



Lesson Plan

Load! Ready! Fire!

Grades

4, 5, 6

Subjects

Math, science

Time allotted

30 minutes

Setting

Classroom and Stones River National Battlefield

Group size

Groups of seven students

Skills

Cooperating, listening

Methods

Students will be introduced to an artillery piece and a mock demonstration of how it works.

Materials

Cannon (on-site) and cannon diagrams

Keywords

Barrel
Battery,
Friction
Lanyard
Primer
Priming wire
Sponge rammer
Thumbstall

Objectives

At the end of the activity, students will be able to:

- *Explain how a cannon is loaded and fired*
- *Identify the parts of a cannon*
- *Work cooperatively to participate in a mock artillery firing*



BACKGROUND INFORMATION

Artillery (cannon) played an important part in the Battle of Stones River and was responsible for almost 80 percent of the casualties. Cannons are organized into batteries. Union batteries usually consisted of six guns while Confederate units normally had four. A battery was organized into sections, having a right, left and sometimes a center. It took seven artillerymen to load and fire one cannon. Each assigned number had a special task for servicing the piece

The gunner was usually a sergeant who was in charge of giving the orders to the rest of the crew. His first command upon hearing “Commence firing” was “Load!”

The crewman at position number one would dampen the sponge rammer in the water bucket and insert it into the cannon barrel while position number three uses his thumb (with the thumb-stall) to cover the vent which creates a vacuum. This action would ensure that all sparks were extinguished from previous shots so no misfires would occur while loading a new round.

Simultaneously, position number five has received instructions from the gunner about the type of round to retrieve from the limber chest where numbers six and seven are preparing the cartridge. Number five puts the round in his haversack and takes it to number two. Along the way he shows it to the gunner who checks it for accuracy.

When five arrives with the cartridge, two takes it and positions it at the front of the barrel. Then number one rams it to the back of the barrel with the wooden end of the sponge rammer.

The gunner steps clear and observe the scene then gives the command “Ready!” The number three crewman uses a priming wire and inserts it into the vent which pops open the cartridge bag. When he steps away number four steps forward and inserts the friction primer into the vent. It is attached to the lanyard (string). Number three holds the lanyard in place while number four takes up the slack. Once the lanyard is at tension, the gunner surveys the scene and on his command “Fire!” number four pulls the lanyard and hopefully the cannon fires.

The steps were repeated until the command “Cease firing!” was heard.

ACTIVITIES

- Identify the parts of the cannon.
- Introduce students to the procedure for firing the cannon.
- Assign students to cannon near positions and have students demonstrate a mock firing.

FOLLOW-UP ACTIVITIES

- Introduce students to the various types of projectiles and range of each. Have students graph distances.

RESOURCES

Thomas, Dean S. *Cannons: An Introduction to Civil War Artillery* Gettysburg, PA, Thomas Publications, 1985.

APPENDIX
Cannon Positions

The Gunner

Stand at the trail of the cannon and give the commands. Also check to make sure all perform their duties correctly. Issue these orders:

LOAD Give the type of ammunition to be fired. For example, solid shot, case or canister. While the cannon is being loaded, take aim using the pendulum hausse sight and elevating screw for elevation. Instruct Number 3 to move the gun from side to side by tapping on the side of the trail. When the cannon is aimed raise both hands and give the command...

READY Step back to observe all positions. When all are clear give the command...

FIRE If anything goes wrong he usually gets blamed.

Number 1

Stand at the right wheel near the front or muzzle of the gun. You are responsible for the spongerammer. It is one of the most difficult and physically taxing jobs. Stand looking forward with the sponge up until the command **LOAD** is given. Then ram the charge after Number 2 places it in the muzzle. Use the weight of your body with the rammer to push the charge to the back of the barrel. You must be careful to only use the right hand on the rammer and keep your body away from the gun's muzzle and wheels. In case of a premature fire this artilleryman would only lose a hand or arm. When the command **READY** is given, bend back on the left foot until the gun is fired. In between firing, sponge the barrel to remove any sparks. When cleaning the barrel, keep a close eye on Number 3 to make sure he gets a good seal on the vent with the thumbstall. Your life may depend on it!

Number 2

Stand at the left wheel near the front or muzzle of the gun. Look forward until the command **LOAD** is given. Then step inside the wheel facing the right. Receive the cartridge from Number 5, face left and

place it in the muzzle. Then step back out of the wheel. On the command **READY**, bend back on your right foot. If the primer fails Number 2 must reprime the piece.

Number 3

Stand outside the right wheel near the back or breech of the gun. At the command **LOAD**, step inside the wheel and place your thumb (Which

should be in a thumbstall) over the vent while Number 1 is sponging or ramming. When the charge is inserted, move to the trail handspike and move the gun to the right or left as indicated by the gunner tapping on the side of the trail. Then return to your original position. On the command **READY** step in and prick the cartridge with the priming wire. Then hold the friction primer in place until Number 4 nods approval. Return to your original position until the cannon is fired.

Number 4

Fires the gun. Stand outside the left wheel near the back or breech of the gun. At the command **LOAD** insert the hook of the lanyard into the ring of the friction primer. On the command **Ready** step in and place the friction primer tube in the vent and have Number 3 hold the lanyard in place. Then step out to a position where the lanyard is stretched tight and nod approval to Number 3 who will step clear of the wheel. On the command **FIRE** keep your right arm straight and pull the lanyard firmly downward and to the rear. Put your weight on your left foot. Look away from the gun to keep the lanyard hook from hitting you in the face.

Number 5

Stand to the rear of the gun toward the limber. At the command **LOAD** repeat the round ordered by the gunner then walk back to the ammunition chest to receive a single round from Number 7 and place in the haversack. Take it forward and deliver to Number 2 and return to your original position. If firing shells or case shot, show it to the gunner before delivering to Number 2.

Number 6

Manages the limber and ammunition chest with Number 7. On the command **LOAD** opens the ammunition chest for Number 7 and closes it immediately after he has prepared the round. It is important for Number 6 to keep an eye out for anything that might set the ammunition on fire, especially during battle when bullets or pieces of shell could ignite the chest.

Number 7

Manages the limber and ammunition chest with Number 6. On the command **LOAD** listen carefully to the gunner and Number 5 to order the type of round for you to prepare. Fix the round and place in Number 5's haversack.