Assume that the triple is $n, n+2$ and $n+4 (n \geq 1)$.

It has been proved that any integer n, at least one of the integers $n, n+2, n+4$ is divisible by 3 in the previous problem.

When $n >= 4$, the number which can be divided by 3 is larger than 3, so it is equal to $3k$, where k is an integer larger than one.

So that number is not prime.

When $1 \leq n < 3$, all the circumstances are $[1, 3, 5], [2, 4, 6], [3, 5, 7]$.

Since $1, 4, 6$ are all not prime, the only available solution is [3,5,7].

Hence, it's proved true.