Maths lesson – The world's number systems

LO: To develop my understanding of the world's number systems

Planned by Matilda Munro for Two Temple Place, 2015

Main teaching

CCL – History (Ancient Egypt), Geography

Explain to the children that today they will be investigating number systems from around the world in pairs.

Q: Does anyone know how to say the numbers 1 – 10 in another language?
Q: Does anyone know how to write the numbers 1 – 10 in another language?
Q: What other countries use the same digits as we do?
Q: Do you know of any other languages that use different symbols?

Today we will be focusing on the number symbols used in Ancient Egypt, China, Bangladesh and countries that speak Arabic.

Show a normal hundred square with numbers missing.

Q: Which numbers are missing? How did you know?

Explain that they could work out what was missing even if they didn't know the numbers by looking at the patterns.

Q: What patterns can they see?

Show a Chinese hundred square with numbers missing

Q: Which numbers are missing? How can we work out how to write them?

Discuss Ancient Egyptian number system being very different. Show them and model writing some numbers.

Q: What are the disadvantages of the Egyptian system compared to ours?

Model doing a sum

Children to do activities in MA pairs.

Activities - Differentiation

Activity – MA groups

First children need to work out how to fill in the missing numbers in each hundred square.
Then go through and solve the sums.
Teachers can change the problems to suit their classes.

EAL / SEN:
Supported in MA pairs.

Speaking frame:

I think the missing number is ___ because…
I think you'd write it like this ___ because…

G&T:
Can they write their own word problems using numbers in a different language?

Assessment
Success criteria:

I know that different countries use different number systems today.

I know how the Ancient Egyptians recorded numbers.

I can deduce numbers in foreign number systems.

I can solve problems in foreign number systems.

Plenary

Share what they found easy and difficult about today's lesson.

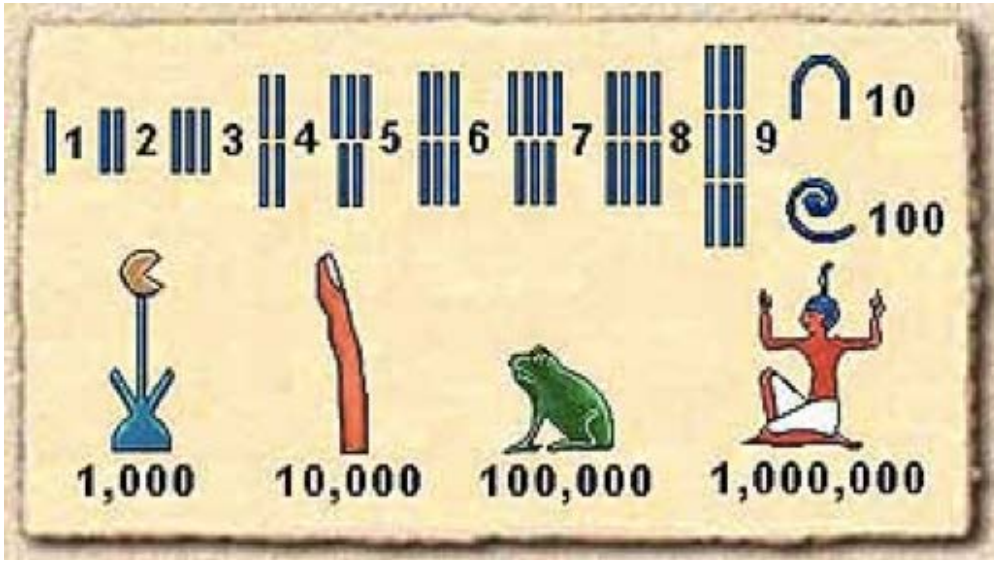
What did they find most interesting?

RESOURCES

Bold = in pack
Not bold = needs to be provided by school

Worksheets

Resources for Egyptian Maths Lesson
Egyptian Number System



Link to image: https://hu.wikipedia.org/wiki/F%C3%A1jl:Egyptian_numbers.jpeg

Problems:
Tutankhamun has 100 fields and wants to share them equally between his 10 friends. How many fields will each friend get?

Each boat can carry 8 planks of wood. If Queen Hatshepsut has 5 boats, how many planks of wood can she carry?

一	二		四	五	六	七	八	九	十
十一	十二	十三	十四	十五	十六	十七	十八	十九	二十
二十一	二十二	二十三		二十五	二十六	二十七	二十八	二十九	三千
	三十二	三十三	三十四	三十五	三十六		三十八	三十九	四十
四十一	四十二	四十三	四十四	四十五	四十六	四十七	四十八		五十
五十一		五十三	五十四	五十五		五十七	五十八	五十九	
六十一	六十二	六十三		六十五	六十六	六十七	六十八	六十九	七十
	七十二	七十三	七十四		七十六	七十七	七十八		八十
八十一		八十三	八十四	八十五	八十六	八十七	八十八	八十九	九十
九十一	九十二	九十三	九十四		九十六	九十七		九十九	一百

Problems:

二十 + 五 =

三十八 - 六 =

十五 + 九 =

五十 - 十 =

١٠	٩	٨	٧	٦	٥	٤	٣	٢	١
٢٠	١	١	١	١٦	١٥		١	١	١١
٣٠		٢		٢٦	٢٥	٢٤	٢	٢	٢
	٣	٣	٣	٣٦		٣٤	٣	٣	٣
٥٠	٤٩		٤٧	٤٦	٤٥	٤٤	٤٣	٤٢	٤١
٦٠	٥٩	٥٨	٥٧	٥٦		٥٤	٥٣	٥٢	
٧٠	٦٩	٦٨		٦٦	٦٥		٦٣	٦٢	٦١
٨٠		٧	٧	٧٦	٧٥	٧٤	٧	٧	٧
	٨	٨	٨		٨٥	٨٤	٨		٨
١٠		٩	٩	٩٦	٩٥	٩٤	٩	٩	٩

Problems:

١٢ + ٥ =

٢ x ١٨ =

١٠٠ - ٣٠ =

٢٥ + ١٣ =

HINT – Where is number 1? What is different about this hundred square?