

Name: \_\_\_\_\_

Team # \_\_\_\_\_

Period: \_\_\_\_\_

M.T.H.S. - Auto Tech  
Mr. S. Carlson

Chap #s: \_\_\_\_\_

Date: \_\_\_\_\_

**AUTOMOTIVE SYSTEMS UNIT**  
**Short Research and Presentation Project**  
**THE 8 BIG QUESTIONS & POWERPOINT GUIDELINES**

**A. The 8 BIG QUESTIONS to be covered in your research project and PowerPoint Presentation. Please address all of them by question number and area title in your PowerPoint.**

**1. Purpose of Your System (What is the overall purpose of your system?)**

- a. What is your system's name?
- b. What is a system?
- c. What is your system's overall purpose? What does it do? Describe the major functions of your system?
- d. What is your system's **input** and **output**?
- e. Why is it important?

**2. System and Component Identification (Identify your system & its parts)**

- a. Where is it located? What general automotive category is it part of?
- b. What does your system look like? Please draw a neat full-page sketch (on a separate blank paper) of your system and its' component(s) and label all the important parts with lines going to the parts and attach.
- c. What material(s) is it mostly made from?
- d. What are the major parts that are in your system? How big are the parts?
- e. What other systems are connected to your system?
- f. What are the important dimensions, sizes, and/or numbers connected with your system?
- g. On a separate blank paper make a list of the 10 most important terms and their definitions related to your system.

**3. Proper System Operation (How does your system properly operate?)**

- a. How does it operate? How does it move? (rotate, oscillate, reciprocate?)
- b. If it moves, what makes it move, what order does it follow?
- c. What are the important Science and/or Math principles used in your system? **THIS IS IMPORTANT!**

**4. Common Maintenance (How is your system kept in good condition?)**

- a. How is this system properly maintained? What should all car owners know about this system regarding maintenance?
- b. How often should it be given maintenance and much does it cost?

**OVER**

## **5. System Failure & Trouble-Shooting (How does your system commonly fail?)**

- a. What is the most obvious thing that usually can go wrong with your system? (Which part of your system normally fails first?)
- b. How does it wear out or break?
- c. What are the 3 most common failures to your system (including your most obvious item above?)
  - 1)
  - 2)
  - 3)
- d. How can it be made to last longer?
- e. What does it sound like or feel like when it fails or is failing?
- f. How do you know it is failing or going bad? How expensive is it to keep driving if it's failing?

## **6. System Repair (How is your system repaired?)**

- a. How is it fixed? Which part of this system is usually repaired or replaced?
- b. How much does it cost to buy the new part to repair the system, not counting labor?
- c. How much does labor cost you if you have a new one installed?
- d. How much does it cost to have it professionally fixed vs. fixing it yourself?
- e. How long does it take to be fixed if a garage fixed it versus fixing it yourself?
- f. What tools would you usually need to fix it yourself?
- g. What are some safety issues to be aware of when repairing your system?

## **7. Used Car Checking Over Before Purchase (What do you look for?)**

- a. How do you check for this system's proper operation on a used car?
- b. How can a dishonest used car dealer mask a problem in your system?

## **8. Heavy Duty/High Performance Versions (What do they look/act like?)**

- a. What do Heavy Duty/High Performance versions of your system look like?
- b. How do they perform to a higher level or last longer?
- c. What are the usual brand names and how much do they cost?

## **B. Appropriate 3-D objects to obtain and use as a visual aid.**

A sample of your system or part of it

## **C. Suggested 2-D objects for your presentation IN ADDITION TO YOUR PowerPoint.**

Document Cam items, handout, video, pictures, references to textbook figures, etc.

**Please run other ideas about your presentation by your instructor before presenting.**