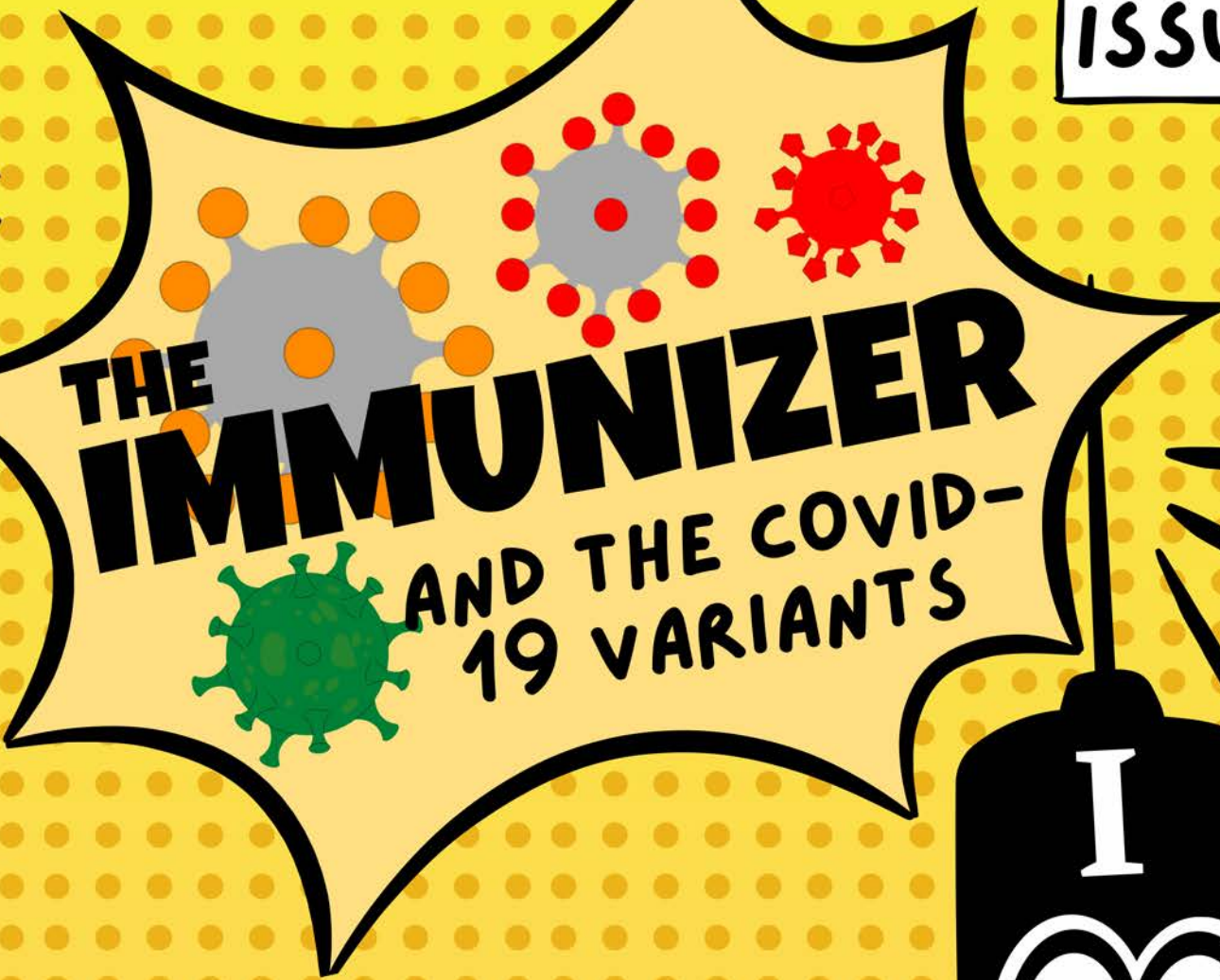


**ISSUE 2**



**THE IMMUNIZER**  
**AND THE COVID-19 VARIANTS**

**INCLUDING  
PUZZLES, BOOSTER  
INFO, AND A  
GLOSSARY**



**UPDATED SEPTEMBER 2022**

 **Department of  
Public Health**  
CITY OF PHILADELPHIA

**BY: JENNYFER OSUNA, SAM RAINES, AND MARGUERITE HORTON**

# SPECIAL THANKS

TO THE CONTRIBUTIONS FROM:  
SHI ROBISON, SHARA EPSTEIN,  
MARY LAXTON, GAYLE MENDOZA,  
AND THE IMMUNIZATIONS PROGRAM.



# QUESTIONS?

DON'T BE SHY,  
TALK TO YOUR DOCTOR!  
THEY ARE PREPARED TO ANSWER  
ANY VACCINE RELATED QUESTIONS.  
THEY CAN ALSO TELL YOU WHERE TO  
FIND THE RIGHT ANSWERS!



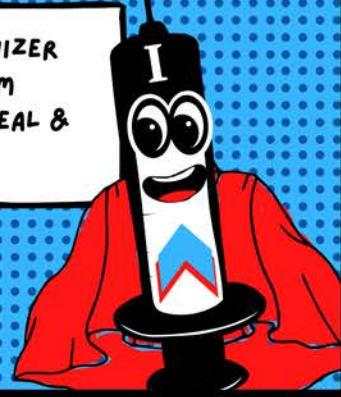
# LEARN ABOUT VARIANTS WITH

## TOPICS

## PAGE #

HOW A VIRUS SPREADS .....	1
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- THE IMMUNIZER
- THEY/ THEM
- LIKES TO HEAL & TEACH



- ASH, THEY/THEM
- 12 YEARS OLD
- LIKES PIZZA AND BASKETBALL



- ROSHAN, THEY/THEM
- 12 YEARS OLD
- LIKES SOCCER AND KARAOKE



- SCIENTIST, SHE/HER
- 45 YEARS OLD
- VIRUS EXPERT
- LIKES TEA AND TRAVELING



- SCRUFFY, HE/HIM
- 2 YEARS OLD, RAISED BY ASH
- LIKES TO RUN, EAT, AND SLEEP



# LET'S BEGIN!

DOCTOR'S OFFICE

THREE, TWO, ONE... DONE!

ASH JUST GOT THEIR SECOND DOSE OF THEIR PRIMARY\* COVID-19 VACCINE! NOW THEY ARE FULLY VACCINATED!

ASH'S HOUSE

HEY ASH! HOW WAS GETTING YOUR SECOND DOSE?

GREAT! IT WAS EASY!

BUT IMMUNIZER... I HAVE BEEN HEARING THE WORD VARIANT\* A LOT IN THE NEWS AND I'M A BIT CONFUSED.

WHEN YOU SEE AN ASTERISK (\*) NEXT TO A WORD, CHECK OUT THE GLOSSARY ON PAGE 13 TO FIND OUT WHAT IT MEANS!

NO WORRIES ASH, I CAN EXPLAIN!

A VARIANT IS A DIFFERENT VERSION OF A VIRUS.

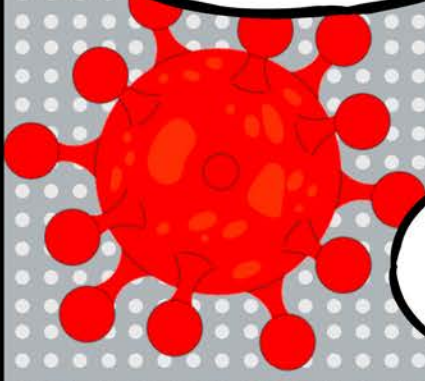




VARIANTS MAY SOUND NEW AND SCARY, BUT SCIENTISTS HAVE BEEN STUDYING VARIANTS IN OTHER VIRUSES FOR A LONG TIME, SO SCIENTISTS HAVE LEARNED WHERE THEY COME FROM AND HOW TO FIGHT THEM.

I'LL SHOW YOU WHAT THEY KNOW! FIRST, LET'S SEE HOW A VIRUS LIKE COVID-19 SPREADS.

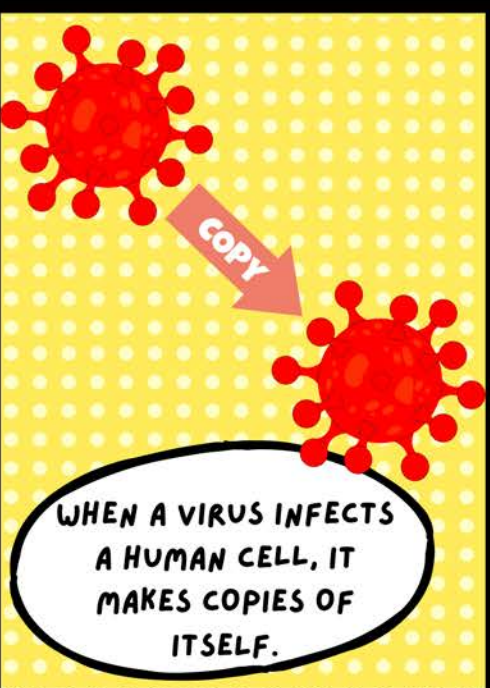
BY ITSELF, A VIRUS IS ALMOST LIKE A ROBOT: IT'S COMPLETELY LIFELESS.



