NAME: _____

STEM CAREER CHALLENGE
PHARMACY TECHNICIAN



In their efforts to defeat **THE HIVE**, the Sci-Ops Team members are regularly exposed to harmful chemicals from **THE HIVE'S** polluting activities. Valery, a certified pharmacy technician, helps the Sci-Ops Team with the various medications that they are prescribed by the team doctor to combat the health side effects from pollutant exposure. Valery makes sure to accurately label and distribute medications to the correct team member.

Pharmacy technicians work in different fields of the pharmacy by:

- Working in hospital and community pharmacies.
- Working in a telepharmacy to assist multiple hospital and community pharmacies.
- Creating and organizing a patient's prescription in a compounding pharmacy.

CHALLENGE 1: CORRECT DISTRIBUTION OF MEDICATIONS

Valery became a certified pharmacy technician after completing the 1-year pharmacy technician program at her local community college. During her program, she completed an internship at a local pharmacy to gain first hand experience about the duties of a pharmacy technician. Below she recounts her experience with patients by telling you about the Smith family, with their permission:

> ***VALERY:*** *During my internship at the Neighborhood Pharmacy, I would have to label prescriptions so each person knew who the medication was for and how to take it. There are four family members in the Smith family: the father Regi Smith, the mother Amanda Smith, their 5-year old daughter Ally Smith, and their dog, Max Smith.*

1 Use the Neighborhood Pharmacy labels to best fill in the chart below with the family members' medication information.

	Regi	Amanda	Ally	Max
Medication Name				
Are there any warnings to consider with this medication?				
How often should the medicine be taken?				
How will the medication be taken? Ex. Take orally by mouth, etc.				

PLASMA GAMES

Reflect on your previous answers and the Neighborhood Pharmacy labels to complete the questions below.

2 **What information on the labels was most helpful for determining the correct medication for the family members? Explain.**

3 **Did you have any difficulty determining the correct medication for the family members? If so, explain.**

4 **List two changes that you would suggest to improve the prescription labels. For each, explain why the change is needed.**

CHANGE 1: _____

CHANGE 2: _____

CHALLENGE 2: MAKING LABELS CLEAR



DEBORAH ADLER
https://adlerdesign.com/

In the real world, Deborah Adler's family faced a similar dilemma. Her grandparents' medications were labeled similar to the Neighborhood Pharmacy labels. Her grandparents' medications were both labelled H. Adler since their names are Helen and Herman Adler. This led to her grandmother mistakenly taking some of her grandfather's medication. This incident inspired Deborah Adler to redesign prescription labels for Target®. The redesigned labels are now used in Target® pharmacies and more!

The Sci-Ops Team recruited Valery after she become a certified pharmacy technician. She insured that the Plasma Pharmacy used Deborah Adler's design for pharmaceutical labels.

Use the Plasma Pharmacy labels to complete tasks 5 - 7.

5 **Compare the Plasma Pharmacy labels to the Neighborhood Pharmacy labels. List three changes made to the Plasma Pharmacy prescription labels.**

A

B

C

6 Explain how these changes improved the prescription labels in 2-3 sentences.

7 Using the Plasma Pharmacy labels, reevaluate how the Smith family should use their medications.

	Regi	Amanda	Ally	Max
Medication Name				
Are there any warnings to consider with this medication?				
How often should the medicine be taken?				
How will the medication be taken? Ex. Take orally by mouth, etc.				

REFLECT ON THE CAREER



Valery started her community college's pharmacy technician certificate program right after high school. After 1 year, she completed the program and is currently making $35,000 per year. In Valery's current position, she does more than label the Sci-Operative's medication. Each day is a little different and you may find Valery creating medicines, educating the team on how to take their medicine, or working with other health professionals.

Another aspect of this career that excites Valery is knowing that she is gaining the experience to move up in her career. She could move into a leadership position and manage multiple pharmacy technicians. She has been taking on more responsibility to help the pharmacist, so she could apply this new experience to continue her education and become a pharmacist. She also enjoys helping her clients with their health, so she is considering going to nursing or medical school.

8 Which aspects of a career as a pharmacy technician are interesting to you?

9 Is this a career you can see yourself pursuing in the future? Why or why not?

NEIGHBORHOOD PHARMACY LABELS

Neighborhood Pharmacy
555-123-4567
23 Fun Avenue #203

June 20, 2021
Smith, A

Sumatriptan Nasal Spray, 10 mg

RX: 1234567-01
QTY: 30 g
Adams, Dr

EXP Date: June 20, 2022



Neighborhood Rx

Do not continue medication if pregnant.
Do not continue medication if other nasal spray is prescribed.
Keep out of the reach of children.

