Course Title: 7th Grade Agricultural Science/Industrial Technology
Board Approval Date: 4/11/16
Credits: NA

Course Description:

This course focuses on mastery of the PA Academic Standards for Science and Technology, Engineering Education, as well as Environment and Ecology. As students progress through this course, they will participate in a systematic study of watersheds, wetlands, and invasive species, proper use of power tools, and solving problems with technology. Students will develop an understanding for the role that watersheds and wetlands play in maintaining the health and quality of water on earth by participating in a freshwater analysis study located on school property, research and develop a digital presentation on a current invasive species and the impact it has on the environment, and create a wooden project (to be determined by teacher) using various power tools in the shop that will be beneficial to wildlife.

Learning Activities / Modes of Assessment:

Large group instruction
Student-driven learning activities
Checklists / Teacher Observation
Small group work
Freshwater study
iPads for class assignments and group projects
Projects with Rubrics
Construction of project in the wood shop
Shop safety quizzes
Digital Lessons
Creation of decal using VersaLaser

Instructional Resources:

Discovery Education
Various informational resources from www.agednet.com
Technology. Thode, Bradley R. and Terry. Delmar Publishers Inc. 1994.
Technology: Today and Tomorrow. Brusic, Sharon A., Fales, James F., Kuetemeyer, Vincent F. McGraw Hill – Glencoe. 2004.
Technology Interactions. Harms, Henry R., Swernofsky, Neal R. McGraw Hill – Glencoe. 2003.

Course Pacing Guide

Course: **7th Grade Agricultural Science/Industrial Technology**

Course Unit (Topic)	**Length of Instruction (Days/Periods)**
1. Watersheds and Wetlands	10 days
2. Woodworking for Wildlife	10 days
DAYS TOTAL	20 Days

7th Grade - Watersheds and Wetlands - KUD

KNOW	UNDERSTAND	DO
4.2.7.A - Explain how water enters, moves through, and leaves a watershed. - Explain the concept of stream order. - Describe factors that affect the flow and water quality within a watershed.	Watersheds and wetlands play a key role in maintaining the health and quality of the water that sustains life on earth.	4.2.7.C - Use appropriate tools and techniques to analyze a freshwater environment. - Interpret physical, chemical, and biological data as a means of assessing the environmental quality of a freshwater environment.
4.2.7.B - Explain the primary functions of a wetland within a watershed. - Providing habitat, flood control, water purification. - Serving as buffer zones, wildlife propagation areas, and food and fiber systems.		Freshwater Analysis Report
Vocabulary: watershed, stream order, buffer zone, wetland, invasive species		4.5.7.B - Describe the impact of pests in different geographic locations and techniques used to manage those pests. - Identify introduced species that are classified as pests in their new environments. - Research integrated pest management practices.
		Invasive species research assignment

7th Grade - Woodworking for Wildlife - KUD

KNOW	UNDERSTAND	DO
Proper safety rules and procedures for using specific equipment in the shop.	Artificial habitats provide shelter, food, and water when there is an absence of these survival needs and can help support local wildlife during these times.	3.4.7.D1 - Identify and collect information about everyday problems that can be solved by technology and generate ideas and requirements for solving a problem.
Current issues surrounding wildlife and their habitats.		3.4.7.D2 - Select and safely use appropriate tools, products and systems for specific tasks.
Vocabulary: wildlife, artificial habitat, compound miter saw, router, palm sander, scroll saw, brad nailer		Choose and build a wooden project that will benefit wildlife.