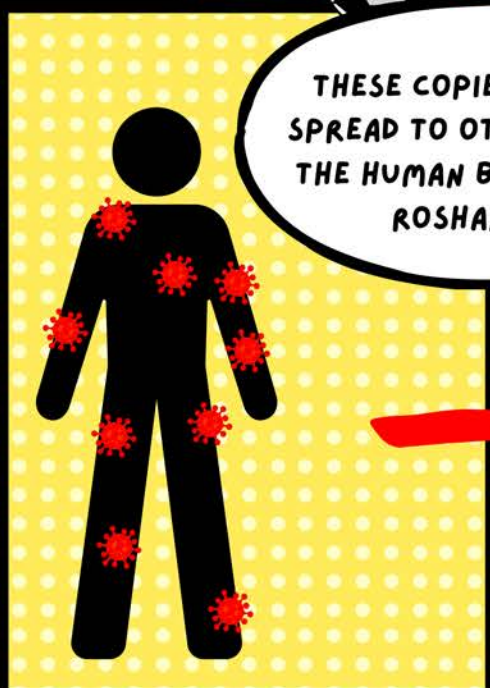
BUT LOOK WHAT HAPPENS WHEN A VIRUS INFECTS A PERSON...



ROSHAN, AGE 14, LOVES SOCCER AND KARAOKE.



WHEN A VIRUS INFECTS A HUMAN CELL, IT MAKES COPIES OF ITSELF.



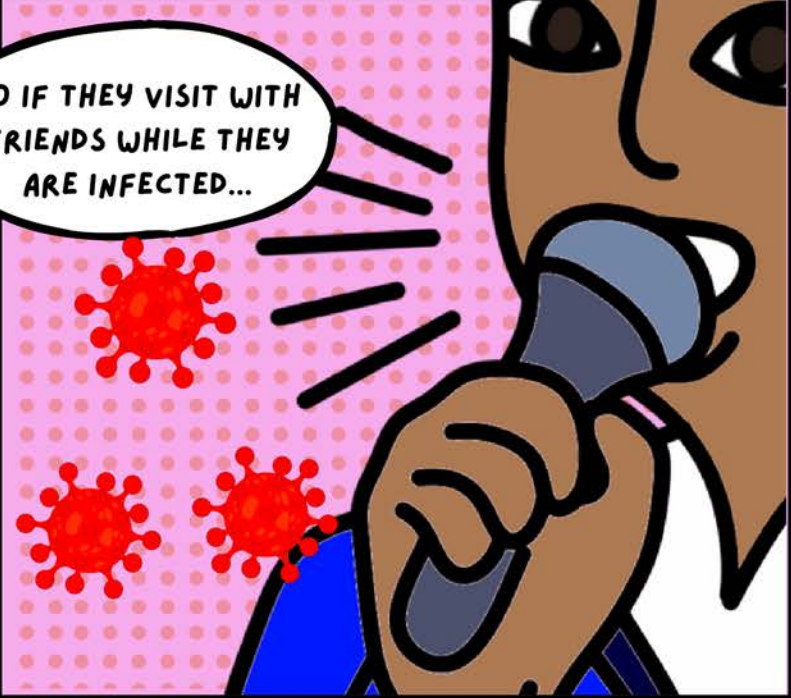
THESE COPIES CAN THEN SPREAD TO OTHER CELLS IN THE HUMAN BODY, MAKING ROSHAN SICK.



COPIES OF THE VIRUS WILL BE IN ROSHAN'S SALIVA AND RESPIRATORY SECRETIONS.



SO IF THEY VISIT WITH FRIENDS WHILE THEY ARE INFECTED...



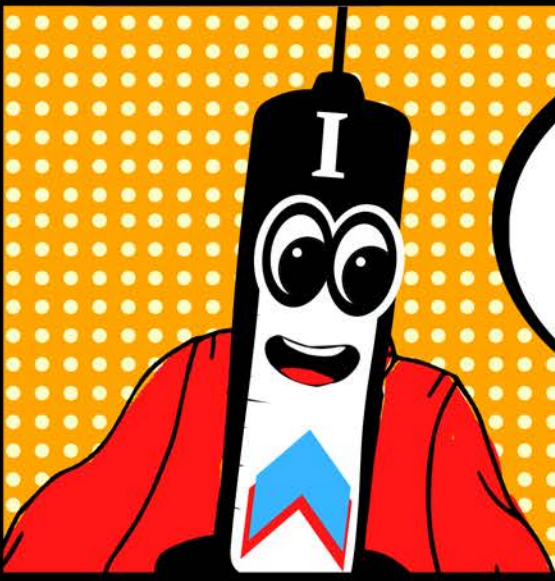
THE COPIES OF THE VIRUS COULD GO FROM ROSHAN'S SALIVA AND RESPIRATORY SECRETIONS INTO OTHER PEOPLE'S BODIES WHILE THEY TALK, SING, OR LAUGH.



THEN THE VIRUS WILL MAKE OTHER COPIES AND SPREAD TO MORE PEOPLE.



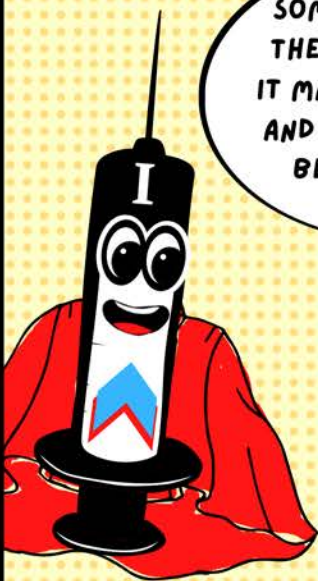
THIS IS HOW THIS VIRUS SPREADS.



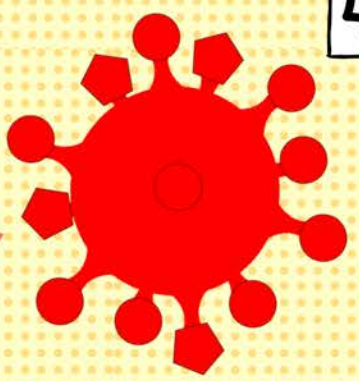
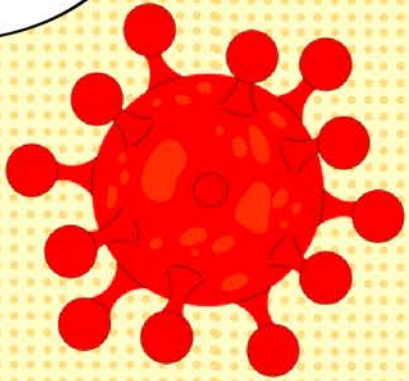
ALWAYS STAY AT HOME AND AWAY FROM OTHERS WHEN YOU ARE SICK- THEN YOU WON'T SPREAD A VIRUS TO OTHER PEOPLE.

OK!



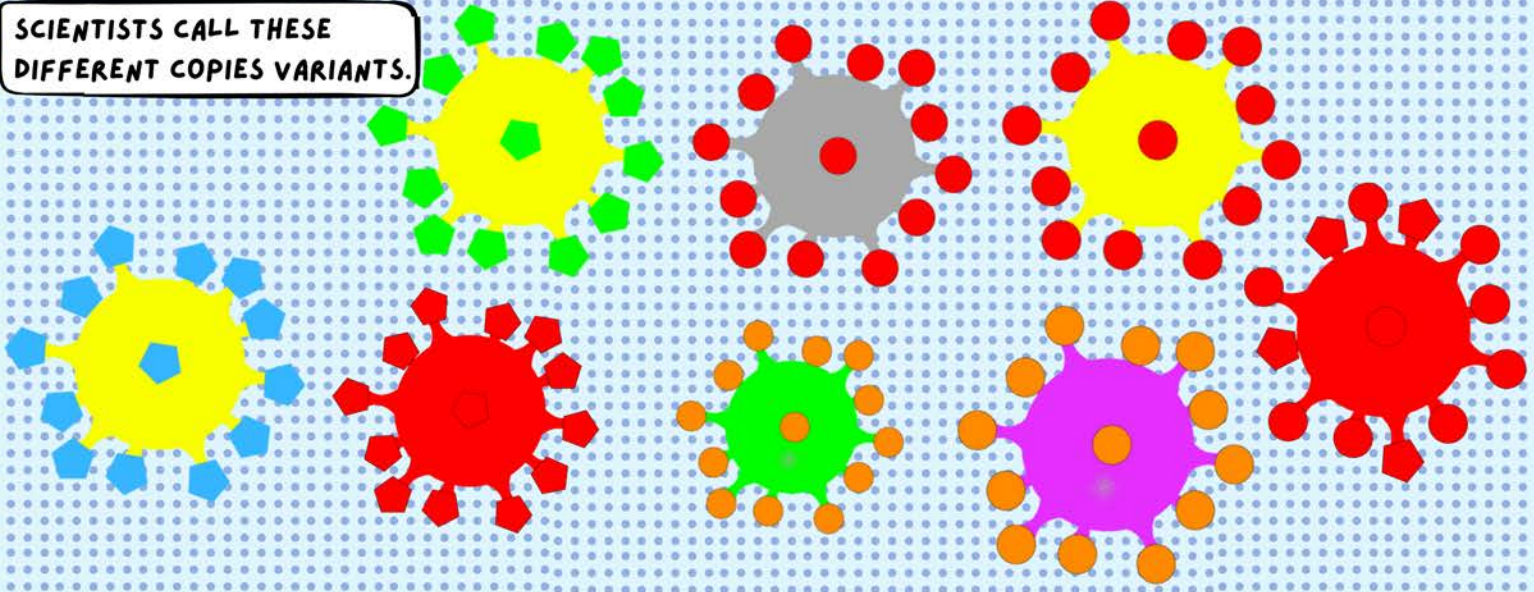


SOMETIMES, WHEN THE VIRUS COPIES, IT MAKES A MISTAKE, AND THE COPY WILL BE DIFFERENT.

