StreamWebs™
Student Stewardship Network

OSU Oregon State University Extension Service

PEBBLE COUNT

Name:_____
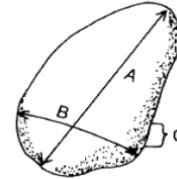
School: _____Teacher: _____

Date: _____ Time: _____

Stream/Site Name: _____

Weather: _____

Pebble counts are an important component of analyzing stream characteristics. The distribution of sediment material on the streambed can inform you about a variety of different stream functions and hydrologic conditions, including erosion potential, woody debris, and aquatic species habitat.
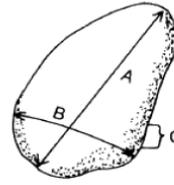

(A) Long axis
(B) Intermediate axis
(C) Short axis

The intermediate axis is the pebble's diameter.

Material	Size (mm)	Tally	#
silt/clay	0 - 0.062		
very fine sand	0.062 - 0.125		
fine sand	0.125 - 0.25		
medium sand	0.25 - 0.5		
coarse sand	0.5 - 1		
very coarse sand	1 - 2		
very fine gravel	2 - 4		
fine gravel	4 - 6		
fine gravel	6 - 8		
medium gravel	8 - 11		
medium gravel	11 - 16		
coarse gravel	16 - 22		
coarse gravel	22 - 32		
very coarse gravel	32 - 45		
very coarse gravel	45 - 64		
small cobble	64 - 90		
medium cobble	90 - 128		
large cobble	128 - 180		
very large cobble	180 - 256		
small boulder	256 - 362		
small boulder	362 - 512		
medium boulder	512 - 1024		
large boulder	1024 - 2048		
very large boulder	2048 - 4096		

PEBBLE COUNT

Equipment

• Measuring Tape
• Ruler Marked in millimeters OR Gravelometer
• Pen or Pencil

(A) Long axis
(B) Intermediate axis
(C) Short axis

The intermediate axis is the pebble's diameter.

1) Select an area of the stream to conduct your pebble count.

2) Start transect at a randomly selected point (throw a pebble) along the edge of the stream. Take one step into the water perpendicular to flow and, without looking down to the stream, pick up the the first pebble touching your index finger next to your big toe.

3) Measure the b-axis (see image below) by determining which hole the pebble fits through in the gravelometer or by measuring with ruler.

4) Take another step across the stream and repeat the previous steps until you reach the opposite side. In general, you will need to collect 100 measurements in order to accurately quantify pebble distributions.

5) Record each pebble size you pick up on your data sheet.