

# BattleBots IQ Battery Selection Sheet

NAME \_\_\_\_\_ DATE \_\_\_\_\_

**Directions:** Use this sheet to record information gathered during the Battery Search. A sample Battery Selection Problem is offered in order for participants to develop battery search and selection strategies and experience.

Battery Make/Description	Model#	Wgt/lbs	Volume/ci	Ah	Voltage	Price
Wild Horses Inc./ Extractor Available locally/In stock	XG470	18 lbs.	210 c.i.	17	12	\$45.00

Battery Make/Description	Cost/Unit Volume	Cost per Ah	Cost per lb.
Wild Horses Inc./ Extractor Available locally/In stock	\$0.21/c.i.	\$2.65/Ah	\$2.50/lb

**Problem:** Find the best Sealed Lead Acid Battery that meets the following specifications;

**Weight Under 14 lbs    Rated Capacity 17 – 20Ah    12 Volts**

**Select the best battery based on:**

**Volume      Price      Availability**

Procedure:

1.) Determine several sources from which to gather battery information and pricing. These might include a local automotive parts dealer and manufacturers web sites.

2.) Begin by searching manufacturers web sites in order to obtain experience in locating battery products and information. Here are some battery sites that offer detailed product information.

- Hawker Batteries [<http://www.hepi.com>]
- Yuasa Batteries [<http://www.yuasabatteries.com>]
- CSB Batteries [<http://www.csb-battery.com>]

3.) Select several promising batteries and record the specifications in the battery matrix above. Be sure to use the dealer locating services offered on the websites and record the battery information and the dealer location and phone number.

Please note that significant effort and time commitments are required to obtain usable information necessary to determine the BEST battery or component. Metric to inch conversions are often required and volumetric calculations are necessary. This is an open ended problem with out a determinate answer. It is expected that many students will have multiple answers to this problem. This is typical in the world of BattleBots design, electro-mechanical design and engineering in general.

4.) Determine the most suitable battery with respect to the design parameters offered above and call the dealers to determine availability and cost.

5.) Present your findings to the BattleBots team members, either in the form of a 2 slide power point presentation or a single page written report. Design and research information should be communicated clearly and accurately to help determine the most suitable batteries or components for a BattleBot.

This exercise is a valuable lesson in sourcing, evaluating and presenting information required by a particular need and specified by a particular set of parameters. This is a Transferable skill, and a particularly important skill for BattleBots designers and builders to acquire.

Nearly every component on your BattleBot will require this type of resource sourcing and evaluation effort. This skill will remain with you for life. Good luck and enjoy your efforts, the success of your BattleBot depends on it.