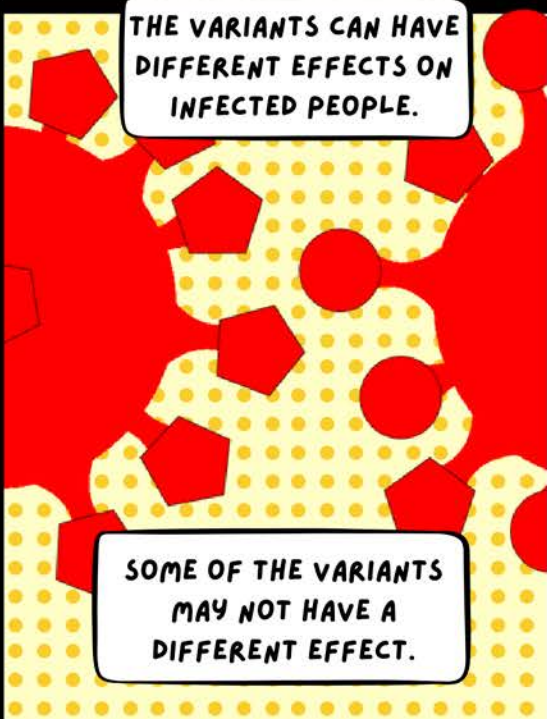


CAN YOU SPOT THE DIFFERENCE?

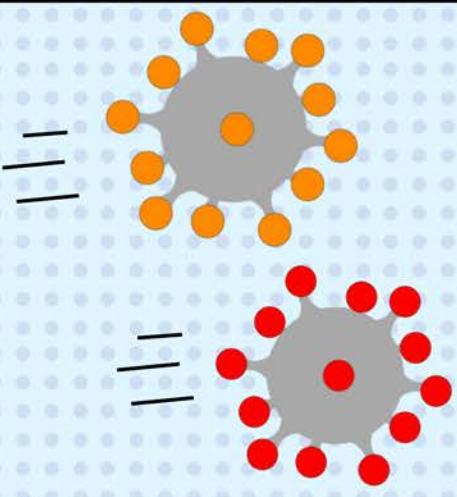
SCIENTISTS CALL THESE DIFFERENT COPIES VARIANTS.



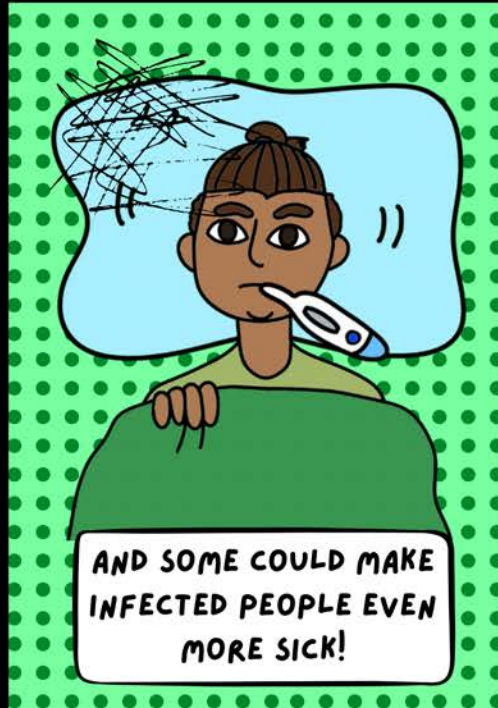
THE VARIANTS CAN HAVE DIFFERENT EFFECTS ON INFECTED PEOPLE.



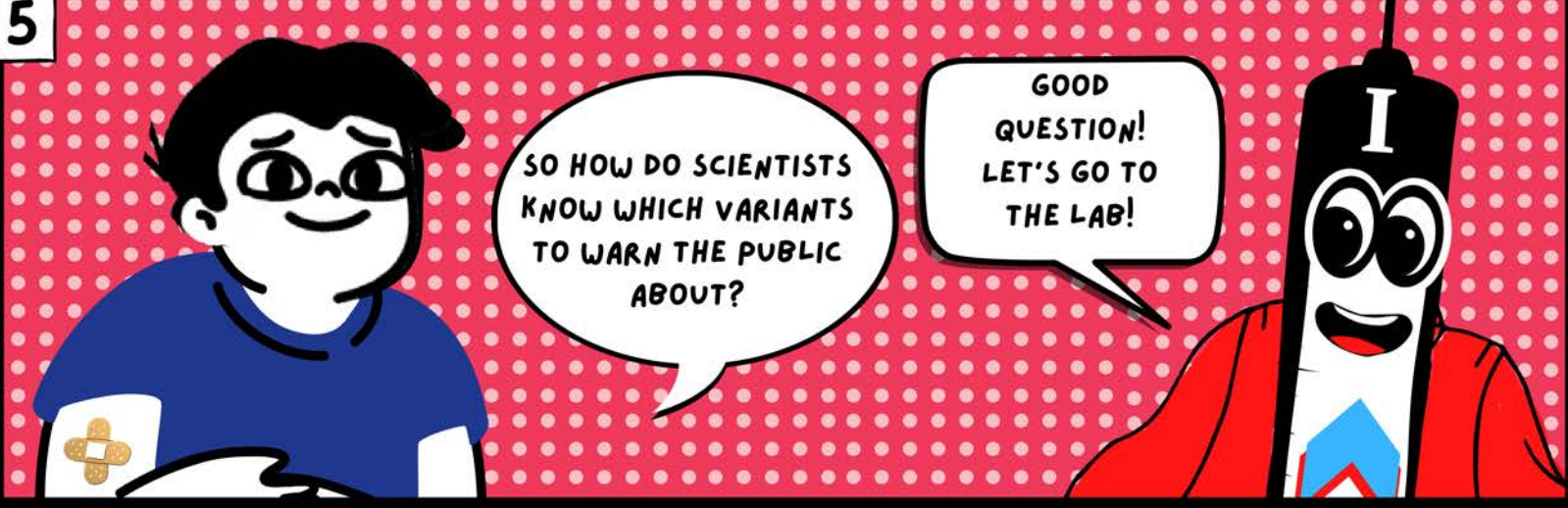
SOME OF THE VARIANTS MAY NOT HAVE A DIFFERENT EFFECT.



SOME OF THE VARIANTS MIGHT SPREAD FASTER THAN OTHERS...

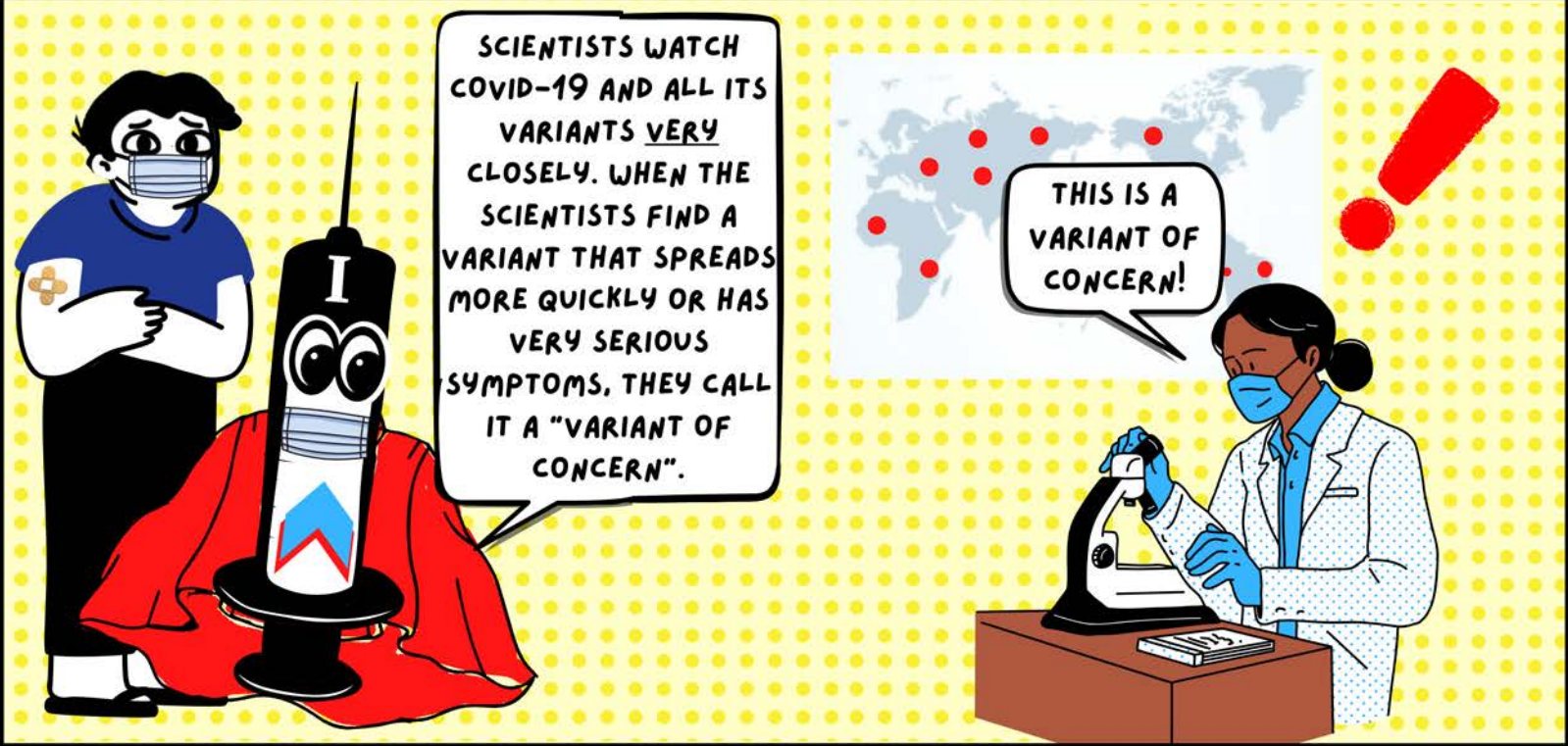


AND SOME COULD MAKE INFECTED PEOPLE EVEN MORE SICK!



