

Shelby County Schools Automated External Defibrillation (AED) Program Guidelines

1. Scope

This document describes guidelines for EN-PRO to oversee the **Shelby County Schools** Automated External Defibrillator (AED) Program. This program utilizes employees who serve as trained volunteer responders in cardiopulmonary resuscitation (CPR) and automated external defibrillation therapy in the event of a medical emergency.

2. Purpose

The purpose of this document is to establish consistent guidelines for application, location, maintenance, and various other components described herein involving the early defibrillation program at **Shelby County Schools** facilities, so that EN-PRO can ensure that an effective AED Program is in place to cover designated areas.

3. Definitions

Automated external defibrillator (AED)

A semi-automatic computerized medical device programmed to analyze heart rhythm, recognize rhythms that require defibrillation, and provide visual and voice prompts for the device operator. The AED instructs the operator to deliver an electric shock if indicated after ensuring all personnel are clear.

Volunteer Responder

An employee of **Shelby County Schools** who is trained in the use of an automated external defibrillator (AED) and cardio pulmonary resuscitation and who holds a current certification with any nationally recognized training institution.

Security Personnel

A person or person(s) who have been contracted by **Shelby County Schools** to perform certain security functions and who are required to respond to medical emergencies and who have been trained in the use of an automated external defibrillator (AED) and cardio pulmonary resuscitation and hold a current certification with American Heart Association, American Red Cross or other national recognized training institution.

Cardiopulmonary resuscitation (CPR)

Artificial ventilation and/or external cardiac compression applied to a patient in respiratory and/or cardiac arrest.

Emergency Medical Service (EMS)

Professional responders who have been trained to provide pre-hospital healthcare for patients with real or perceived emergencies who arrive on scene to provide emergency care and to transport patients to a hospital.

Risk

The chance of injury or illness as determined by the presence of hazards and/or the probability of an adverse event occurring.

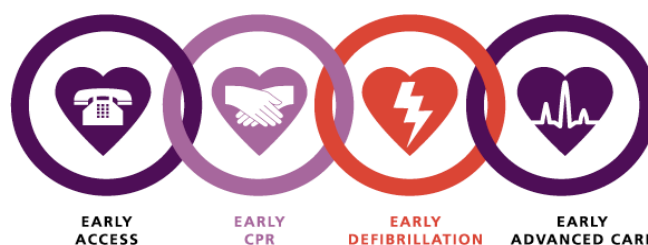
Sudden cardiac arrest (SCA)

A significant life-threatening event when a person's heart stops or fails to produce a pulse.

4. Early Defibrillation Program Overview

EN-PRO provides a medical emergency response plan that includes CPR and emergency defibrillation as described in this Guideline. The goal of the Early Defibrillation Program is to participate actively in the Chain of Survival (see figure 1) by providing effective early defibrillation to any victim of SCA at **Shelby County Schools** facilities, when defibrillation is indicated.

Figure 1. Chain of Survival



5. AED Response Team Roles and Responsibilities

5.1 Corporate Program Administrator

It is the responsibility of the Corporate Administrator to:

- (1) Oversee all aspects of the implementation of the AED Program.
- (2) Review the program annually to evaluate effectiveness.
- (3) Designate an AED Site Coordinator who understands the importance of an AED Program and demonstrates the ability to manage volunteer responder teams.

5.2 Medical Director

It is the responsibility of the Medical Director to:

- (1) Provide medical consultation and expertise.
- (2) Develop and/or approve protocols for the use of the AED and other medical equipment.
- (3) Act as a liaison between the early defibrillation program site and EMS.
- (4) Approve the AED training program and ensure rescuers are properly trained.
- (5) Review all incidents involving the use of the AED.
- (6) Provide Post-event debriefing support.
- (7) Assure program quality is maintained and exercised when needed. The Medical Director will have the authority to suspend or terminate Volunteer Responder privileges based upon deficiencies in compliance with EN-PRO protocols, policies and procedures, training, or inappropriate actions that are not consistent with program policies.

5.3 AED Site Coordinator

It is the responsibility of the AED Site Coordinator for each site to:

- (1) Communicate with EN-PRO regarding who is providing oversight, Volunteer Responders, management and EMS regarding the early defibrillation program.
- (2) Participate in case reviews, responder training and re-certification, data collection and other quality assurance activities.
- (3) Maintain the AEDs and related response equipment.
- (4) Develop and maintain the emergency response guideline.

