

Anatomy of a Timber Frame Barn

Subject: Social Studies: Agriculture

Grade Level: 5-8

McRel Standards: US History Era 6: The development of the Industrial United States (1870-1900)

Benchmark: Understands how the rise of corporations, heavy industry, and mechanized farming transformed American society.

Anticipatory Set: Have students think about the inside skeleton of a barn. What do they think that it would look like? Why would it be important to understand the skeletal design of a barn?

Purpose: Learn about the style and the anatomy of the Charles Fish Barn.

Objective: To help students learn about the English style barn that the Charles Fish Barn exemplifies. To help students learn the names of the various wooden timbers that are the building blocks of the Charles Fish Barn. To help students understand some of the terminology associated with the structure of the Charles Fish Barn.

Teaching to the Objective:

- Step 1: Reproduce and give students the two-page handout on the Anatomy of the Charles Fish Barn.
- Step 2: Give students an opportunity to read and study the handout.
- Step 3: Give students a copy of the barn diagram that is not labeled. Ask them to label the following things on their diagrams.
- Label at least one post on each of the four diagrams.
 - Label at least two girts on the top diagram.
 - Label at least one brace on the top and two bottom diagrams.
 - Label at least one rafter on the top and two bottom diagrams.
 - Label a purlin on the top and two bottom diagrams.
 - Label at least one Queen post strut on each of the two bottom diagrams.
 - Label a plate on the top and two bottom diagrams.
 - Label at least one tie beam on the two bottom diagrams.
 - Label the swing beam on the diagram of Bent D. (What was the purpose of the swing beam?)
 - Label the five bays on the top and middle diagrams.
 - Label several studs on the middle and bottom diagram of Bent A. (Discuss the purpose of the studs.)
 - Label the doors you find on the top and middle diagrams. (Discuss what each door was used for.)