Class Assignments: Technology in Pharmacy

Lab. Practice: Properly using the equipment and supplies used to prepare sterile products.

200 Drug List

**MASTERY FOCUS**  **(PL-2, PL-3, I-1, I-6) Pharmacy Technician**

**Essential Understanding:**

Student will understand that the Principles of Technology in Pharmacy is essential to all health care workers.

Students will understand the special concerns regarding chemotherapy and cytotoxic drugs as well as causing harm to patients if medication are improperly compounded during preparation.

**Lab Practice:**

**Standards: What will students know, understand, and be able to do?**

**Objectives:**

1 Student will be able to identify and list hardware and Software components used in Pharmacy Computers and summarize their purpose.

2. Student will identify safety practices in using technology based programs in all aspects of the health science industry.

3. Student will described and discuss the use of automation and robotics in the community.

Lab. Objectives: 1. Student will list the routes of administration associated with sterile products.

2. Students will be able to name the parts of a needle, syringe, and IV bags and how to avoid

Contaminating the supplies when compounding drugs.

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| **TEKS**  1 (D), 1 (E), 9 (B), 10 (A) | **ELPS**  [Boggle's World ESL Activities | Project SHINE](http://www.google.com/url?sa=t&rct=j&q=boggle%20esl&source=web&cd=13&cad=rja&uact=8&ved=0CFQQFjAM&url=http%3A%2F%2Fwww.projectshine.org%2Fboggles-world-esl-activities&ei=9OPCVIL2LMy0yAT264GACA&usg=AFQjCNF6zIibOBHiW04Ye4oWHVS43km9Wg)  ( |

**Key Vocabulary: What key terms will my students need to understand?**

**Key Terms:** Pharmacy Technology

1. ROM & RAM

2. CPI & PDA

3. Input Devices

4. Operating System

5. Telepharmacy

6. Data base

7. Robotics

**Assessment Plan:** Discuss knowledge of key terms.

Do Now: 1. 200 drug test /measurements 1/27/15

MC900441976[1] 2. Skill Practice for oral test 1/28/15

**LESSON CYCLE** I. Students Will learn the key terms and the hardware used in Pharmacy Technology. Why It Is Important? (**The students need to know the meaning of the key terms and computer hardware because today virtually every pharmacy uses computers, automated systems, and other technology platforms for its operations and management of pharmaceutical care. This is why a basic understanding of technology is necessary for the pharmacy technician.**

II. Introduction to New Material –

1. **Students will view and discuss a PowerPoint on the hardware components used in pharmacy computers and summarize their purpose. (**1/26/15)
2. **Review content in text book and handouts** (1/16/15)
3. **Review content related to lesson per website and links.**
4. **Review images and pictures of robots and computer software on** Health Century 21.

III. Guided Practice

1. **Teacher will clarify and check for understanding by asking open-ended questions. Teacher will pace the classroom to clarify misunderstanding.**
2. **Teacher will introduce content to be learned and review key terms.**
3. **Teacher will demonstrate skill practices.**
4. **Teacher will review agenda and objectives daily**
5. **Teacher will review resources and equipment needed to problem solve student centered lessons**.

IV. Independent Practice

1. **Student to define and write key terms.**
2. **Student to take notes from PowerPoint.**
3. **Student to complete homework**
4. **Student to complete worksheets in class**
5. **Student to study the 200 drug list for certification prep.**
6. **Groups will work independently to study the parts of syringes, needles, IV bags or oral test on** 1/28/15**.**

V. The Closing – **Classroom discussions to check for understanding. Ask students did we meet and learn the objectives for the day. Play kahoot or other games to check for mastery. And to clarify misunderstanding.**

**How will I engage my students in learning? How will I lead my students to mastery?**

**CHECKS FOR UNDERSTANDING (I-2)**

|  |  |
| --- | --- |
| 1. **Engage and Connect (30-min):**   **Do Now:** 15 minutes  Hands on group activity  Independent practice  Online group studies. | Review Do Now  Clarify misunderstanding  Allow students to demonstrate priming IV tubing and withdraw medication from vial. |
| 1. **Introduce New Learning (15-20 min):**   PowerPoint- Technology in Pharmacy  Demonstrate skill practice  Summarize the uses of personal digital practice and explain telepharmacy practice.  Introduce automation and Robotics in community pharmacies.  Demonstrate how to start an IV on a patient and the different anatomical sites used. | Student provide feedback by demonstrating skills.  Student are able to voice why lesson is important during guided questions |
| 1. **Lead Guided and Independent Practice (25 min):**   **Guided Practice (10 min):**  Demonstrate and explain the parts of a needle, syringe and IV bag.  **Independent Practice (25-30 min):** | Clarify misunderstanding. By asking questions and reteach material as needed.  Allow students to demonstrate priming IV tubing and withdraw medication from vial. (lab. day)  .  Practice /visually label syringes, needle and IV bag for oral test on 1/28/15  Practice putting on and removing sterile gloves. (**completed**)  Complete lab worksheet  Complete homework |
| 1. **Close the Lesson and Assess Mastery (10 min):** | Check understanding by open ended questions involving all students.  Play Kohoot.  Exit ticket  Quizzes  Test |

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**DIFFERENTIATION (I-3)**

**How will I scaffold and/or accelerate learning? For whom? How will I group my students?**

**SCAFFOLD:** 200 drug list a resource to learn drugs for the certification test. PowerPoint presentations- Videos on how to clean supplies used to compound medications. **Internet research.**

**ACCELERATE:** Have students read power point and videos out loud and use prior knowledge learn to problem solve.

**Group activity-** Student will demonstrate how to withdraw medication from a vial and a syringe. Student will be checked off on mixing IV medication until he/she skill performance is mastered. Student will practice giving injections with an orange.

Answer questions and identify all part of intravenous and intramuscular supplies and their use during **oral test. (1/28/15)**

**GROUP:** Group according to academic level (high performing students grouped with lower performing students. (4-5 students per group). ESL student grouped with a Spanish speaking student.

**LOGISTICS** **(I-6, I-10)**

**What materials, resources, and technology will I need to prepare and arrange?**

* Text Book
* U-tube videos on skill practices
* Syringes
* Sterile needles
* Hand sanitizer
* Sharp containers
* Oranges
* Alcohol pads
* 4’ X 4’ gauze
* Sterile field
* IV tubing
* Medication vials and ampules
* Lab-top (technology based lesson)
* Diversified Health Occupational PowerPoint
* Case studies
* Medical Math –Health Century 21 PowerPoint/handouts