- (5) Maintain a list of trained Volunteer Responders.
- (6) Ensure compliance with the EN-PRO policies and procedures of the AED program.

5.4 Volunteer Responders

It is the responsibility of the Volunteer Responders to:

- (1) Successfully complete all mandatory training and skills evaluations, as defined by the AHA and mandated by the overseeing Medical Director
- (2) Respond to emergency calls according to the site's AED protocols.
- (3) Follow the guidelines of the AED program and remain current on all certifications required by EN-PRO and its Board of Medical Directors.

5.6 Security Personnel

It is the responsibility of all contracted security personnel to:

- (1) Respond to all medical emergencies, including but not limited to unresponsive persons who may be suffering from Sudden Cardiac Arrest
- (2) Ensure that all appropriate authorities have been contacted.
- (3) Access the nearest AED and begin initial treatment in accordance with the AED/CPR training that they have received.

6. AED Equipment

6.1 Description

The equipment provided in support of the early defibrillation program is to be used in the event of an SCA emergency. This equipment shall not be used outside the parameters of the AED program or for personal use by the employees. Each device should be maintained according to policy and following the manufacturer's guidelines. Shelby County Schools has selected to use the ZOLL AED PLUS for its AED program.

6.2 Location

Each AED location shall include the following items:

Item Description	Quantity
ZOLL AED Plus with battery installed	1
Carrying Case:	1

The AED device should be placed in the location recommended by EN-PRO to ensure an effective response to the targeted program area.

6.3 Accessories

All accessory equipment must remain with the AED unit and must be inspected on a monthly basis, for readiness of use and integrity of the device. All accessories are included with each ZOLL AED Plus.

Item Description	Quantity
CPR-D Padz or Stat II Padz (installed in device)	1 or more
Pack of 10 Type 123A Lithium Batteries (installed in device)	1 or more
Rescue Essentials (attached to back of Padz package)	1 or more

7. AED Maintenance

See Appendix I for the *Periodic Maintenance Checklist*.

7.1 Reports of Damage

Follow the PlusTrac guidelines for all scheduled AED maintenance checks. Report any performance discrepancies, device defects, missing, expired, and/or damaged accessories to the EN-PRO program Support Specialist immediately.

7.2 Required Maintenance Schedule

EN-PRO, your Workplace Defibrillation Program provider for your AED, requires each AED Site Coordinator to complete the Maintenance Verification monthly check on your AED to ensure it is in compliance. If you do not check your AED you will be notified promptly. First you will receive an email reminder 5 (five) days prior to the required verification date

(Default: 28th of each month). If no check is made by the deadline, another email reminder will be sent. If the AED has not been checked within 3 (three) days following the required Maintenance Verification, the Corporate Program Administrator and AED Site Coordinator will be notified electronically.

7.3 Cleaning

When necessary, clean the AED using recommended cleaning agents, per the ZOLL AED Plus User's Guide.

8. AED Response Plan Overview

See Appendix II for the *Response Plan*.

8.1 Call 911 – Notify the local Emergency Medical Services (EMS)

Any employee who learns of a medical emergency shall initiate the Emergency Response Plan immediately by providing the following information:

- Type of emergency.
- Location of emergency.
- Brief description of the victim to include the following: approximate age, gender, whether or not the victim is conscious/breathing, and if not breathing, is CPR being conducted.
- Any special access instructions.

Notifying 911 is a very crucial part in saving lives because it summons trained medical responders on the scene as soon as possible.

8.2 Volunteer Responders Response.

The Volunteer Responders render appropriate care based upon the patient's condition and approved EN-PRO protocols at the scene. They also verify scene safety before assessing the patient.

8.3 Transfer of Patient Care

Once EMS arrives, the Volunteer Responders transfer patient care to the EMS agency for appropriate advanced medical treatment and provide a report including:

- The initial time of the event.
- Any care given prior to the team's arrival.
- Patient's condition upon the team arrival.
- All treatment rendered to the patient by the team.

8.4 Post-Event Procedures

After transferring patient care to EMS responders, the Volunteer Responders conduct the following post-event procedures:

- Notify an EN-PRO Acct. Mgr. immediately at **1-866-352-5433** (M-F, 8-5) or **1-866-238-3434** (after hours & weekends)
- Post-use Incident report completion
- Post-use equipment maintenance.

