

# Unit 13

## Vital Capacity vs. Height Lab



*Miss School, Miss Out!*



# Vital Capacity vs. Height Lab

Question: Are a person's height and vital capacity correlated?

Hypothesis:

Observations: Data table for personal data

Analysis: Plot data on graph.

Conclusion: Support or reject your hypothesis using evidence from your analysis.

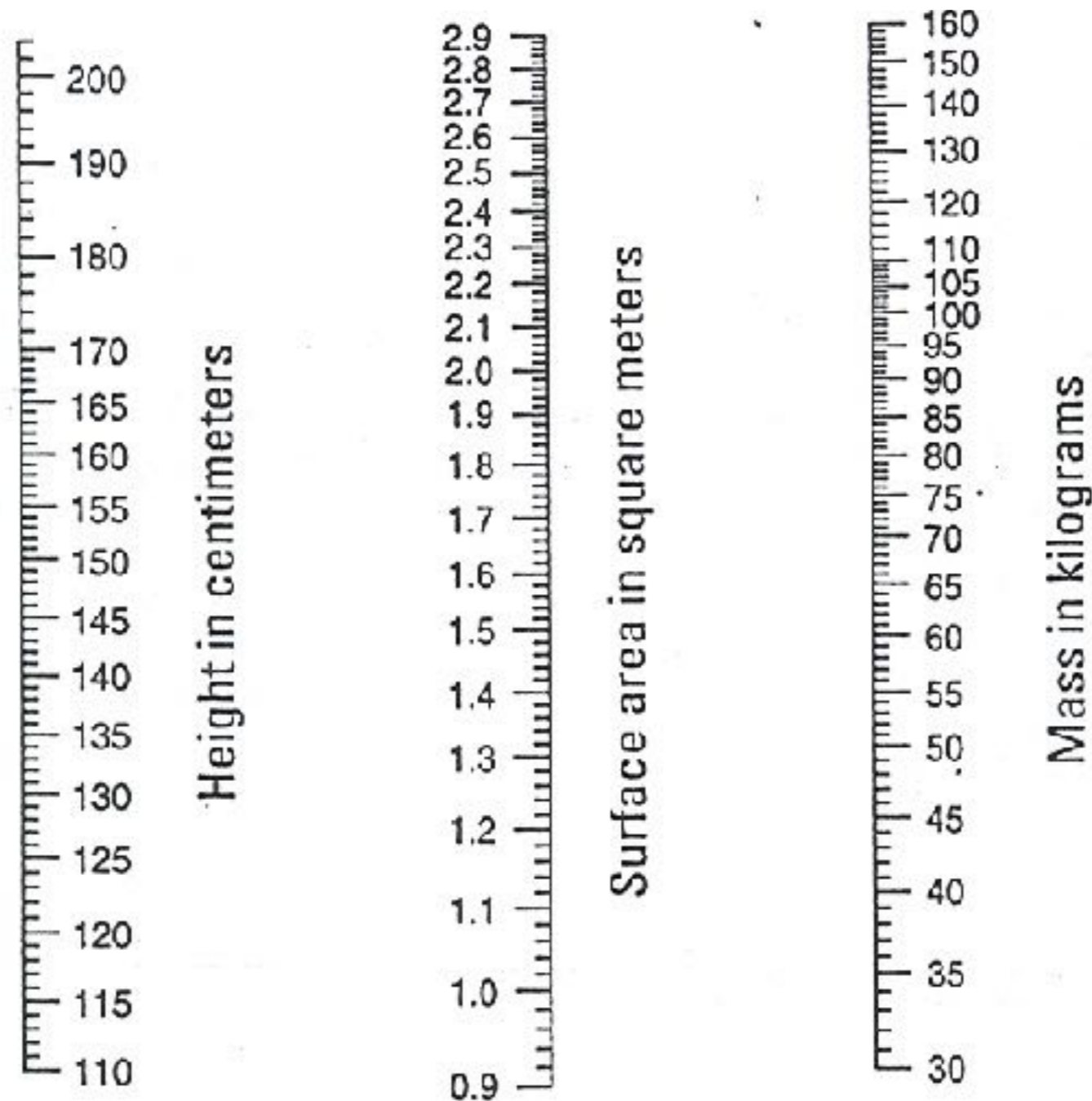
# Personal Data

Height (cm)	Estimated Vital Capacity (L)	Phipps/Bird Vital Capacity (L)
		Trial 1:
Weight (kg)		Trial 2:
		Average:

