

Edible Eratosthenes Activity

The Sieve of Eratosthenes can be a great tool to use when introducing students to multiples and prime numbers. It will delight and astonish most students, just as it did the ancient Greeks! This exercise can take some time, but it's a great deal of inexpensive fun if you are using cereal.

Get the activity started by distributing copies of the Sieve of Eratosthenes worksheet. Then, give each student a baggie of about $\frac{1}{2}$ cup Cheerios. As a class, begin searching for multiples, starting with two. For each multiple of two that you find, put one Cheerio on that number. Then put Cheerios on multiples of three, then five, and so on.

When you are finished searching for multiples, the numbers that remain unmarked by Cheerios are prime numbers: numbers whose multiples are one and themselves. A familiarization with prime numbers can help when dealing with fractions, because it's not always easy to figure out when a number is prime—especially if it's a bigger number.

Sieve of Eratosthenes Answer Key

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

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