Terminology

Temperature:

Temperature is one of the most critical factors to the salmonid incubation. Temperature determines the rate of development. All salmonids require cool water to survive. The temperature range for successful salmonid incubation is between 1 º Celsius and 12 º Celsius. Ranges for rearing salmonid fry should not exceed 15 º Celsius. Fluctuations in temperatures should be avoided. Egg development is faster at warmer temperatures and slower at colder temperatures. When altering the temperature in your aquarium do not exceed a 2 º Celsius change in a 24 hour period.

Thermal Units

A thermal unit (TU) is defined as one degree for a 24-hour period. Thermal units can be used to monitor salmon development and forcast important egg stages.

EXAMPLE: If salmonid eggs are exposed to 5 degree Celsius water temperature for 24-hour period they have gained 5 thermal units; one unit for each degree celsius.

Accumulated Thermal Units

Accumulated thermal units (ATUs) are the cumulation of the thermal units (TUs)
also referred to as: cumulative temperature units or degree days

	DAY	DATE	DAILY TEMP (Celsius)		ATUs
Received Eggs	Monday	1			
	Tuesday	2	3.0		3.0
	Wednesday	3	2.5		5.5
	Thursday	4	3.0		8.5
	Friday	5	3.5		12.0
	Saturday	6	3.5	a	15.5
	Sunday	7	3.5	a	19.0
	Monday	8	4.0		23.0

a) Average of Friday and Monday temperatures

Temperature conversion formulas

Formula
Celsius = 5/9 (F - 32)
Fahrenheit = (5/9 X C) + 32

Fahrenheit	Celsius
32	0.0
33	0.6
34	1.1
35	1.7
36	2.2
37	2.8
38	3.3
39	3.9
40	4.4
41	5.0
42	5.6
43	6.1
44	6.7
45	7.2
46	7.8
47	8.3
48	8.9
49	9.4
50	10.0
51	10.6
52	11.1
53	11.7
54	12.2
55	12.8