8.5 Debriefing Procedures

As soon as possible a debriefing should be conducted to evaluate the Volunteer Responders response and allow for evaluation of the need for emotional support of the responders involved. This will be done on an informal basis. The AED Site Coordinator and EN-PRO Medical Director will evaluate all aspects of the emergency response and the strengths and deficiencies of the response plan as revealed by the incident. Modifications made to the plan must be discussed with your EN-PRO Customer support manager and approved by the EN-PRO Board of Medical Directors prior to any changes to the response plan.

9. Protocol Authorization

9.1 Protocol Approval

The AED program Medical Director, in consultation with the Shelby County Schools Corporate Administrator, reviews all AED protocols and addendums and approves them. The protocols are for use only by members of Shelby County Schools's Volunteer Responder teams under the guidance of EN-PRO.

9.2 Protocol Revisions

The EN-PRO Customer support manager and program Medical Director are the only individuals authorized to revise the EN-PRO AED protocols based on an annual review of their content and the AED program's feasibility.

9.3 Operational Guidelines

The Volunteer Responders are to perform only to the level of their training and the guidance provided in the EN-PRO protocols while responding to Sudden Cardiac Arrest. Immunity Protection is only applicable to responding team members under these conditions.

9.4 Protocol Qualifications

All Volunteer Responders are authorized to use the protocols based upon the following criteria:

- Successful completion of the AHA and/or any nationally recognized training entity's approved AED instructional program.
- Must identify self as being a Volunteer Responder to the AED Site Coordinator
- Utilization of the AED during work hours and/or at facility functions.

10. Protocol Guidelines

10.1 AED Application Guidelines

Once the AED is turned on and the pads applied to the patient, the Volunteer Responder does not remove the pads or turn off the device.

10.2 AED Application Criteria

The AED shall be applied only to patients who are at least eight (8) years of age or 55 pounds and unconscious/unresponsive with no signs of circulation and no respiration. If using Pediatric Pads, the device may be used on a patient less than eight (8) years of age and less than 55 pounds.

10.3 Defibrillation Procedures

Defibrillation shocks are to be delivered only in accordance with the EN-PRO AED protocol. If the device advises no shocks, the Volunteer Responder follows the step-by-step procedures of the ZOLL AED Plus and approved protocols for patient care and CPR.

10.4 Excessive Chest Hair

If required for proper defibrillation pad adhesion, any excess hair on the patient's chest is shaved with a prep razor supplied in the AED Rescue Essentials kit. A smooth shave is not required.

10.5 Medication Patches

Using a gloved hand, remove any medication patches, if present, from the patient's chest prior to pad placement and wipe the skin clean with a cloth.

10.6 Implantable Pacemakers and Defibrillators

If the patient has an implantable pacemaker and internal defibrillator, do not place the defibrillation pads directly over the implanted device. If the presence of an implanted device affects pad placement, place the defibrillation pad as close to the recommended pad site as possible.

10.7 AED Abuse or Vandalism

No abuse or vandalism of the AED is to be tolerated. If abuse or vandalism is suspected, it is to be reported to the AED Site Coordinator immediately so that the AED can be evaluated for proper operation.

11. AED Protocol

11.1 Initial Assessment

The first Volunteer Responder conducts an initial assessment to determine the level of response required from the team and outside responding agencies. This initial assessment includes:

- Assessment of the scene for safety of self and other responders.
- Use of gloves and other universal precautions prior to patient contact.
- Assessment of the victim – **If no movement or response:**

11.2 Ensure that 911 *has* been notified and that the local EMS response agency is en-route. Send a second Volunteer Responder (if available) to do this. The following information should be relayed to 911:

- Type of emergency
- Location of emergency
- Breathing/Consciousness of victim and whether or not CPR in progress
- Any special access instructions

11.3 Get the AED device or send second rescuer (if available) to do this.

11.4 CPR/Basic Life Support Procedures

- a. Open the victim's **AIRWAY** and check **BREATHING**
- b. If not breathing, give **2 BREATHS** that make the chest rise
- c. Check for sign of circulation (coughing, breathing, signs of life)
 - i. If signs of circulation are present, give **1** breath every **5** to **6** seconds. If normal breathing returns, stop rescue breathing.
 - ii. If no signs of circulation, give 5 cycles of **30 CHEST COMPRESSIONS** and **2 RESCUE BREATHS** until AED arrives or EMS takes over. Push hard and fast for

chest compressions (100/min) and release completely after each compression. Minimize interruptions in compressions.

