MODULES

PARENT BRIEFING

Module

Engines

- Explore the historical events and technological discoveries that help make the engines of the twenty-first century possible.
- Compare the processes involved in two- and four-stroke reciprocating internal combustion engine cycles.
- Discover similarities among all engines.
- Learn safety practices to follow when using hand tools.

Session Focus

1 History of Two- and Four-Stroke Engines

2 Hand Tool Classification, Identification, and Safety

3 Parts and Procedures

4 Valve Train Components, Valve Clearance

5 Compression System, Four-Stroke Process, Measurements

6 Compression System, Governor System, Engine Systems

7 Ignition System, Cooling System, Spark Tester

Dear Parent,

As parents and teachers, we realize it can be hard to get a child to discuss what he or she is learning in school. We hope the information provided on this page will assist you in communicating with your child about what he or she is learning.

Your participation in the learning process is extremely important, as you are your child's best teacher.

For the next few days, your child will learn about the operation of the four-stroke reciprocating internal combustion engine. He or she will explore major engine systems by disassembling and reassembling a Briggs & Stratton 5.5 hp horizontal shaft engine. You may want to keep your lawn mower in a safe place!

Words students will learn in this Module include:

- cam lobes
- camshaft
- crankshaft
- energy
- engine block
- fuel
- intake valve
- reciprocal
- stroke
- torque

Questions for Discussion

During the course of this Module, your child will be assessed on key concepts and activities. You might want to discuss these concepts and activities with your child. He or she will be asked to:

- Discuss when fasteners should be "snugged" and demonstrate the rule of thumb to follow to snug a fastener. *(The aluminum engine block can be easily damaged by overtightening the fasteners. As a rule of thumb, snug is when you tighten a fastener with a tool using only your fingers.)*
- Evaluate the importance of keeping tools in their designated storage spaces when they are not in use. *(Answers may vary but might reference safety and the fact that keeping tools in their designated storage container when they are not in use makes it easier to find tools when they are needed.)*

Student: _____

Parent: _____

PITSCO EDUCATION