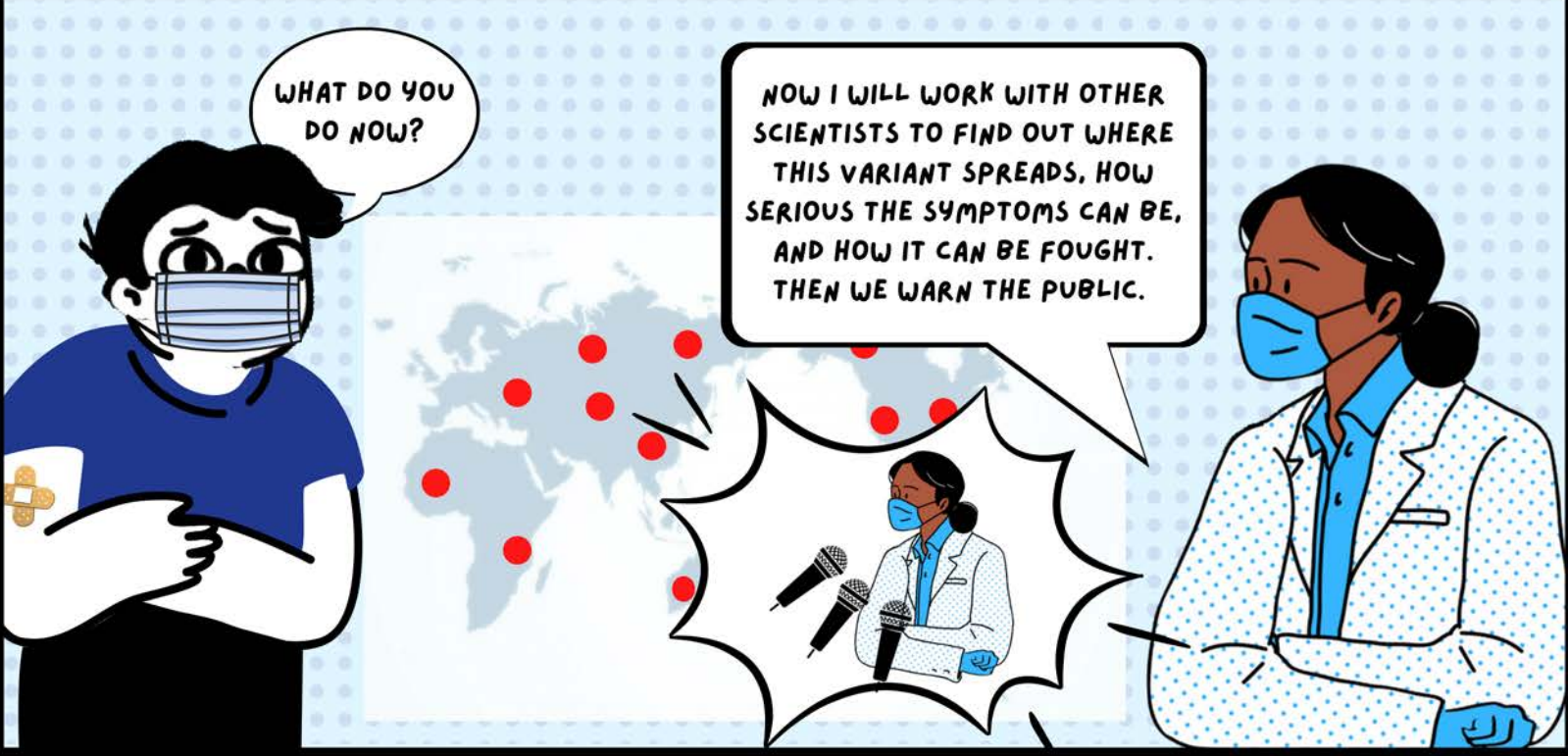
SO HOW DO SCIENTISTS KNOW WHICH VARIANTS TO WARN THE PUBLIC ABOUT?

GOOD QUESTION! LET'S GO TO THE LAB!



SCIENTISTS WATCH COVID-19 AND ALL ITS VARIANTS VERY CLOSELY. WHEN THE SCIENTISTS FIND A VARIANT THAT SPREADS MORE QUICKLY OR HAS VERY SERIOUS SYMPTOMS, THEY CALL IT A "VARIANT OF CONCERN".

THIS IS A VARIANT OF CONCERN!

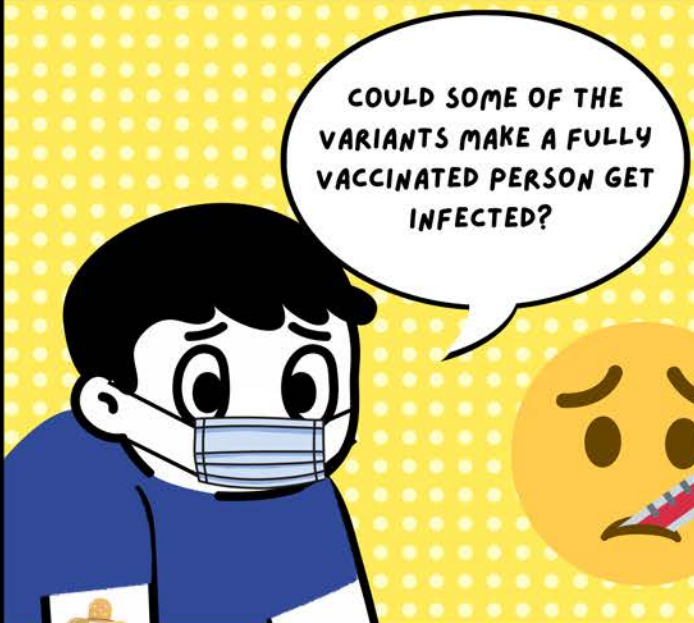


WHAT DO YOU DO NOW?

NOW I WILL WORK WITH OTHER SCIENTISTS TO FIND OUT WHERE THIS VARIANT SPREADS, HOW SERIOUS THE SYMPTOMS CAN BE, AND HOW IT CAN BE FOUGHT. THEN WE WARN THE PUBLIC.







COULD SOME OF THE VARIANTS MAKE A FULLY VACCINATED PERSON GET INFECTED?



WELL ASH, WHILE VACCINES ARE VERY EFFECTIVE AT PREVENTING SEVERE DISEASE, IT IS RARE THAT A VACCINE CAN STOP ALL INFECTIONS. SOMETIMES, A FULLY VACCINATED PERSON GETS INFECTED WITH COVID-19, AND THIS IS CALLED A BREAKTHROUGH CASE\*.



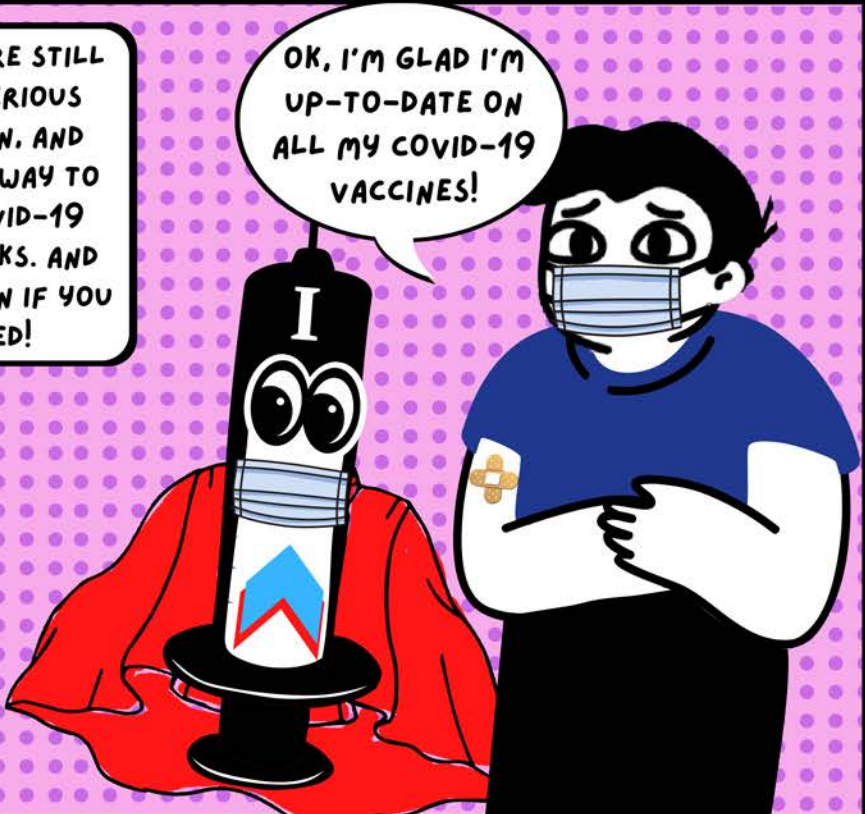
THAT SOUNDS SCARY!