Inject nasally daily, once.

Neighborhood Pharmacy
555-123-4567
23 Fun Avenue #203

April 8, 2021
Smith, A

Hydrocortisone probutate 0.1%

RX: 689258-02
QTY: 500 g
Adams, Dr

EXP Date: April 8, 2022



Neighborhood Rx

Do not continue medication if pregnant.
Do not apply other steroid creams.
Keep out of the reach of children.
Avoid applying around eyes or mouth.

Apply to affected areas daily, once.

Neighborhood Pharmacy
555-123-4567
23 Fun Avenue #203

December 1, 2021
Smith, R

Metronidazole, 500 mg

RX: 1736948-03
QTY: 30 tablets
Jackson, DVM

EXP Date: December 1, 2022



Neighborhood Rx

Keep out of the reach of children.
For veterinary use only.
Consume food alongside the medication

Consume medication by mouth daily, twice.

Neighborhood Pharmacy
555-123-4567
23 Fun Avenue #203

April 8, 2019
Smith, R

Guanfacine, 2 mg

RX: 8358301-04
QTY: 30 tablets
Adams, Dr

EXP Date: April 8, 2020



Neighborhood Rx

Consume medication alongside food.
Do not continue medication if pregnant.
Do not consume alcohol or other stimulant with prescription.
Keep out of the reach of children.

Consume two tablets by mouth twice daily.

PLASMA PHARMACY LABELS

Amanda

Sumatriptan
Nasal Spray, 10 mg

MORNING
MIDDAY
EVENING
NIGHT 1 Spray

Amanda Smith

Sumatriptan Nasal Spray, 10 mg

Apply 1 nasal spray daily.

Angle spray applicator against the inside of nostril, tilt head back slightly, and press down on applicator.

IMPORTANT INFORMATION

- Do not continue medication if pregnant.
- Do not continue medication if other nasal spray is prescribed.
- Keep out of the reach of children.

075381 650380

PLASMA PHARMACY

PRSCR: F. Adams
DATE FILLED: 2.23.2021
DISCARD AFTER: 2.23.2022
RX: 1234567-01
QTY: 30 g

This prescription is a liquid solution with a nasal spray tip as the applicator.

Max (CANINE)

Metronidazole,
500 mg

MORNING 1 Tablet
MIDDAY
EVENING 1 Tablet
NIGHT

Max Smith (CANINE)

Metronidazole, 500 mg

Consume 1 tablet twice a day with food.

IMPORTANT INFORMATION

- For veterinary use only.
- Keep out of the reach of children.

075381 650310

PLASMA PHARMACY

PRSCR: L. Jackson, DVM
DATE FILLED: 6.6.2021
DISCARD AFTER: 6.6.2022
RX: 689258-02
QTY: 30 tablets

This prescription is a white, oval tablet imprinted with the numbers 851.

Regi

Guanfacine,
2 mg

MORNING 2 Tablets
MIDDAY
EVENING 2 Tablets
NIGHT

Regi Smith

Guanfacine, 2 mg

Consume 2 tablets twice per day with food.

IMPORTANT INFORMATION

- Do not continue medication if pregnant.
- Consume medication alongside food.
- Keep out of the reach of children.
- Do not consume alcohol or other stimulants with prescription.

075381 650320

PLASMA PHARMACY

PRSCR: F. Adams
DATE FILLED: 8.13.2021
DISCARD AFTER: 8.13.2022
RX: 1736948-03
QTY: 30 tablets

This prescription is a white, circular tablet imprinted with the letter M on one side and GH on the other side.

Ally

Hydrocortisone
probutate 0.1%

MORNING SEE DIRECTIONS
MIDDAY
EVENING
NIGHT

Ally Smith

Hydrocortisone probutate 0.1%

Apply to affected areas after bathing once per day.

IMPORTANT INFORMATION

- Do not continue medication if pregnant.
- Avoid applying around eyes and mouth.
- Keep out of the reach of children.
- Do not apply other steroid creams.

519000 50100

PLASMA PHARMACY

PRSCR: F. Adams
DATE FILLED: 9.9.2021
DISCARD AFTER: 9.9.2022
RX: 8358301-04
QTY: 500 g

This prescription is a smooth, white topical cream.