### STANDARD TASK ANALYSIS FORM

**Duty/Task:**

6-4 Plant seeds in growing media

**Performance Standards (Observable & Measurable Criteria):**

1. Obtain correct growing media, hydroponic containers, fertilizer, minerals and seeds for your operation

2. Prepare a water and mineral mix solution

3. Maintain the growing solution by maintaining the proper temperature and concentration of fertilizer and minerals for the growing solution

**Required Knowledge and Skills (Math, Science, & Language):**

1. Knowledge of hydroponics, knowledge of proper containers, knowledge of seed varieties

2. Knowledge of hydroponics, knowledge of proper mixing ratios of water and minerals

3. Knowledge of hydroponic solutions, fertilizer and mineral requirements for various crops

**Safety (Concerns):**

1. Accurate, timely, conscientious

**Performance Standards (Observable & Measurable Criteria):**

1. Obtained correct growing media, hydroponic containers, fertilizer, minerals and seeds for your operation

2. Prepared a water and mineral mix solution that would support plant germination and growth

3. Maintained the proper temperature and concentration of fertilizer and minerals for the growing solution

**Tools, Equipment, Supplies & Materials (Needed):**

1. Mixing tank, water, minerals, mixing ratio, air diffuser

2. Pumps, storage tanks, distribution lines, air diffuser, water heater

3. Fertilizer/mineral concentrate, water heater, mixing tank, water, minerals, mixing ratio, air diffuser, thermometer

**Worker Behaviors (Important to Worker Success):**

1. Keen to protect hands

2. Wear gloves to protect hands

3. Wear PPE when mixing

4. Use gloves to protect hands

5. Wear PPE when working with circulation system

**Performance Standards (Observable & Measurable Criteria):**

1. What type of growing media (rock wool, pea gravel, oasis cubes) do I use for this crop? What type of containers do I use for this crop? What seed variety will I grow? Where do I get my supplies? How much do I buy? What is an acceptable price?

2. What direction do I plant the seeds? How many seeds do I add per area?

3. What should my ratio of water to minerals be? How do I determine what the proper ratio should be? How do I mix it?

4. How do I circulate the mixture through the media? How often should it be circulated? What temperature should the mix be to be effective?

5. What temperature should I maintain the mixture at? What should the concentration be? How do I know when to add more concentrate or water?

**Performance Standards (Observable & Measurable Criteria):**

1. What properties of the growing media, supplier offerings, size of the growing operation, type of seeds being planted, environmental conditions, consumer demand, and purchasing practices, is available, comparative purchasing

2. N/A 1 Accurate, timely, conscientious 1 What type of growing media (rock wool, pea gravel, oasis cubes) do I use for this crop? What type of containers do I use for this crop? What seed variety will I grow? Where do I get my supplies? How much do I buy? What is an acceptable price?

3. Properties of the growing media, supplier offerings, size of the growing operation, type of seed being planted, environmental conditions, consumer demand, and purchasing practices, is available, comparative purchasing

**Performance Standards (Observable & Measurable Criteria):**

1. N/A 1 Accurate, timely, conscientious 1 What type of growing media (rock wool, pea gravel, oasis cubes) do I use for this crop? What type of containers do I use for this crop? What seed variety will I grow? Where do I get my supplies? How much do I buy? What is an acceptable price?

3. Properties of the growing media, supplier offerings, size of the growing operation, type of seed being planted, environmental conditions, consumer demand, and purchasing practices, is available, comparative purchasing