Differences Between SI and CI Engines

Orientation:
In this activity, your team will compare the operation of SI and CI engines. These stem from fundamental differences in how combustion occurs and what operational constraints are associated with each engine type.

Learning Objectives:
1. Explain how ignition control is different from load control in an engine.
2. Recognize differences between SI and CI engines from the standpoint of ignition control, load control, fuel/air ratio (equivalence ratio), and the mechanism responsible for engine knock.

Targeted Skills:
Inquiring – asking key questions
Identifying Assumptions – examining preconceptions/biases
Persuading – using information and logic to selectively convince others
Accepting Help – overcoming personal misconceptions with input/coaching from others

Task:
Complete the following table, including definitions for terms cited in the first column.

	SI Engines	**CI Engines**
IGNITION CONTROL		
LOAD CONTROL		
FUEL/AIR RATIO		
Mechanism Responsible for ENGINE KNOCK		