d. **AED Arrives**

- i. Turn on the AED and follow the prompts.
- ii. It is **vital** that the AED pads are placed on the victim as soon as possible. If more than one Volunteer Responder is present, one can apply the AED pads while the other continues CPR until told to stop. Make sure that the AED pads are placed in their proper location and that they are making effective contact with the victim's chest. Perform any special procedures required (removal of medication patches or shaving of excessive chest hair). Do not place the AED pads over the nipple, medication patches, or implantable devices.
- iii. **AED Heart Rhythm Analysis**
 1. When the AED pads are properly attached to the victim and connected to the AED, the device will automatically **analyze** the victim for a shockable rhythm
 - a. If **SHOCK ADVISED**:
 - i. CLEAR area
 - ii. PRESS Shock button to deliver a shock to the victim as prompted
 - iii. RESUME CPR IMMEDIATELY for 5 Cycles (30 chest compressions/2 breaths per cycle = approx. 2 minutes).
 - iv. REEVALUATE Circulation and Rhythm
 - b. If **NO SHOCK ADVISED**:
 - i. Resume CPR immediately for 5 Cycles
 - ii. Check Rhythm every 5 cycles
 - iii. Continue until EMS takes over or victim starts to move

11.5 AED Shock Sequence

Based upon EN-PRO protocols and in accordance with AED prompts, conduct the following:

- Administer a single shock to the patient, followed by two (2) minutes of CPR if needed.

Do not initiate CPR until prompted by the device, or the first shock has been administered. After first shock has been delivered, and or analysis did not prompt to shock, verify there are no signs of circulation before continuing CPR.

11.6 No Shock Advised Procedure

If the AED gives a “No Shock Advised” prompt and the patient is not breathing and has no signs of circulation / no pulse, administer the ABC’s of CPR. Continue CPR until one of the following occurs: the patient regains a pulse or signs of circulation are present, the AED advises to stop CPR for analysis, or EMS arrives and assumes care of the patient. If the patient is not breathing normally but does have a pulse and/or signs of circulation, perform rescue breathing until the patient regains adequate respiration at a rate of 1 breath for every 5 seconds. The AED then advises to not touch the patient for analysis. Continue this process until EMS arrives and assumes patient care. Conduct continuous monitoring of the patient’s condition and evaluation of rescue in accordance with Volunteer Responder training.

11.7 Patient Monitoring

Once the AED has been applied to the patient, do not turn off the AED or remove the defibrillation pads unless so prompted by the device (i.e., “Replace battery” or “Replace pads”). The AED will continue background monitoring of the patient’s heart rhythm and alert the rescuers if additional shocks are required.

11.8 Transfer victim care to EMS:

- a. Upon arrival of EMS, transfer patient care to the EMS team.
- b. If requested by EMS, assist in victim care: otherwise initiate **post incident procedures**.

11.9 Post Event Procedures:

- a. The AED Incident Report must be completed by the AED Site Coordinator and forwarded to the EN-PRO Customer support manager within 24 hours of the event.
- b. Contact EN-PRO Customer support manager at **1-866-352-5433** (M-F, 8-5) or **1-866-238-3434** (after hours & weekends) as soon as possible and follow Post-Event Procedures found in Section 13.

12. Transfer of Patient Care to EMS

12.1 EMS Arrival

Upon arrival of EMS, transfer patient care to the EMS team. If requested by EMS, assist in patient care; otherwise, initiate Post Event Procedures (see section 13).

12.2 Oral Report

Give the EMS agency a complete oral report of the event and any significant findings. Unless requested to remain at the scene to assist, complete the AED Incident Report.

12.3 AED Incident Report

The AED Incident Report must be completed by the AED Site Coordinator and forwarded onto the EN-PRO Program Manager. It is the responsibility of the AED Site Coordinator to oversee this data transfer and deliver this report to the EN-PRO Customer support manager.

