

# 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?

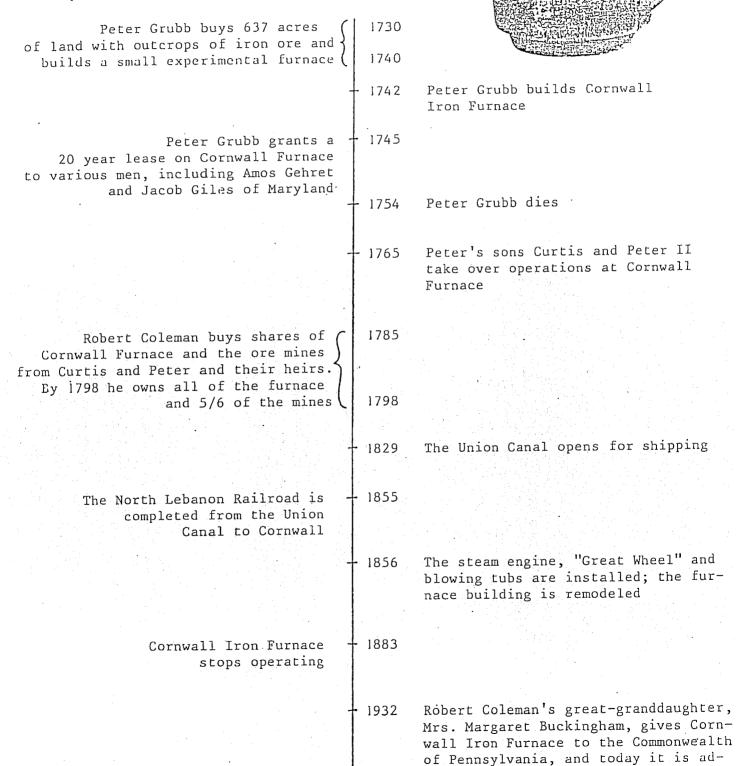
What is ore?

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.



ministered by the Pennsylvania Histor-

ical 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. <u>CANAL</u>: A man-made waterway used for transportation; the Union Canal passed north of Lebanon as it joined the Schuykill 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 19<sup>th</sup> Century.

3. <u>CANNON</u>: 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. <u>CHARCOAL:</u> 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. <u>FURNACE:</u> A stone structure, like a flat-topped pyramid, in which iron is melted from iron ore.



- 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. <u>LIMESTONE</u>: 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. <u>PIG IRON:</u> 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-19<sup>th</sup> 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.



© Constantine Kermes 68