The American Revolution in the Hudson Valley
Lesson Plan

Topic: **Chain Across the Hudson Lesson Plan A**
Locating the Chain

Time Frame 40 Minutes

Grade Level: 4th Grade

State Standard(s): Social Studies
1. Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live – local, national, and global – including the distribution of people, places, and environments over the Earth's Surface.

2. Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.

Content Area: History & Geography

Strategy/Strategies: Inquiry & Cooperative Groups

Material(s): **Map** showing the course of the Hudson River with Topographical Features.
Map showing location of Forts along the River
Letter from Washington to General Putnam - 4th grade version

Teacher Resources: Primary Document(s)
Letter from General George Washington to General Putnam requesting that he locate and identify to best location for a chain to obstruct the British advance up the Hudson River.
Books
Diamant, Lincoln. *Chaining the Hudson; The Fight for the River in the American Revolution*. New York: Citadel Press, 1994.

Objective(s): 1. Students will use available knowledge, the course of the River, topography, and location of the Forts to determine the best place to construct a chain barrier on the Hudson River to stop British ships of war.

Procedure:

Opening: 1. Students receive a **letter** from General George Washington requesting them to locate and identify the best location for a chain that would cross the Hudson River and stop the forward advance of British warships.

2. Students receive a map with topographical features, course of river, location of Forts and Iron Works.

Body: 1. Students work in cooperative groups to determine best location for the chain.

2. Students prepare a justification of chosen location. Justification should include reasons for the choice based on the course of the River, location of Forts, nearness of iron works, and topographical features other than the River.

Closure: 1. Each group will share its choice and justification.

2. Choices will be compared to the actual **historic choice**.

Follow Up: **Lesson Plan B**; Calculating Materials and Cost

Headquarters
2 December, 1777.

*Dear (teacher)*_____*:*

The importance of the Hudson River, and the necessity of defending it, is well understood. It runs through the whole state, and is the only passage by which the Enemy from New York, or any part of our Coast, can ever hope to cooperate with an army from Canada. The possession of it is essential to preserve the communication between the eastern, middle, and southern states. This river is our means of transportation – of food, supplies, and troops – we must be able to travel it to go north, east, or west.

You all know this. I am therefore asking you to secure the southern end of the Hudson River against the British Navy as soon as possible and by whatever means necessary. Seize the present opportunity, and employ your whole force and all the means in your power for erecting and completing, as far as it shall be possible, such works and obstructions as may be necessary to defend and secure the river against any future attempts of the Enemy. You will consult Governor Clinton, General Parsons, the French Engineer, Colonel Radiere, and*(teacher)*_____ to devise a plan.

The Enemy has already gotten up the Hudson once, and destroyed all the houses, mills, and towns as far as Clermont. Unless we can stop their advance, they will do this again in the spring. They may perhaps go as far as Albany, the only Town in the State of any importance remaining in our hands, and burn it too.

To prevent these evils, therefore, I expect you all to exert every nerve, and ounce of energy needed in constructing the proper Works and means in defense of the Hudson.

I am, Dear Sir, &c."

Headquarters, 2 December, 1777.

Dear Sir:

The importance of the Hudson River in the present context, and the necessity of defending it, are subjects which have been so frequently and fully discussed and are so well understood, that it is unnecessary to enlarge upon them. These facts at once appear, when it is considered that it runs through a whole state; that it is the only passage by which the Enemy from New York, or any part of our Coast, can ever hope to cooperate with an army from Canada; that the possession of it is indispensably essential to preserve the communication between the eastern, middle, and southern states; and further, that upon its security, in a great measure, depend our chief supplies of flour for the subsistence of such forces, as we may have occasion for, in the course of the war, either in the eastern or northern departments, or in the country lying high up on the west side of it. These facts are familiar to all; they are familiar to you. I therefore request you, in the most urgent terms, to turn your most serious and active attention to this infinitely important object. Seize the present opportunity, and employ your whole force and all the means in your power for erecting and completing, as far as it shall be possible, such works and obstructions as may be necessary to defend and secure the river against any future attempts of the Enemy. You will consult Governor Clinton, General Parsons, and the French Engineer, Colonel Radiere, upon the occasion. By gaining the passage, you know the Enemy have already laid waste and destroyed all the houses, mills, and towns accessible to them. Unless proper measures are taken to prevent them, they will renew their ravages in the spring, or as soon as the season will admit, and perhaps Albany, the only Town in the State of any importance remaining in our hands, may undergo a like fate and a general Havoc and devastation take place.

To prevent these evils, therefore, I shall expect that you will exert every nerve, and employ your whole force in future, while and whenever it is practicable, in constructing and forwarding the proper Works and means in defense. The troops must not be kept out on command, and acting in detachments to cover the country below, which is a consideration infinitely less important and interesting.

I am, Dear Sir, &c.”

The American Revolution in the Hudson Valley
Lesson Plan

Topic: **Chain Across the Hudson Lesson Plan B**
Calculating Materials and Cost

Time Frame: Two, 40 Minute periods

State Standard(s): Math
Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.

Social Studies
Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live – local, national, and global – including the distribution of people, places, and environments over the Earth's Surface.

History
Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.

Economics
Students present economic information by developing charts, tables, diagrams, and simple graphs.

Content Area: Math, History, and Economics

Strategy/Strategies: Inquiry/Cooperative Learning

Material(s): **Transcription of the contract** to construct the chain
Fourth Grade version of the contract to construct the chain

Objective(s): Students will use resource material to quantify information about the chain and the total cost of the construction of the chain across the Hudson River.

Procedure:

Opening:
1. The class will receive a contract from the United States Army to construct the chain that will cross the Hudson River.