DON'T WORRY ASH! BREAKTHROUGH INFECTIONS CAN HAPPEN WITH EVERY VACCINE.



THE COVID-19 VACCINES ARE STILL GREAT AT PREVENTING SERIOUS ILLNESS, HOSPITALIZATION, AND DEATH, AND ARE THE BEST WAY TO SLOW THE SPREAD OF COVID-19 ALONG WITH WEARING MASKS. AND YOU'LL FEEL LESS SICK THAN IF YOU DIDN'T GET VACCINATED!



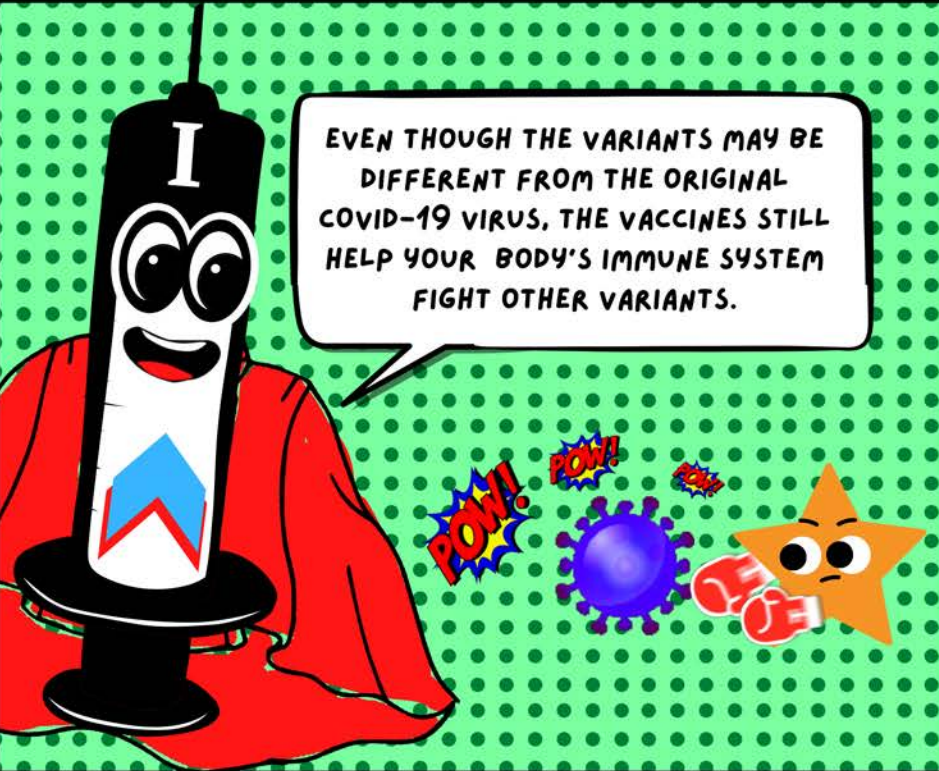
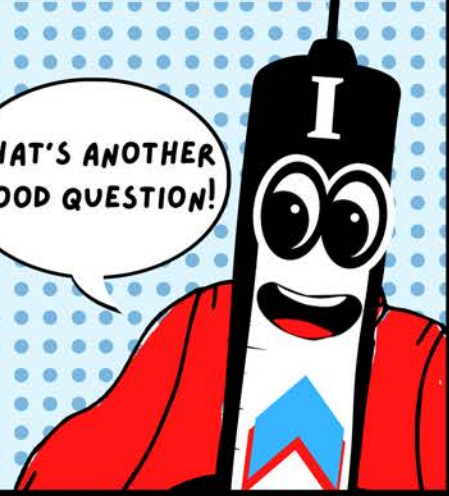
OK, I'M GLAD I'M UP-TO-DATE ON ALL MY COVID-19 VACCINES!



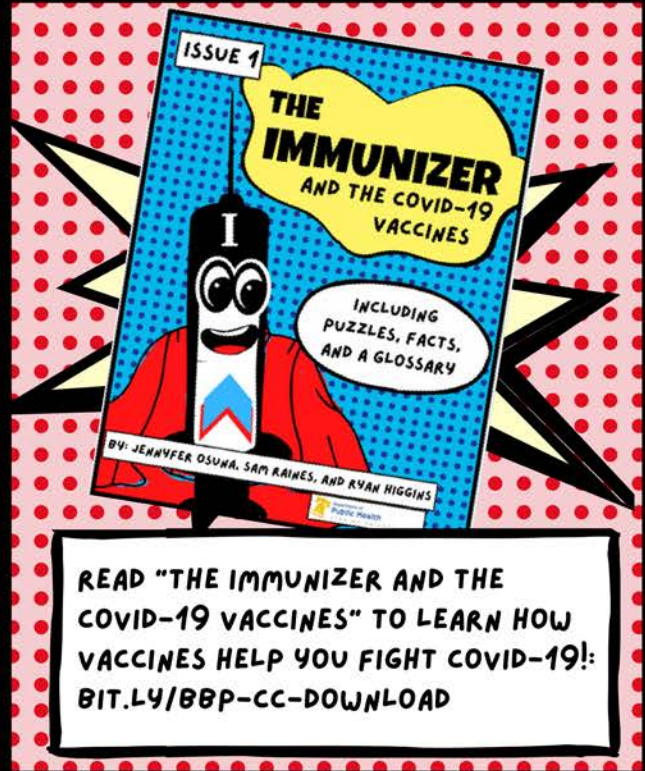
SO, IF THE VARIANTS ARE DIFFERENT COPIES OF THE ORIGINAL VIRUS, DOES MY COVID-19 VACCINE PROTECT ME FROM ONLY THE ORIGINAL COVID-19 VIRUS?



THAT'S ANOTHER GOOD QUESTION!



EVEN THOUGH THE VARIANTS MAY BE DIFFERENT FROM THE ORIGINAL COVID-19 VIRUS, THE VACCINES STILL HELP YOUR BODY'S IMMUNE SYSTEM FIGHT OTHER VARIANTS.



READ "THE IMMUNIZER AND THE COVID-19 VACCINES" TO LEARN HOW VACCINES HELP YOU FIGHT COVID-19!  
[BIT.LY/BBP-CC-DOWNLOAD](https://bit.ly/bbp-cc-download)



YOU MAY HAVE HEARD THAT THE OMICRON VARIANT IS MORE CONTAGIOUS THAN OTHER PREVIOUS VARIANTS. BECAUSE OF THIS, SCIENTISTS HAVE UPDATED THE MRNA BOOSTER SHOTS TO ALSO FIGHT BOTH THE ORIGINAL COVID-19 AND THE OMICRON VARIANTS.

TURN TO PAGE 12 TO LEARN WHERE TO FIND ACCURATE AND UP-TO-DATE INFORMATION ABOUT COVID-19.

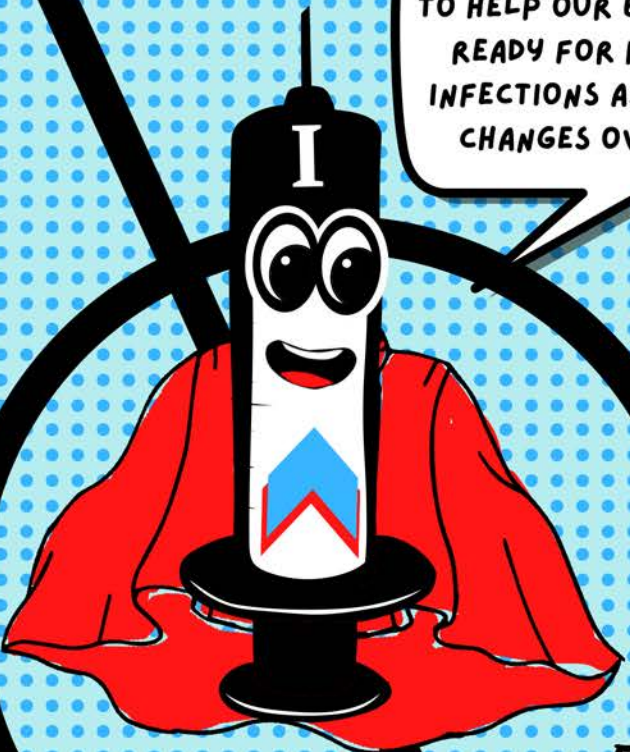
IF THE PRIMARY COVID-19 VACCINE PROTECTS ME FROM VARIANTS, DO I NEED A BOOSTER SHOT?

AFTER GETTING THE COVID-19 VACCINE, THE BODY'S ABILITY TO FIGHT THE VIRUS DECREASES OVER TIME. IT'S LIKE TAKING A LONG BREAK FROM PLAYING BASKETBALL. YOUR BODY NEEDS TO START PRACTICING AGAIN. THIS IS WHERE BOOSTERS COME IN.



WE NEED BOOSTER SHOTS TO HELP OUR BODIES STAY READY FOR POSSIBLE INFECTIONS AS THE VIRUS CHANGES OVER TIME.

