



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION
CORNWALL IRON FURNACE
P.O. BOX 251
CORNWALL, PENNSYLVANIA 17016

PRE-VISIT DISCUSSION:

Name things (in your home, etc.) that are made of iron (and steel).

What iron objects might have been in your home had you lived 200 years ago?

What is iron?

What is ore?

Were there iron furnaces or forges near your home or school? What remains today?

Do names of furnaces or forges survive in the names of towns, streets, streams, or other places near your home or school?

TIME LINE



The time line shows how the most important events in the history of Cornwall Iron Furnace relate to each other and in what sequence they occurred.

| | | |
|---|------|--|
| Peter Grubb buys 637 acres of land with outcrops of iron ore and builds a small experimental furnace | 1730 | |
| | 1740 | |
| | 1742 | Peter Grubb builds Cornwall Iron Furnace |
| Peter Grubb grants a 20 year lease on Cornwall Furnace to various men, including Amos Gehret and Jacob Giles of Maryland | 1745 | |
| | 1754 | Peter Grubb dies |
| | 1765 | Peter's sons Curtis and Peter II take over operations at Cornwall Furnace |
| Robert Coleman buys shares of Cornwall Furnace and the ore mines from Curtis and Peter and their heirs. By 1798 he owns all of the furnace and 5/6 of the mines | 1785 | |
| | 1798 | |
| | 1829 | The Union Canal opens for shipping |
| The North Lebanon Railroad is completed from the Union Canal to Cornwall | 1855 | |
| | 1856 | The steam engine, "Great Wheel" and blowing tubs are installed; the furnace building is remodeled |
| Cornwall Iron Furnace stops operating | 1883 | |
| | 1932 | Robert Coleman's great-granddaughter, Mrs. Margaret Buckingham, gives Cornwall Iron Furnace to the Commonwealth of Pennsylvania, and today it is administered by the Pennsylvania Historical and Museum Commission |

VOCABULARY LIST

Cornwall Iron Furnace

1. **BLOWING TUBS:** Huge wooden, barrel-like cylinders from which air is forced by pistons through the tuyere pipes into the furnace; part of the blowing equipment which provides the cold air blast to the furnace.
2. **CANAL:** A man-made waterway used for transportation; the Union Canal passed north of Lebanon as it joined the Schuylkill River at Reading and the Susquehanna River at Harrisburg; large quantities was shipped from Cornwall Iron Furnace by way of the Union Canal during the first half of the 19th Century.
3. **CANNON:** A huge gun, cast of iron in the floor in front of the furnace; Cornwall Iron Furnace made 42 of them and many cannonballs during the Revolutionary War.
4. **CHARCOAL:** Wood which has been smoldered to dry it out; made in the forest, charcoal is used in the furnace to melt iron from the ore. Great amounts were stored in the charcoal house.
5. **COLEMAN, ROBERT:** owner of the Cornwall Iron Furnace and mines from 1798 until his death in 1825; his family owned the furnace complex until 1932, when it was given to the Commonwealth of Pennsylvania.
6. **COLLIER:** The man who tends the charcoal piles in the woods and produces charcoal for the furnace; he lives in a crude hut built near each pile.
7. **CORNWALL:** The name given to the furnace and mines by Peter Grubb, the builder of Cornwall Iron Furnace; it was named for the town in England from which his father had come to America.
8. **FOUNDER:** The man in charge of the iron-making at the furnace; an expert, he decides when the iron is ready to cast; he directs other workers and pours melted iron into molds to make finished products.
9. **FURNACE:** A stone structure, like a flat-topped pyramid, in which iron is melted from iron ore.

CHARCOAL
COLLIER



10. **GREAT WHEEL:** Part of the blowing equipment which provided the cold air blast for the furnace; the Great Wheel drives giant pistons in the blowing tubs, forcing air through pipes into the furnace; the Great Wheel measures in diameter, 76 feet in circumference; it is turned by the steam engine.
11. **GRUBB, PETER:** First owner of the iron ore mines and builder of the Cornwall Iron Furnace in 1742; he lived from 1700 to 1754.
12. **IRON ORE:** A rock found in the earth which contains the metal iron; poured into the furnace and heated, the metal melted out of the rock.
13. **LIMESTONE:** A gray-colored rock Used in iron-making; it combines with the impurities in the iron ore and floats them away on top of the melted iron; it is called a flux.
14. **OPEN PIT MINE:** The huge open mine just south of the furnace from which iron ore was taken; ore was extracted here from the 1730's until 1973.
15. **PIG IRON:** The main product of the iron furnace; somewhat crude and impure, pig iron is further refined at a forge and then by the blacksmith.
16. **PLANTATION:** The area surrounding the iron furnace, including forests, worker's homes, the office, store, blacksmith's shop, carpenter's shop, butcher shop, mule stables and the mansion of the ironmaster; all of the plantation depended on the success of the furnace operation.
17. **STEAM ENGINE:** A machine installed in the furnace building in the mid-19th century; powered by steam from two boilers on top of the furnace stack; it turns the Great Wheel.
18. **STOVE PLATES:** Iron sections which are connected to form a stove which may burn wood or coal; these plates were cast in sand molds by the founder and his helpers.

ORE MINER



©Constantine Kermes '68