Calculating Percent Substrate by Size Class

These calculations refer to 1 field method, Primary Transects – Primary Transect with Substrate and Depth – see Data Element 7.00) using…

TransectID (e.g. A0, or A5)
StationLeftRight (e.g. 00, 01…10)
Embeddedness

1) Conceptually generate a populated table as below, with 121 observations: 11 rows and 11 columns.

TransectID	StationLeftRight										
	00	01	02	03	04	05	06	07	08	09	10
A0											
B0											
C0											
D0											
E0											
E5											
F0											
G0											
H0											
J0											
K0											

Of course, in the database, this can be just 1 data columns of 209 observations, as follows:

TransectIDwith StationLeftRightLeftRight	SubstrateTypeCode
A000	
A001	
A002…	

2. Count the number of observations in the table – there might be missing data, leaving less than 121. This is NumberOfSubstratesEmbedAll. Also count the number of embeddedness observations in the table where StationLeftRight is 4, or 5, or 6. This is NumberOfSubstratesEmbedMid; normally n = 33 (11 rows and 3 columns).

3: Calculate the remaining variables listed

Calculated Variable	Description
PercentEmbeddednessAll	Mean of embeddedness [normally n = 121]
Standard deviationEmbeddednessAll	Standard deviation of embeddedness [normally n = 121]
PercentEmbeddednessMid	Mean embeddedness, mid-channel [normally n =33]
Standard deviationEmbeddednessMid	Standard deviation of embeddedness, mid-channel [normally n = 33]