GREAT, I'LL TELL MY MOM THAT I NEED TO GET MY BOOSTER SHOT WHEN IT'S TIME.



CHECK OUT PAGE 13 TO LEARN ABOUT WHO GETS BOOSTER SHOTS AND WHEN TO GET THEM.

BUT HOW DO WE STOP COVID-19 VARIANTS FROM BEING MADE?



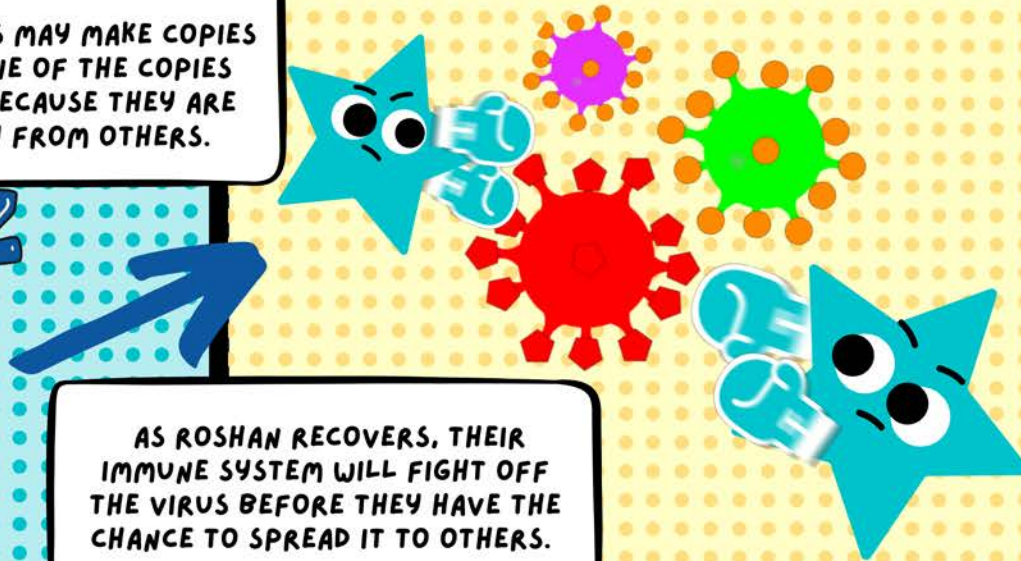
I'M SO GLAD YOU ASKED, ASH. LET'S GO BACK TO ROSHAN.



AFTER TESTING POSITIVE FOR COVID-19, ROSHAN ISOLATED IN THEIR HOUSE.

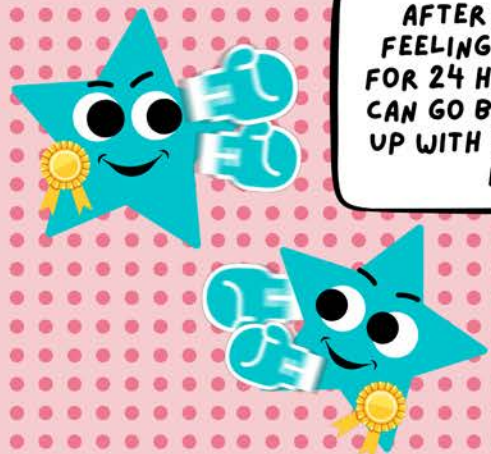
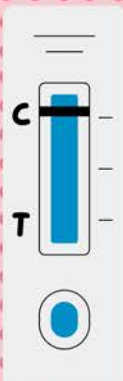


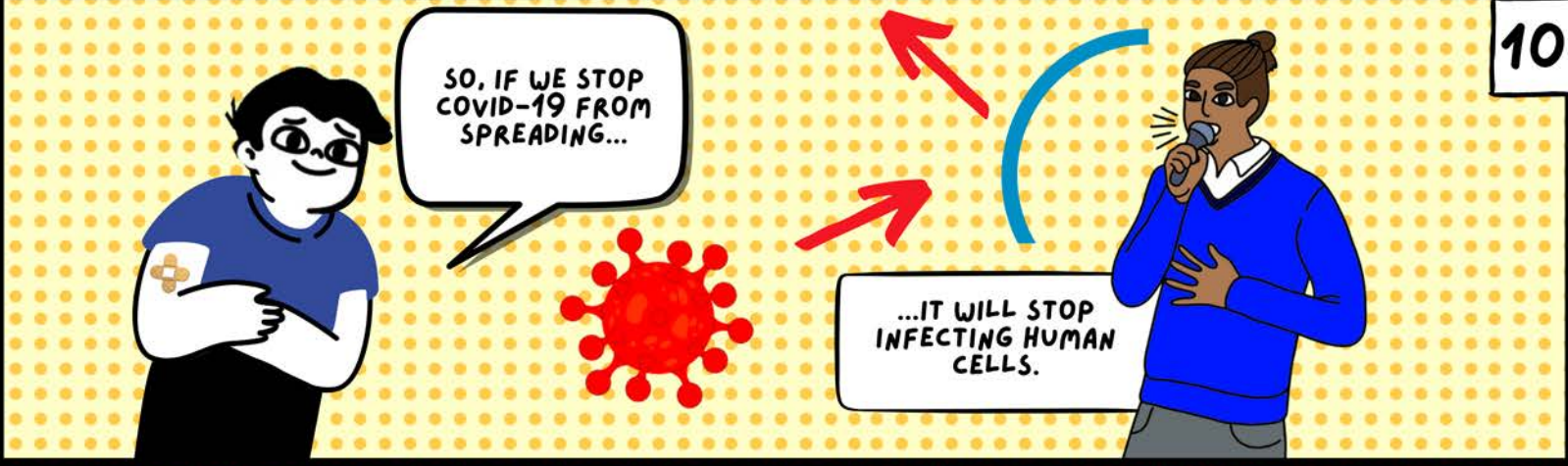
WHILE THE VIRUS MAY MAKE COPIES OF ITSELF, NONE OF THE COPIES WILL SPREAD BECAUSE THEY ARE SAFELY AWAY FROM OTHERS.



AS ROSHAN RECOVERS, THEIR IMMUNE SYSTEM WILL FIGHT OFF THE VIRUS BEFORE THEY HAVE THE CHANCE TO SPREAD IT TO OTHERS.

AFTER 5 DAYS WHEN ROSHAN IS FEELING BETTER AND FEVER-FREE FOR 24 HOURS WITHOUT MEDS, THEY CAN GO BACK TO SCHOOL AND CATCH UP WITH THEIR FRIENDS. THEY MASK FOR 5 MORE DAYS.



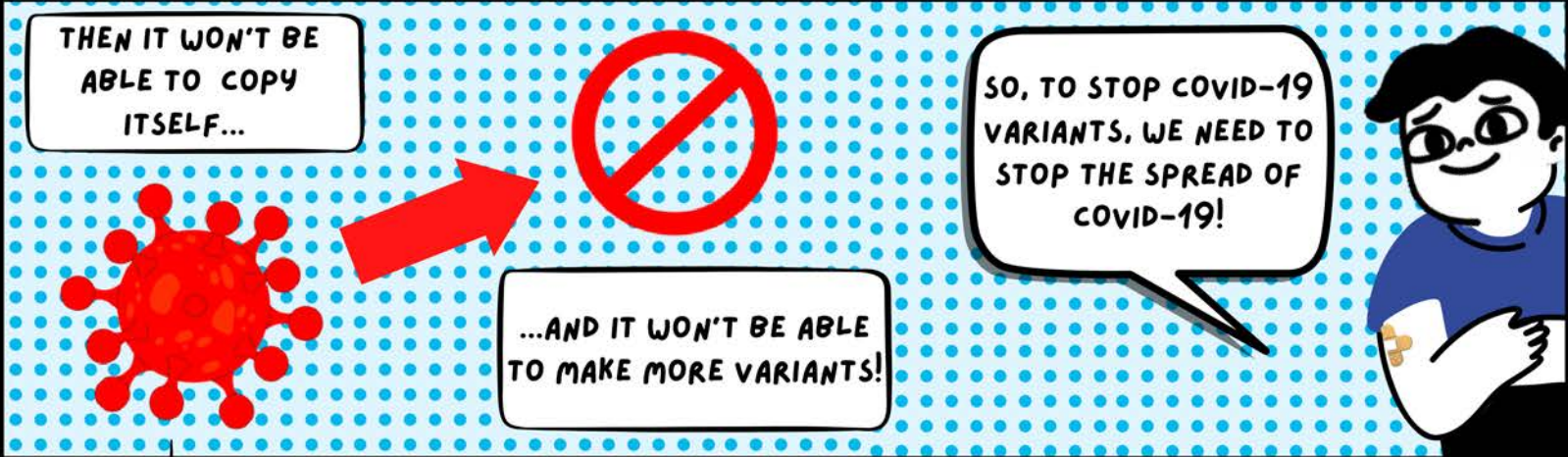


THEN IT WON'T BE ABLE TO COPY ITSELF...

