







Frequency: Is the symbol present in your quadrat?







Activity: Randomly choose 8 different quadrats and mark down (yes or no) if each symbol is in the quadrat.

Quadrat	Position						
1							
2							
3							
4							
5							
6							
7							
8							

Q: How many quadrats did it take until you counted each symbol at least once?

Density: How many of each symbol are present in your quadrat?

Activity: Randomly choose 8 different quadrats and count how many of each symbol are in the quadrat.







Quadrat	Position						
1							
2							
3							
4							
5							
6							
7							
8							

Q: How similar is the density of stars in each quadrat? What about the smiley face?

Total Density: How many symbols are present as you increase your sampling effort?

Activity: From the table above, add together the number of symbols present, as you increase your number of quadrats.

Hint: For two quadrats, take the sum of quadrat 1 and 2 from above; for three quadrats, take the sum of quadrat 1, 2, and 3 from above OR the sum of two quadrats (table below) and quadrat 3 (table above).

Quadrats						
1						
2						
3						
4						
5						
6						
7						
8						

Density: How close were our estimates to ‘real-life’?

Hint: There are a total of 40 quadrats in your plot.







So for 1 quadrat measured, you need to multiply each number of symbols from the table above by 40.

For 2 quadrats measured, you need to multiply each number of symbols from the table above by 20.

For 4 quadrats measured, you need to multiply each number of symbols from the table above by _____?

For 5 quadrats measured, you need to multiply each number of symbols from the table above by _____?

For 8 quadrats measured, you need to multiply each number of symbols from the table above by _____?

Quadrat						
1						
2						
4						
5						
8						

Q: How close was your estimate of moons to real-life?

Q: How close was the lightning bolt estimate?

Q: What is the closest estimate to real-life? What is the worst estimate?

Q: Why are some estimates closer than other ones?