$(\text{Height in inches})(2.54 \text{ cm}) = \text{Height in cm}$

$(\text{Weight in pounds}) = \text{Weight in kg}$   
2.2 kg

# Vital Capacity vs. Height Lab



**Vital Capacity:**

Males: Body Surface Area from above x 2.5

Females: Body Surface Area from above x 2.0

# Class Data:

	Height (cm)	Estimated Vital Capacity (L)	Phipps/Bird Vital Capacity (L)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

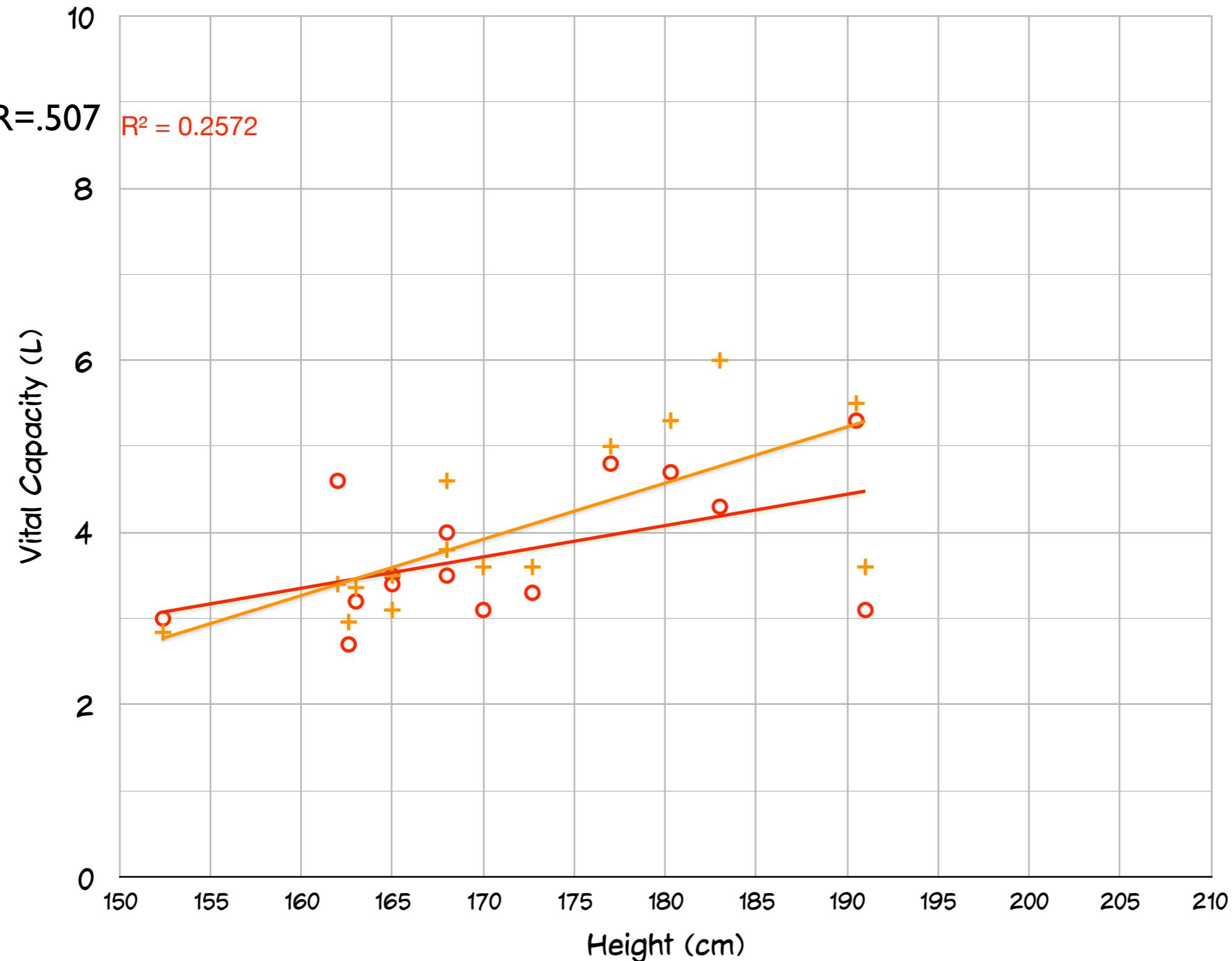
# Class Data

	Height (cm)	Estimated Vital Capacity (L)	Phipps/Bird Vital Capacity (L)
1	190.5	5.5	5.3
2	177	5	4.8
3	162	3.4	4.6
4	165	3.5	3.5
5	183	6	4.3
6	191	3.6	3.1
7	170	3.6	3.1
8	162.6	2.96	2.7
9	172.7	3.6	3.3
10	152.4	2.84	3
11	180.3	5.3	4.7
12	168	3.8	3.5
13	168	4.6	4
14	163	3.36	3.2
15	165	3.1	3.4

