a guess and help them through their thinking. An exact answer is not required, encourage them to try and see how many pieces of string can fit in the bowl. Discuss how this amount might change for different family members.



Record your thinking and share this learning with your teacher.

## Reflection

Draw your favourite part of solving this problem. Can you make your own Fermi question/s?

<b>Star</b> Something that went well!	<b>Star</b> Something that went well!	<b>Wish</b> A goal for next time...
		(What is something you would do differently next time?)

<b>Star</b> <b>Something that went well!</b>	<b>Star</b> <b>Something that went well!</b>	<b>Wish</b> <b>A goal for next time...</b>

# Challenging tasks

## Stage 1

Name:

Class:

### Activity 1

During this activity you will be answering a Fermi question. Fermis questions are questions that make you think like a mathematician.



Resources – a paper to record your thinking, a few balloons, a room to measure.

### Activity 1 – How many balloons will fit inside your \_\_\_\_\_ room?



<https://www.teachertoolkit.co.uk/2017/04/28/fermi-questions/>



Advice for parents: encourage your child to explore ‘how many?’ by having a guess and help them through their thinking. An exact answer is not required, encourage them to try and see how many balloons could fit in the area. Discuss how this amount might change for different area, small box, cupboard etc.



Record your thinking and share this learning with your teacher.

## Reflection

Draw your favourite part of solving this problem. Can you make your own Fermi question/s?

<b>Star</b> Something that went well!	<b>Star</b> Something that went well!	<b>Wish</b> A goal for next time...
		(What is something you would do differently next time?)

<b>Star</b> <b>Something that went well!</b>	<b>Star</b> <b>Something that went well!</b>	<b>Wish</b> <b>A goal for next time...</b>

# Challenging tasks

## Stage 2

Name:

Class:

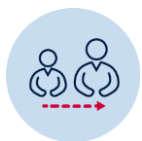
### Activity 1

During this activity you will be answering a Fermi question. Fermis questions are questions that make you think like a mathematician.



Resources – a paper to record your thinking, a stop watch or a timer (on phone).

Activity 1 – How many times could you say alphabet in 24 hours? <https://www.teachertoolkit.co.uk/2017/04/28/fermi-questions/>



Advice for parents: encourage your child to explore 'how many?' by having a guess and help them through their thinking. An exact answer is not required, encourage them to try a see how long it takes to say the alphabet and then talk about different amounts of time e.g. 10 minutes, 1 hour etc. Discuss how this might change as they get tired of repeating themselves.



Record your thinking and share this learning with your teacher.

## Reflection

Draw your favourite part of solving this problem. Can you make your own Fermi question/s?

<b>Star</b> Something that went well!	<b>Star</b> Something that went well!	<b>Wish</b> A goal for next time...
		(What is something you would do differently next time?)



# Challenging tasks

## Stage 3

Name:

Class:

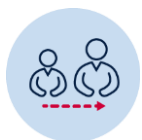
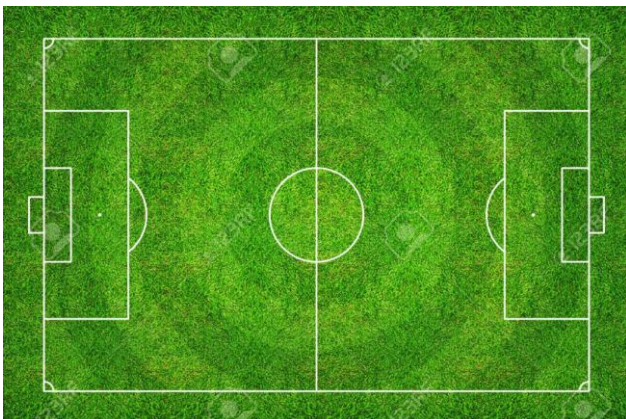
### Activity 1

During this activity you will be answering a Fermi question. Fermis questions are questions that make you think like a mathematician.



Resources – a paper to record your thinking, a small patch of grass, dimensions of football field.

### Activity 1 – How many blades of grass are on a football field? <https://www.teachertoolkit.co.uk/2017/04/28/fermi-questions/>



Advice for parents: encourage your child to explore ‘how many?’ in a small patch of grass. Discover the dimensions of a football field. An exact answer is not required, encourage Discuss how this might change with football fields that aren’t full size.



Record your thinking and share this learning with your teacher.

## Reflection

Did this challenge you?

Why or why not?

Can you make your own Fermi question/s?

# Challenging tasks

## Stage 3 or 4

Name:

Class:

### Activity 1

During this activity you will be answering a Fermi question. Fermis questions are questions that make you think like a mathematician.



Resources – a paper to record your thinking, access to various websites or social platforms to explore the 'like' term.

### Activity 1 – How many times does a typical teenager use 'like' a day? <https://www.teachertoolkit.co.uk/2017/04/28/fermi-questions/>





Advice for parents: encourage your child to explore ‘how many?’ using one site and discuss the impact of time spent on the site. Explore websites or apps that are popular as well as the not so popular. Compare these results.



Record your thinking and represent your findings in a graphical way or visual way and share this learning with your teacher.

## Reflection

Did this challenge you?

Why or why not?

Can you make your own Fermi question/s?

<b>Star</b> Something that went well!	<b>Star</b> Something that went well!	<b>Wish</b> A goal for next time...
		(What is something you would do differently next time?)

Templates to help with numeral formation

1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19 20

11 12 13 14 15 16 17 18 19 20

11 12 13 14 15 16 17 18 19 20

11 12 13 14 15 16 17 18 19 20