

# Forestry

## (6<sup>th</sup> – 8<sup>th</sup> Grade Rotational Version)

### Morning Learning Stations for Students –

#### **STATION 1:** Forest Ecosystems (Needs 4 Adults)

- (20 min) Learn all the factors that effect a forest
  - o Discuss the Abiotic and Biotic Factors of a forest ecosystem
  - o Explore the Renewable and Non-Renewable Resources
  - o Understand how trees grow (Dendrochronology)
  - o Explore the different types of trees (Coniferous VS Deciduous)
- (25 min) Tree age and tree identification activity
  - o Examine how matter is cycled and energy flows throughout a forest ecosystem

#### **STATION 2:** Soil Activity (Needs 4 Adults)

- (25 min) Learn about the importance of Soil and Soil Profiles
- (20 min) Evaluate soil samples and make recommendations

### LUNCH BREAK

### Afternoon Learning Stations for Students –

#### **STATION 3:** Explore IQhub & Drive Tractor Simulator (Needs 4 Adults)

- (60 min) IQhub Scavenger Hunt (2 students at a time go drive tractor simulator)

#### **STATION 4:** Forestry Industry Activity (Needs 4 Adults)

- (10 min) Tree Products Discussion
  - o Understand the different types of wood (Hard VS Soft)
  - o Explore the different products from trees
- (15 min) Pacing for Distance
  - o Learn how foresters using pacing to determine distance
  - o Understand how your steps can be a method of measurement
- (20 min) Measuring Trees
  - o Learn how foresters determine diameter and height of trees
  - o Understand how trees are measured to determine usefulness of the lumber
  - o Discuss human Impacts on the environment
- (15 min) Determining Tree Volume
  - o Learn how to determine volume of trees
  - o Examine how humans impact the environment with the rate of resource consumption
  - o Discuss solutions for biodiversity and ecosystem conservation

### Michigan Learning Standards for today's IQhub visit –

- Science Standards:
  - MS-LS1-6 Photosynthesis: Matter Cycling – Energy Flow
  - MS-LS2-1 Effects of Resource Availability
  - MS-LS2-3 Matter Cycling and Energy Flow in Ecosystems
  - MS-LS2-5 Biodiversity and Ecosystem Services Solutions
  - MS-ESS3-3 Human Impacts in the Environment

- MS-ESS3-4 Human Consumption of Natural Resources
- Math Standards:
  - MS-5.MD Measurement and Data
- Career Awareness for 6<sup>th</sup> Grade:
  - Target 3: Engage Students in Career Awareness Activities
    - Identify jobs in a Career Zone; include what is a nontraditional job
    - Basic soft skills/work ethic discussions
- Career Exploration for 7<sup>th</sup> – 8<sup>th</sup> Grade:
  - Target 3: Engage Students in Career Awareness Activities
    - Identify personal traits and characteristics that may later link to career interests
    - Soft skills/work ethics

**Possible Careers Discussed in today's IQhub visit –**

- Arborist
- Farmer
- Forester
- Mechanic
- Soil Scientist
- Environmentalist
- Ecologist
- Contractor
- Landscaper
- Entrepreneur