12.4 Post Event Support and Data Retrieval

Following the use of an AED, contact EN-PRO at **1-866-352-5433** (M-F, 8-5) or **1-866-238-3434** (after hours & weekends) and EN-PRO will commence the post event services at no additional charge. An EN-PRO Customer support manager will complete all required “post use incident” debriefing forms as well as activate the **loaner program**. ZOLL will schedule for a “loaner” AED Plus to be delivered within 24 hours of the incident and provide a return shipping service for the AED that was used in the incident, to be shipped back to ZOLL for data retrieval. Once the data is retrieved it will be sent to the program Medical Director for required review and filing. Upon the completion of data retrieval, the AED unit will be shipped back to the respective AED Site with newly replenished electrode pads and batteries.

13. Post Event Procedures

See Appendices III for the *AED Incident Report*.

13.1 AED Incident Report

The volunteer responder who provided care to the patient documents all accounts of the AED use and any patient care given on the AED Incident Report form. Provide the completed AED Incident Report to the Regional Coordinator, then forward to EN-PRO for required filing/review.

13.2 AED Report Confidentiality

The AED Incident Report is a part of the patient care record and is confidential to both the patient and EN-PRO. This report is not to be copied or altered once completed. Discussion of all aspects of the event is to be limited to team members in formal debriefing or training sessions. To prevent violation of patient confidentiality and liability for your company, Volunteer Responders are to refrain from discussion about any aspects of the medical event outside of the event debriefing.

13.3 AED Defects and Protocol Deviations

Any defects in the AED operation or deviations from protocol in the SCA event are to be reported to the Regional Coordinator immediately for appropriate action and then forwarded on to EN-PRO.

13.4 AED Debriefing Procedures

A debriefing, headed by the AED Site Coordinator and Medical Director is to be conducted with all team members who responded to the event, as well as any bystanders and co-workers who witnessed the event. This debriefing will be held via phone conference with the EN-PRO Customer support manager.

13.5 Post Event AED Check Procedures

Upon receiving your original AED and before returning the AED to service, perform the following post event procedures:

- Check the AED visually for damage or missing parts.

- Replace all supplies used during the event (CPR-D Pads/Batteries).
- Return the AED to its designated area for future use.

The above procedures (with the exception of replacing of supplies) will need to be performed also for the loaner device you receive while the “event-use AED” is having data retrieval procedures conducted by EN-PRO.

14. Training Procedures

14.1 AED Training Requirements

PlusTrac shall all track training requirements and notify each Regional Coordinator of any deficiencies. The AED Site Coordinator shall be responsible for updating PlusTrac with all required training information in the event a new employee is added to the AED program and was not trained by an EN-PRO professional educator. Each volunteer responder must be trained and maintain a current certification in the use of an automated external defibrillator and cardio pulmonary resuscitation through the American Heart Association and/or another nationally recognized training entity as approved by EN-PRO.

14.2 PlusReview – Online Refresher Training Program

Each volunteer responder will be required to participate in the online refreshing training program semi-annually. This program will serve as a refresher to their current certifications and will review the core competencies of cardio pulmonary resuscitation as well as the usage of the ZOLL AED Plus.

APPENDIX I - Periodic Maintenance Checklist (*PLUSTRAC.com Login Instructions*)

EN-PRO recommends that your AED Inspection be conducted and a record of this inspection recorded into the database at www.PlusTrac.com. You will enter a record of inspection for each device of which you are the AED Site Coordinator.

To check your device:

1. Go to location in your facility where device is located, and check the screen on the lower left hand corner of device to verify it contains a green “check.”
2. Check the expiration date on the electrode pads by viewing the tab that will be exposed from the front of the device. Check this tab to verify the pads have not expired.

To enter the record of your inspection:

1. Go to www.PlusTrac.com and Log-in using your AED Site Coordinator Username and Password.
2. On blue Menu bar, select “Check AED.”
3. For each site you are overseeing, you will need to enter the maintenance record.
4. Select either the “green/white check” bubble for good status or “red/white exclamation point” bubble for bad status for each location.
5. Under the “Comment” drop down menu, if no problem with AED, select “No Comment.” Make sure you are entering the checks in conjunction with the serial numbers of your devices, if you oversee more than one AED.
6. Then click “Update AED Check List.” You will receive the following message: “Your AED Check List has been successfully updated!”
7. Under Problem Description, you can type a small note, example: if you checked the device and everything was okay, you can enter “device checked, ok.”

