



## Hopewell Furnace Vocabulary

*This vocabulary list can be used to prepare the teacher and the students for the visit to Hopewell Furnace.*

- BELLOWS** ..... A device for producing a stream of air under pressure; in iron-making this air provided the oxygen to keep the furnace fire burning and was contained in two large barrels called blowing tubs at Hopewell.
- BIG HOUSE** ..... Residence of the ironmaster or the manager of the iron furnace. It was referred to as the “Big House” in contrast to the small tenant houses where the workmen lived.
- BLACKSMITH** ..... Person who works, repairs and shapes iron using a forge, anvil, hammer, and other tools. A blacksmith was an important artisan in early America. At Hopewell, in addition to making horseshoes, nails, and hinges, he often had to make mechanical repairs to the furnace equipment.
- BLAST** ..... The period of time during which the furnace was in operation. “In blast” was the time the furnace was making iron. “Out of blast” was any period when it was not operating.
- BLAST FURNACE** ... A furnace where blasts of air are pumped into the fire to speed up the smelting process.
- BRIDGE HOUSE** .... The covered walkway between the charcoal house and the top of the furnace where the ingredients are placed into the chimney by the filler.
- CAST HOUSE** ..... The building in front of the furnace where men work at casting iron products.
- CHARCOAL** ..... The fuel used at Hopewell Furnace to melt the iron ore and limestone inside the furnace, made by burning wood in a very limited air supply. Charcoal was ideal fuel because it was almost free from sulfur and acted as part of the flux needed to smelt ore.
- CLEANER** ..... The person who files the rough edges off the cast iron products and also cleans the sand off the iron products before they are packed for shipment.
- CLERK** ..... Person who acts as business assistant to the ironmaster, manages the company store, keeps track of the iron company’s business records, and is the paymaster.
- COLLIER** ..... A person who makes charcoal from wood; he often lived in the woods in a crude shelter, while he tended his charcoal pits.
- CORD** ..... A unit of measure for cut wood; a stack that measures 8 feet long, 4 feet high, and 4 feet deep.
- FARMER** ..... A person who manages a farm by growing crops and tending animals.
- FILLER** ..... The person with the dangerous job of filling the furnace stack with iron ore, charcoal, and limestone.
- FLASK** ..... The wooden frame used to hold sand in place when making cast products.

- FLUX** ..... This is a cleaning agent used in removing the impurities from an ore; limestone was used at Hopewell in iron ore smelting. When added to iron ore and heated, the flux mixes with the impurities in the ore and creates slag, leaving the metal (iron) behind.
- FOUNDER**..... The skilled manager of the furnace operation. He oversaw everything that went into and came out of the furnace. His job was to produce high-quality iron products.
- FURNACE** ..... A stone structure where iron is produced at a high temperature (about 3000 ° F).
- GUTTERMAN**..... An unskilled workman at the furnace whose duty it is to remove slag and cinder from the work area. He also cast pig iron bars in the sand floor of the cast house.
- HOUSEWIFE** ..... A woman who manages a home and takes care of domestic affairs.
- IRON** ..... Comes from iron ore; used to make a variety of tools and products.
- IRON ORE** ..... A rock that is mined from the Earth and contains the metal iron.
- IRONMASTER** ..... The general manager of the furnace, usually the owner.
- KEEPER** ..... The assistant to the founder. He directs the furnace work when the founder is not present.
- LIMESTONE** ..... A rock taken from quarries and used as flux during the smelting of iron ore at Hopewell.
- MAID** ..... A servant employed to perform domestic duties such as cleaning, cooking, and serving food.
- MINER** ..... A worker who removes a rock, mineral, or ore, such as iron ore, from the Earth.
- MOULDER** ..... A person who makes the molds used to cast products such as pots, pans, and stove parts.
- PIG IRON** ..... Raw cast iron of uniform shape and size, usually a rough bar. These pig iron bars were formed by moulds in the sand floor of the cast house that resembled little pigs nursing on the belly of their sow. The pig iron bars were then sold to a forge or finery for further refinement into wrought iron or other fine cast products.
- PLANTATION** ..... A community where the owner and employees both work and live; at Hopewell it contained the furnace, shops, school, homes, fields, orchards, and other places.
- QUARRYMAN** ..... Person who works in a quarry removing stones such as limestone.
- RACE** ..... A ditch that carries water to or from the water wheel.
- SLAG** ..... The waste product of the iron making industry.
- SMELTING**..... The process by which iron is removed from iron ore.
- TEACHER** ..... A person who gives lessons to a student.
- TEAMSTER**..... A person who drives a team of horses, oxen, or mules for hauling.
- TENANT HOUSE** .... House owned by the ironmaster and rented by an employee.
- WATERWHEEL** ..... Large wheel turned by running or falling water; at Hopewell it pumped the bellows which produced the air blast for the furnace.