R=.717  $R^2 = 0.5152$

# Vital Capacity vs. Height

R=.507  $R^2 = 0.2572$

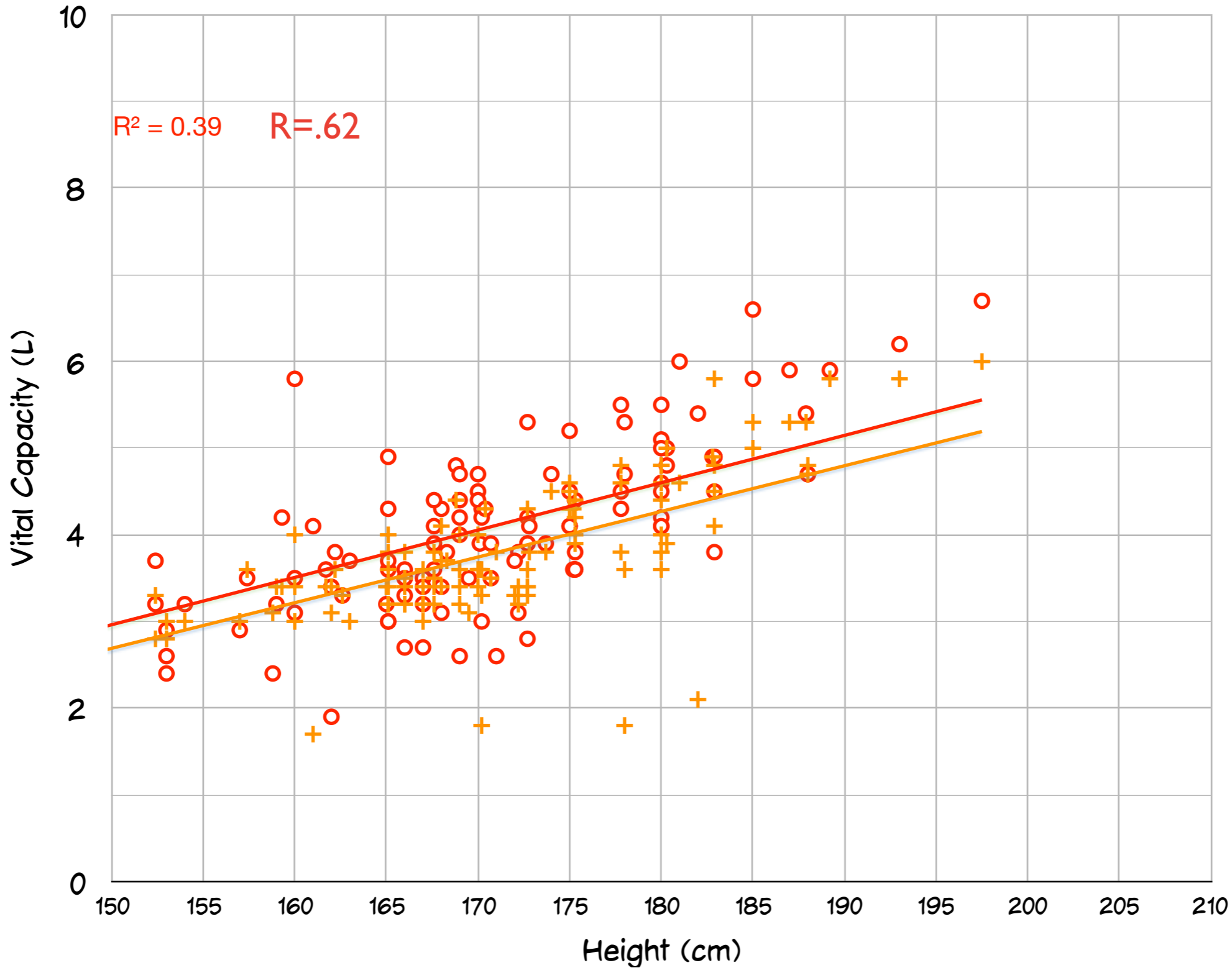


- + Estimated Vital Capacity
- o Phips/Bird Vital Capacity

# All Class Data Vital Capacity vs. Height Lab

$R^2 = 0.4884$   $R = .70$

## Vital Capacity vs. Height



- + Estimated Vital Capacity
- Phips/Bird Vital Capacity



# Pulmonary Ventilation

## 2. Respiratory Physiology:

### I. Respiratory Events

- 1.
- 2.
- 3.
- 4.
- 5.

### II. Pulmonary Ventilation

#### 1. Inspiration

a.

b.

#### 2. Expiration

a.

b.