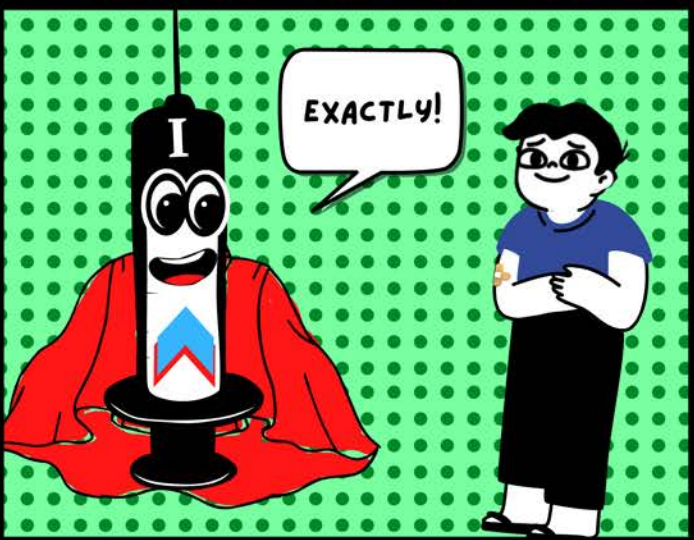


...AND IT WON'T BE ABLE TO MAKE MORE VARIANTS!

SO, TO STOP COVID-19 VARIANTS, WE NEED TO STOP THE SPREAD OF COVID-19!



EXACTLY!



TO FIGHT COVID-19 AND ITS VARIANTS:



STAY HOME WHEN YOU'RE SICK



WEAR A MASK

GET YOUR COVID-19 VACCINE



AND YOUR COVID-19 BOOSTERS TOO!



BUT IMMUNIZER...I'VE BEEN SEEING SO MUCH STUFF ABOUT COVID-19, AND I'M WORRIED.

THAT'S OK ASH. COVID-19 CAN BE HARD TO TALK ABOUT.



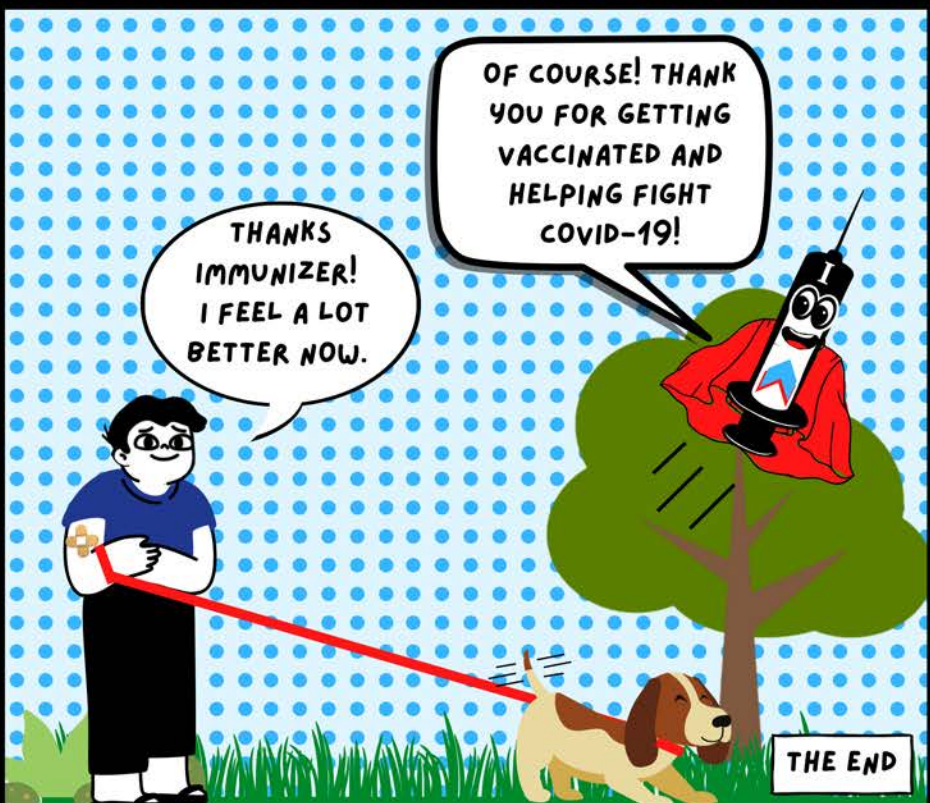
THIS IS WHY IT IS IMPORTANT TO LEARN ABOUT THE VIRUS FROM EXPERTS INCLUDING YOUR DOCTOR.

TURN TO PAGE 12 TO LEARN WHERE TO FIND ACCURATE AND UP-TO-DATE INFORMATION ON THE COVID-19 VIRUS.

MOST PEOPLE CAN'T LEARN ABOUT THE VIRUS LIKE SCIENTISTS CAN.



ALSO, REMEMBER IF LISTENING TO THE RADIO, TV, OR ONLINE STRESSES YOU OUT JUST TURN OFF THE NEWS!



THANKS IMMUNIZER! I FEEL A LOT BETTER NOW.

OF COURSE! THANK YOU FOR GETTING VACCINATED AND HELPING FIGHT COVID-19!

# WHERE CAN I FIND INFORMATION ON COVID-19 AND ITS VARIANTS?



## The World Health Organization

### Who they are:

A United Nations agency that connects nations, partners, and people around the world to promote health, keep the world safe, and serve the vulnerable – so everyone, everywhere can attain the highest level of health.

### Website:

[bit.ly/IHS-WHO](https://bit.ly/IHS-WHO)

## The Centers for Disease Control and Prevention

### Who they are:

A part of the United States government, including clinicians, scientists, and public health professionals, that fights disease and supports communities and citizens to do the same.

### Website:

[bit.ly/IHS-CDC](https://bit.ly/IHS-CDC)

## Your local health department:

### Who they are:

A part of city or county government that protects and promotes the health of their residents by making their communities a healthy place to live, work, and play.

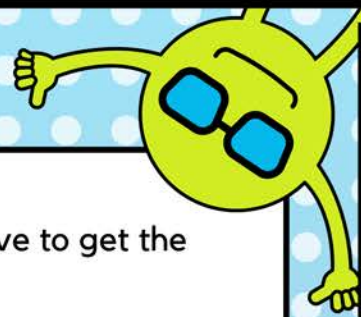
### Website:

[bit.ly/IHS-Philly](https://bit.ly/IHS-Philly)

Don't live in Philadelphia?  
Ask a grown-up to help you find your local health department's website.



# GLOSSARY



**Primary Vaccine(s):** The initial vaccine doses that someone needs to receive to get the first level of protection from a virus or bacteria.

**Variants:** Copies of a virus that are different from the original virus.

**Variant of Concern:** A variant that is either easier to spread, more severe, or behaves differently to testing, treatment, or vaccination.

RECOMMENDATIONS AS OF SEPTEMBER 2022: MAY CHANGE WITH NEW DATA AND EVIDENCE.  
VISIT [PHILA.GOV](https://www.phila.gov) AND [WWW.CDC.GOV/CORONAVIRUS](https://www.cdc.gov/coronavirus) FOR UPDATES.

# BOOSTER SHOT FACTS



- AFTER GETTING THE COVID-19 VACCINE, THE BODY'S ABILITY TO FIGHT THE VIRUS DECREASES OVER TIME. IT'S LIKE TAKING A LONG BREAK FROM PLAYING BASKETBALL. YOUR BODY NEEDS TO START PRACTICING AGAIN. THIS IS WHERE BOOSTERS COME IN.
- ANYONE OVER THE AGE OF 5 IS ELIGIBLE FOR A COVID-19 BOOSTER.
- THE COVID-19 BOOSTERS USE THE SAME TECHNOLOGY AS THE COVID-19 VACCINES. SOME COVID-19 MRNA BOOSTERS HAVE BEEN UPDATED TO ALSO INCLUDE INGREDIENTS THAT WORK AGAINST THE NEWER OMICRON VARIANTS.
- AN MRNA BOOSTER IS RECOMMENDED OVER JOHNSON & JOHNSON.
- YOUR COVID-19 BOOSTER DOES NOT HAVE TO BE THE SAME BRAND AS YOUR COVID-19 VACCINES. YOU CAN MIX AND MATCH!
- SCAN HERE FOR UP TO DATE INFORMATION ON:

COVID-19 BOOSTERS  
[BIT.LY/CDC-COVID-BOOSTERS](https://bit.ly/cdc-covid-boosters)



COVID-19 VACCINE SCHEDULE  
[BIT.LY/CDCCCVIDVAX](https://bit.ly/cdcccovidvax)