Necessary Facts for this exercise:
As iron-workers, the students know that each link will weigh about 132 lbs.

Body: Students, in cooperative groups, will be responsible for preparing a simple chart showing the total number of links necessary, the approximate tonnage of the completed chain, and the total cost of the completed chain.

Closure: 1. Groups share their charts.

2. Class might discuss whether there is sufficient information to calculate the cost of transporting the chain form the Sterling Iron Works to West Point.

Follow-Up Activity (Day 2):

1. Construct a model of the chain at West point.

2. A. Each student will construct one link of the chain to actual specifications, as they appear in the contract.

   B. Alternative: Students may work in cooperative groups to decide on a division of labor that will quickly produce links and a chain.

3. Demonstrate the construction of one link for the class.

Closure: 1. Put links together and compare to actual length of the Chain.

2. Discuss the similarities and differences between the simulated chain and the actual chain.

Possible Questions:

How are the chains similar?

How are the chains different?

How would the construction of the actual chain be more difficult than the simulated chain?

Articles of agreement between Noble, Townsend & Company, Proprietors of the Sterling Iron Works, in the State of New York, of the one part, and Hugh Hughes, D. Q. M. G. to the Army of the United States, of the other part, witnesseth:

That the said Noble, Townsend & Company, jointly and severally engage to have made and ready to be delivered at their works to the said Hugh Hughes, D.Q.M.G. or to the D.Q.M.G. of the Middle Department for the time being, on or before the first day of April next ensuing the date hereof, or as much sooner as circumstances will admit, an iron chain of the following dimensions and quality, that is, in length five hundred yards - each link about two feet long, to be made of the best Sterling Iron, two inches and one quarter square, or as near thereto as possible, with a swivel to every hundred feet, and a clevis to every thousand feet, in the same manner as those of the former Chain.

The said Noble, Townsend, & Company also engage to have made and ready to be delivered at least twelve tons of anchors of the aforesaid iron and of such sizes as the said Hugh Hughes or his Successors in Office shall direct, in writing, as soon as the completion of the chain will admit.

In consideration of which the said Hugh Hughes, in behalf of the United States, agrees to pay to the said Noble, Townsend & Company, or their order, at the rate of four hundred and forty pounds for every ton weight of Chain and Anchors delivered as before mentioned, unless the General Regulations on Trade, Provisions, &c. which are now supposed to be framed by Deputies from the United States shall be published and take effect before the expiration of four months from the date of this; in which case the price is to be only 400 pounds per ton for the said chain and anchors. The payment, if demanded, to be made in such proportion as the work shall be ready to be delivered which shall be determined in ten days after the requisition made by a number of competent judges, not less than three nor more than five, unconcerned with the Proprietors, or the Works, and if condemned, to be completed at the expense of the said

Company, who are also to repair, as aforesaid, all failures of their work, whenever happening, whether at the Works or River, or in extending it across.

The said Hugh Hughes also engages to procure of the Governor of this state, for the said Noble, Townsend & Company, an exemption for nine months from the date hereof, from military duty for sixty artificers that are steadily employed at the said chain and anchors, till completed. Agreeable to the said exemptions, the said Company complying with the terms thereof; providing also that the said Company give the said Hugh Hughes, or his successors in office, the [refusal], by letter, of all the bar iron, anchors, &c., made at the said Works in the said term of nine months, at the current price, unless what is necessary to exchange for clothing and other articles for the use of the works.

It is also agreed, by the said parties, that if the teams of the said Company shall transport the said chain or anchors, or any part thereof, to any assigned post, they shall receive for such services the same pay as shall be given by the United States for the like; the teams of the Company being exempted from the impress by any of the Q.M.G.'s Deputies during the space of nine months.

Lastly, the said Company engage to use their utmost endeavors to keep seven fires at the forging and ten at welding, if assisted with such hands as are necessary and can be spared from the army, in case of their not being able to procure others, the said Company making deductions for their labor.

In witness whereof, the parties have interchangeably subscribed their names this second day of February, one thousand seven hundred and seventy-eight, and in the second year of American Independence.

"Peter Townsend, in behalf of Noble & Company,
Hugh Hughes, in behalf of the United States.
In presence of P. Tillinghast."

Articles of agreement between The 4th grade class of: (teacher's name)_____ in the School of (school name):_____ and Hugh Hughes, D.Q.M.G. to the Army of the United States, Witnesseth:

That each student of the said 4th grade class of (teacher's name) _____, has agreed to make and deliver from their classroom, no later than 90 days from the date of this contract, February 2, 1778, an "iron" chain of the following dimensions and quality:

500 yards long,
each link shall be about 2 feet long, and
2 and ¼ inches square, (or as near to as possible).

The said Class of (teacher's name)_____ also agrees to make at least 12 tons of anchors of the same iron as the chain as soon possible.

As payment for this chain and these anchors, Hugh Hughes, on behalf of the United States, agrees to pay the class of (teacher's name) _____ $440.00 for every ton of chain produced by (same date as above)_____. Any chain delivered after that date will paid for at the rate of only $400.00 per ton.

Hugh Hughes will also ask the Governor of the State to excuse the members of the class of (teacher's name) _____ from serving in the Continental Army.

The Continental Army is responsible for moving the chain from the forge to the forts where it will be used. If the Class carries their chain - or any parts thereof - to the Forts where they will be used, each member of the Class will be paid at the same rate that the United States is currently paying its soldiers.

In witness whereof, the parties have both signed their names this second day of February, one thousand seven hundred and seventy-eight, and in the second year of American Independence.

"Teacher: _____, in behalf of the Class, Hugh Hughes, in behalf of the United States. In presence of P. Tillinghast."