

## The Sieve of Eratosthenes

Give each student a *Sieve of Eratosthenes* (see next page). Do these steps as a group.

Underline 1, as it is neither prime nor composite.

Circle 2, as it is prime.

Now cross out the other multiples of 2, as they are NOT prime. Since they line in straight lines, you can use a ruler.

Since 3 hasn't been crossed out, it must be prime. Circle 3.

Now cross out the other multiples of 3, as they are NOT prime. Since they line in straight lines, you can use a ruler.

4 has been crossed out, so it is NOT prime.

Since 5 hasn't been crossed out, it must be prime. Circle 5.

Now cross out the other multiples of 5, as they are NOT prime. Since they line in straight lines, you can use a ruler.

6 has been crossed out, so it is NOT prime.

Since 7 hasn't been crossed out, it must be prime. Circle 7.

Now cross out the other multiples of 7, as they are NOT prime. Since they line in straight lines, you can use a ruler.

Remarkably, the numbers that are left are all of the prime numbers less than 120!

Have the students list these prime numbers in their exercise book.

### Sieve of Eratosthenes

1	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	101	102
103	104	105	106	107	108

