Pharm-Tech Lesson Plan Continued 2/9/15-2/13/15

Class Assignments: Compounding medications using the Metric Systems

Pharmacy Math: 1. Essential Drug Dosage Calculations

2. 200 Drug List

3. Metric System

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

**Essential Understanding:**

Student will understand the clear concise method to develop competence in the interpretation of medication orders and the calculation of safe medication dosages. The Principles of Technology in Pharmacy is essential to all health care workers.

Students will understand both the brand and generic names of drugs to help the learner become familiar with the correct dose forms.

**Lab Practice:** Skill Practice using proportions, multiplication, division and drug formulas.

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

**Objectives:**

1 Student will be able to describe the metric, apothecary and household systems of measures to problem- solve methods of calculation to prescribe the correct dose.

2. Student will able to convert between household and apothecary systems.

3. Student will express the metric equivalents.

4. Student will learn to read and interpret doctors’ orders to fill a prescription

Lab. Objectives: 1. Student will list the routes of administration associated with prescription orders.

2. Student will fill prescription using the system measures to calculate correct doses.

3. Student will be able to prefill medication carts correctly.

4. Student will learn to compound medications using a written recipe

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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. Tsp.

2. Tbsp.

3. Milliliters

4. Minims

5. Liters

6. Milligrams

7. Grains

8. Grams

9. Kilogram

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

**Do Now**: 1. System of measurements quiz

2. Practice medication problems

3. Student demonstrations and feedback-Skill practice

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**LESSON CYCLE** I. Students Will learn the key terms of the metric systems and drug formulas. Why It Is Important? (**The students need to know the meaning of the key terms and drug formulas to select the proper information needed to determine the correct dosage and prevent medication errors.**

II. Introduction to New Material –

1. **Students will view and discuss a PowerPoint on the Metric systems.**
2. **Review content in text book and handouts**
3. **Review computer software on** Health Century 21. **(Medical Math)**

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**

**e. 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. **Student to learn Metric calculations used to prepare medications.**
7. **Groups and independent practice student will calculate drug problem per MD orders using the parental, orals and other routes to administration.**

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. Teacher will 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 PTCB practice test  Activity Stations in the classroom for skill practice. | Review Do Now  Clarify misunderstanding  Allow students to demonstrate preparing medication pre-fill medication cart. |
| 1. **Introduce New Learning (15-20 min):**   PowerPoint- Medical Math  Demonstrate skill practice using medication problems.  Compound a medication for student practice  Summarize the uses of prepackage medications  Introduce to compounding. | Student provide feedback by demonstrating skills.  Student are able to voice why lesson is important during guided questions.  Students ask questions as needed. |
| 1. **Lead Guided and Independent Practice (25 min):**   **Guided Practice (10 min):**  **Independent Practice (25-30 min):** | Clarify misunderstanding. By asking questions and reteach material as needed.  Allow students to demonstrate practice filling prescriptions and medication carts and administer medications to patients.  .  Practice compounding IV medications and calculating drip factors.  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  Play medical Termo |

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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- Medical Math. **Internet research (Pharmacy Tech Certification Board).**

**ACCELERATE:** Have students read power point and PTCB website as a resource tool.

**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. Student will be able to calculate drops per minute to practice IV therapy.

**Student will orally communicate how to prepare and administer medication per MD orders.**

**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 Unit dose packages
* U-tube videos on skill practices Maalox
* Syringes Hydrogen peroxide
* Sterile needles Medication labels
* Hand sanitizer Laminar Flow hood
* 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 and Medication orders
* Medical Math –Health Century 21 PowerPoint/handouts
* Medication forms
* Clay bowls and mortar
* Tablet Cutter (Coupe-pilule)
* Pill Box/Pilulier
* IV Pole