

# Learning Activity for I'm Prime 5<sup>th</sup> Grade

**Objective:** The students will be able to identify all prime numbers less than 100.

**Materials:** a 100s chart for each student

## I'M PRIME

Hey you, Paparazzi,  
Take another shot, see  
What it is that's making me shine

Snap me and I guess you'll  
See I'm pretty special  
Not just any number in line

I've got just factors - Me and Number One  
Now I've told you all you need to know to understand that

I'm Prime!  
(group) Who said that?  
(solo) Well, I did!

I said I'm Prime!  
(group) I can't be (solo) divided evenly  
By any number 'cept for one and me.

Welcome to Club Prime  
Where we'll have a Prime Time!  
Tell me, can you hang with my crew?

You've got to be odd here  
Just to get the nod here  
The only prime that's even is two

'Cause every other even number you can name  
Has 2 as a factor, and that's not the same as saying

I'm Prime!  
(group) Who said that?  
(solo) Well, I did!

I said I'm Prime!  
(group) I can't be (solo) divided evenly  
By any number 'cept for one and me.

Spoken:

Welcome to Club Prime! You must be a prime number to get inside. So let's see some identification. Okay, 2, 3, 5, 7 -- you're all prime numbers go on in. Let's see: 11, you're good to go. 13, 17, 18 ...

Wait a sec, 18, you're not a prime number! First of all, you're an even number greater than 2, so that gives you away as a composite right off the bat. 18, you're 2 times 9 or 2 times 3 times 3 -- Go across the street to Club Composite.

The rest of you, line up and let's see if you're ready for some "Prime time". 19 - fine. 23 - fine. 27 -- Nope! You're not even, but you're still not prime, you are 3 times 9 or 3 times 3 times 3. Go over to Club Composite, 27.

Okay, let's see the rest of you ... 29, 31, 37, 41, 43, 47 -- all of you go on in and have a good time and Club Prime!

Sung:

I'm Prime!  
(group) Who said that?  
(solo) Well, I did!

I said I'm Prime!  
(group) I can't be (solo) divided evenly  
By any number 'cept for one and me.

(group) Who said that?  
Well, I did!

I said I'm Prime!  
Say it one more time  
I'm Prime  
(group) I can't be (solo) divided evenly  
By any number 'cept for one and me.

## Procedure:

- 1) Play the song.
- 2) Discuss what a prime number is and what one isn't.
- 3) All students need a 100s chart to work through the following steps to identify all of the prime numbers less than 100.

Sieve gives you a method for finding prime numbers.

1. Cross 1 out.
2. Then starting from 2, circle 2 but cross out every multiple of 2.
3. Starting with 3, circle 3, but cross out every multiple of 3.
4. Starting with 5, circle 5, but cross out every multiple of 5.
5. Starting with 7, circle 7 but cross out every multiple of it.
6. Do the same with all the primes that you know already. The numbers that are crossed are not primes, because they are multiples of other numbers. The numbers that are circled are primes. They should have no divisors apart from themselves and 1.
7. Make a list of your primes.

**Evaluation:** Teacher observation. Students will compare and contrast the crossed off and circled numbers from their chart in their journal using what they know about prime and composite numbers as well as factors and multiples to demonstrate an understanding of prime numbers.