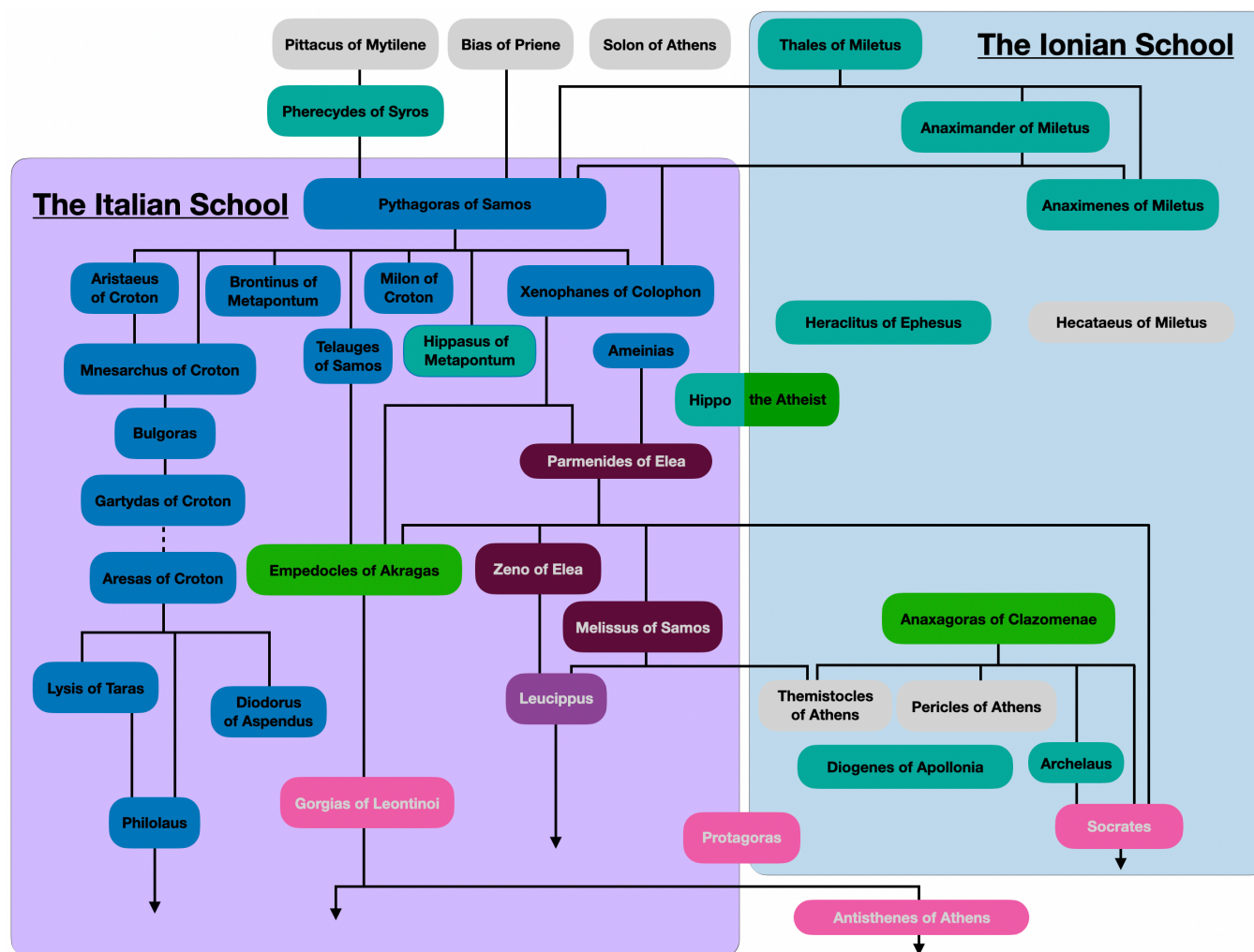


## Unit 15 - Classwork 4: Atomists

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When the Eleatic School of philosophy came to an end, the only two sects of the Italian School were the Pythagoreans and the atomists. In order to answer the following questions about the atomists, read pages 23—28 in Unit 15.



1. Leucippus disagreed with Anaxagoras about determinism. (See pages 23—28 in Unit 15.)

(i) What is *determinism*?

(If you don't remember, feel free to look up the definition, and you may copy the definition you find.)

(ii) Was Anaxagoras a determinist? Why or why not? Explain.

(iii) Was Leucippus a determinist? Why or why not? Explain.

2. Leucippus disagreed with Melissus about movement and the void. (See pages 25—32 in Unit 11.)

(i) In order to help you clarify how Leucippus disagreed with Melissus, fill in the blanks.

LINE 1	If something changes place, then something moves through the void.	<i>assumption (hypothesis)</i>
LINE 2	If something moves through the void, then the void exists.	<i>assumption (hypothesis)</i>
LINE 3	_____.	<i>assumption</i>
LINE 4	_____.	<i>In a modus ponens syllogism, if the premises are Line 1 and Line 3, then Line 4 is the logical conclusion.</i>
LINE 5	_____.	<i>In a modus ponens syllogism, if the premises are Line 2 and Line 4, then Line 5 is the logical conclusion.</i>
LINE 6	_____.	<i>assumption</i>
LINE 7	_____.	<i>In a modus tollens syllogism, if the premises are Line 2 and Line 6, then Line 7 is the logical conclusion.</i>
LINE 8	_____.	<i>In a modus tollens syllogism, if the premises are Line 1 and Line 7, then Line 8 is the logical conclusion.</i>

***modus ponens***

(affirming the antecedent)

Premise 1: If **P** then **Q**.  
 Premise 2: **P**.  
 Conclusion: Therefore, **Q**.

***modus tollens***

(denying the consequent)

Premise 1: If **P** then **Q**.  
 Premise 2: *not-Q*.  
 Conclusion: Therefore, *not-P*.

**valid**

(ii) Which one of the two philosophers would've agreed with the *modus tollens* syllogisms? (See pages 25—32 in Unit 11.)

(iii) Which one of the two philosophers would've agreed with the *modus ponens* syllogisms? (See pages 25—32 in Unit 11.)

3. Democritus *agreed* with Leucippus about atomism. (See pages 23—28 in Unit 15.)

(i) Leucippus made a distinction between an atom and an atom's size. According to him, how is an atom different than its size?

(ii) According to Leucippus and Democritus, what are the only two kinds of thing that exist?