What if something is wrong with my device?

If your device does not have a “green check” status, when you click on the “red/white exclamation point” bubble, the system will open another box that will explain possible troubleshooting actions to take to correct the problem. If you still experience difficulties, please contact EN-PRO at 866-352-5433.

APPENDIX II - Response Plan

The following AED protocol is for use by the Volunteer Responders of your company. The EN-PRO Medical Director/Local Medical Director approves it for use by approved members only. The protocol will be reviewed on an annual basis and replaced by a revised protocol as necessary. See the following AED Protocol Flow Chart.

1. Conduct an initial assessment:
 - a. Assess for scene safety; use universal precautions.
 - b. Assess patient for lack of consciousness, lack of pulse, and signs of circulation.
2. Ensure that 911 have been notified and that the local EMS response agency is en-route. When an emergency call is received, the following information must be obtained:
 - ⇒ Type of emergency
 - ⇒ Location of the emergency
 - ⇒ Breathing/Consciousness of patient and whether or not CPR is in progress
 - ⇒ Any special access instructions
3. Open the patient's airway and initiate CPR until the AED arrives.
4. As soon as the AED is available, turn on the AED and follow the prompts. Make sure that the AED pads are placed in their proper location and that they are making effective contact with the patient's chest. Do not place the AED pads over the nipple, medication patches, or implantable devices. It is vital that the electrode pads are placed on patient as soon as possible.
5. Deliver a shock to the patient when advised by the AED after first clearing the patient area. Administer additional shocks as prompted by the AED until the AED advises no shock, or a series of three (3) consecutive shocks has been delivered.
6. If no shock is advised, check the patient's airway, breathing, and pulse prior to initiation of CPR.
7. If the patient exhibits no pulse or respiration, continue to perform CPR until otherwise prompted by the AED, EMS medics, and/or the Medical Director.
8. Transfer patient care to EMS. No more than 24 hours following the event, document the SCA event and complete the AED Incident Report (complete all fields). Give all documentation to the AED Site Coordinator/Corporate Administrator within 24 hours post-event.
9. Contact an EN-PRO Customer support manager at **1-866-352-5433** (M-F, 8-5) or **1-866-238-3434** (after hours & weekends) as soon as possible and follow Post-Event Procedures found in Section 8.5. Post-event procedures shall commence including:
 - AED Incident Report
 - Notification of Supervisor/AED Site Coordinator/Corporate Administrator
 - Replacement of all equipment used

Appendix III - AED Incident Report

Incident Details

Patient Name: _____		
Patient DOB: ___/___/___	Patient Age: _____	Patient Sex: _____
Incident Date: ___/___/___	Incident Time: _____ (hour: minute)	
Incident Location: _____		

Event History

Patient activity prior to event: _____		
Patient complaints prior to event: _____		
Was the event witnessed?.....	<input type="checkbox"/> No	<input type="checkbox"/> Yes, at _____ (time) / rescuer: _____
Was CPR started?	<input type="checkbox"/> No	<input type="checkbox"/> Yes, at _____ (time) / rescuer: _____

Assessment and Treatment

Were ABC's assessed?	<input type="checkbox"/> No	<input type="checkbox"/> Yes, at _____ (time) / rescuer: _____
Was CPR initiated?	<input type="checkbox"/> No	<input type="checkbox"/> Yes, at _____ (time) / rescuer: _____
Was shock #1 delivered?.....	<input type="checkbox"/> No	<input type="checkbox"/> Yes, at _____ (time) / rescuer: _____
Was shock #2 delivered?.....	<input type="checkbox"/> No	<input type="checkbox"/> Yes, at _____ (time) / rescuer: _____
Was shock #3 delivered?.....	<input type="checkbox"/> No	<input type="checkbox"/> Yes, at _____ (time) / rescuer: _____
Was respiration regained?	<input type="checkbox"/> No	<input type="checkbox"/> Yes, at _____ (time) / rescuer: _____
Was consciousness regained?.....	<input type="checkbox"/> No	<input type="checkbox"/> Yes, at _____ (time) / rescuer: _____
Was patient transferred to EMS?...	<input type="checkbox"/> No	<input type="checkbox"/> Yes, at _____ (time) / rescuer: _____

Report Completed by: _____ Date: ___/___/___

NOTE: Use back of this sheet for additional comments.