Finding primes: The Sieve of Eratosthenes

	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Instructions:

1) Cross off all numbers bigger than 2 which are multiples of 2

2) Cross off all numbers bigger than 3 that are multiples of 3

3) Cross off all numbers bigger than 5 that are multiples of 5

4) Cross off all numbers bigger than 7 that are multiples of 7

5) Circle all the other numbers: these are the prime numbers less than 100!

Primes!

1) Is 91 a prime number?

2) Is 101 a prime number?

3) What is the best way to tell if a number is prime?

4) The ancient Greeks developed a method to find all the prime numbers less than a certain number. Turn over the page and follow the instructions to find all the prime numbers less than 100. How many are there?

5) Twin primes are pairs of prime numbers that differ by 2, for example 3 and 5. List the pairs of twin primes less than 100.

6) Do you think there are an infinite number of prime numbers, or is there some number that is the biggest prime number? Why?

7) Some numbers can be written as the sum of two prime numbers, for example, 4 = 2 + 2. Which of these even numbers can be written as a sum of two prime numbers?

6 =	8 =	10 =	12 =
14 =	16 =	18=	20=

8) Do you think that every even number can be written as the sum of two prime numbers?

9) Which odd numbers can be written as a sum of two prime numbers?