# SECRET CODE PUZZLES



**UNSCRAMBLE THE WORDS TO SPELL OUT A WORD YOU'VE SEEN IN THIS COMIC BOOK!**

**KAERROUBTHGH**

\_\_\_\_\_

**PRSDEA**

\_\_\_\_\_

**PSIECO**

\_\_\_\_\_

**SNSTIECTI**

\_\_\_\_\_

**OEBROTS**

\_\_\_\_\_

**CPoy**

\_\_\_\_\_

**OSTPMMY**

\_\_\_\_\_

**ONoAMFRTIIN**

\_\_\_\_\_

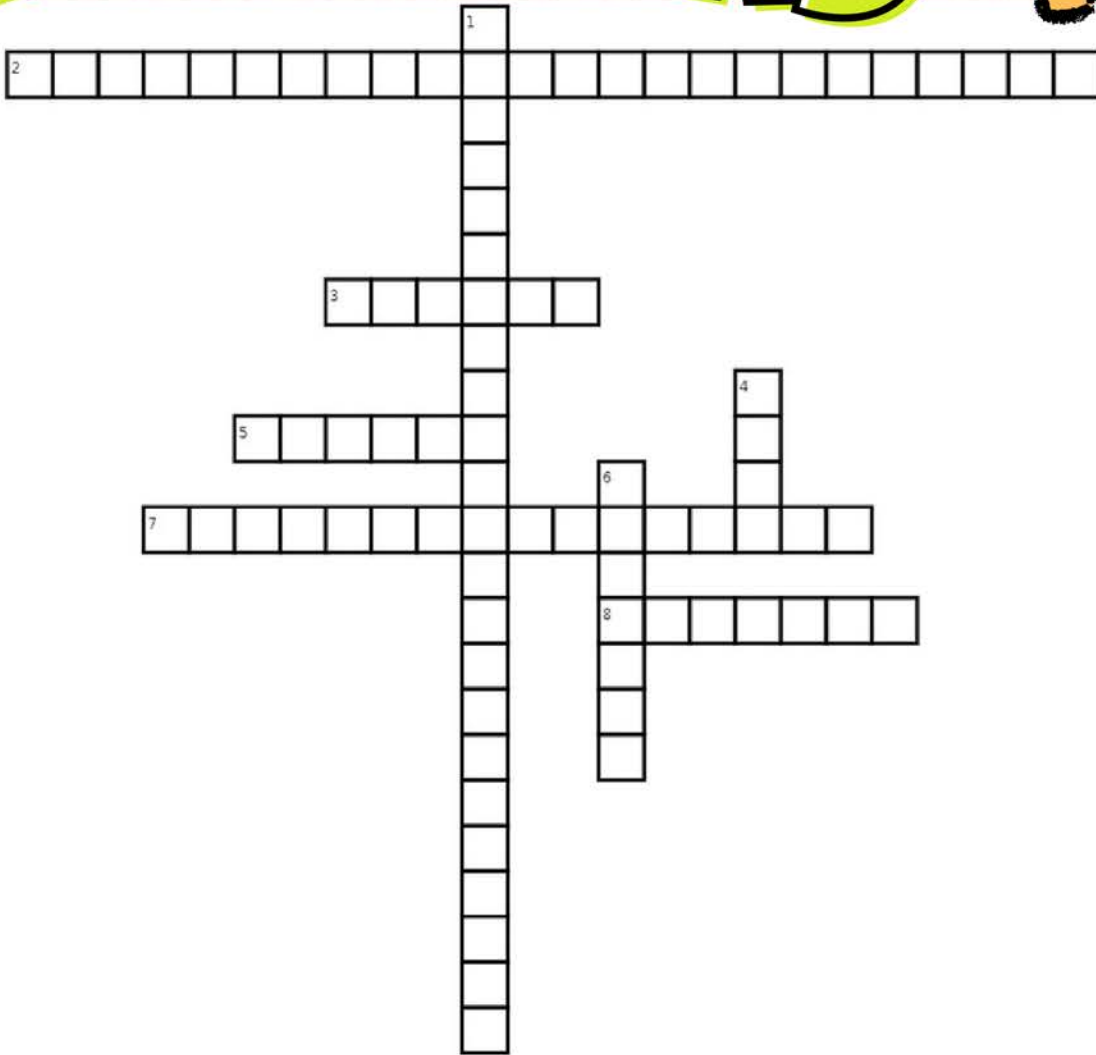
**PXETRE**

\_\_\_\_\_

ANSWERS: Breakthrough, Spread, Copies, Scientist, Booster, Copy, Symptom, Information, Expert.

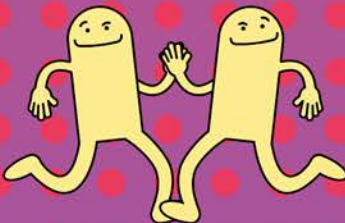


# CROSSWORD



## Down:

1. A United Nations agency that connects nations, partners, and people around the world to promote health, keep the world safe, and serve the vulnerable – so everyone, everywhere can attain the highest level of health.
4. A 12 year old who likes soccer and karaoke
6. An extra added protection against COVID-19 infection and severe illness



## Across:

2. A division of a local or larger government responsible for the oversight and care of matter relating to public health
3. A feeling of emotional or physical tension
5. A person who has a comprehensive and authoritative knowledge of or skill in a particular area
7. A variant that is either easier to spread, more severe, or behaves differently to testing, treatment or vaccination.
8. Raised by Ash and likes to run, eat and sleep

# COLOR BY NUMBERS

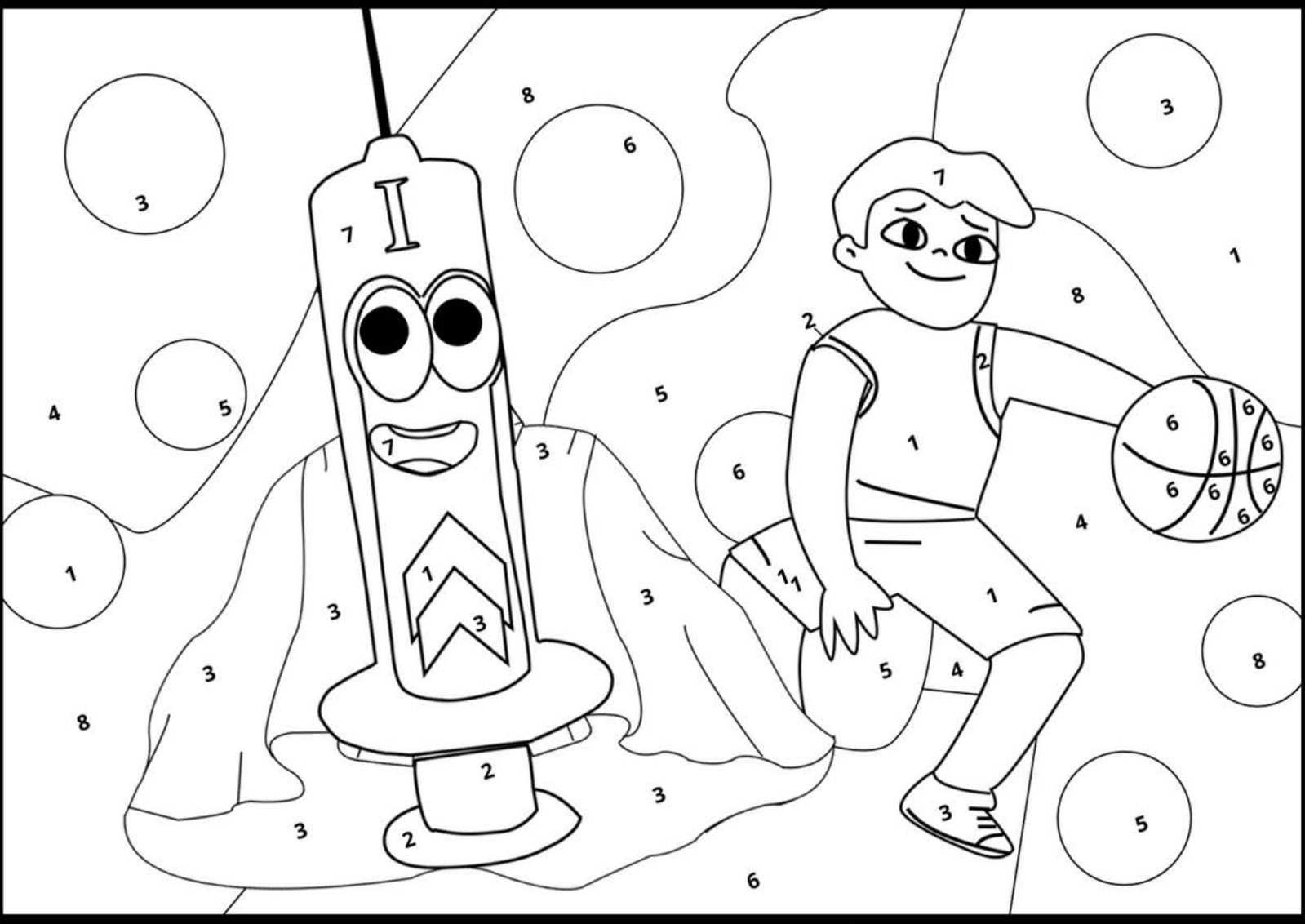
**Directions:**  
Color in each shape with the matching number below:



- 1. Blue
- 2. Gray
- 3. Red
- 4. Violet

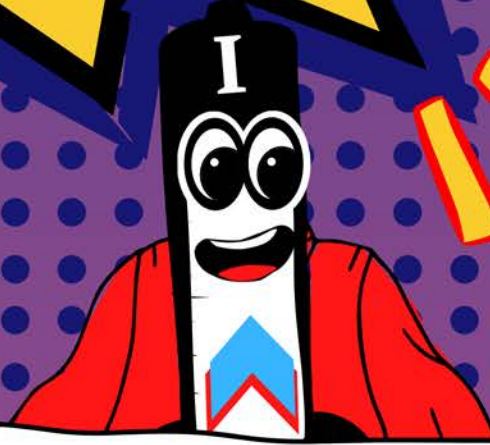
- 5. Yellow
- 6. Orange
- 7. Black
- 8. Green

All shapes without a number are white.





**FOR MORE INFORMATION  
VISIT [PHILA.GOV/COVID](https://phila.gov/covid) AND  
[WWW.CDC.GOV/CORONAVIRUS](https://www.cdc.gov/coronavirus)**



How did you like the comic book? Please share your thoughts or feelings with us to make the comic book better and add any sections or topics you would like to see! Submit your review at [bit.ly/bbp-cc-forms](https://bit.ly/bbp-cc-forms)

