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ICMEE Learning Packets: Level 3 of English  
Proficiency (K-12)

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2020

### 7th–8th Grade: English Level 3, Learning Packet #3 • Theme: Disasters #3

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7<sup>th</sup> – 8<sup>th</sup> grade • English Level 3

# Learning PACKET #3



Theme: Disasters #3

# International Consortium for Multilingual Excellence in Education



August 15<sup>th</sup>, 2020

Dear District/School Personnel:

We are a consortium of researchers, teacher educators, and teachers who believe in and strive to foster multilingual excellence. Therefore, during this time of crisis and difficulty, we are eager to put our expertise and passions to use to try to be of assistance. We initially designed 21 immediate-response packets for K-5, as soon as the pandemic forced schools to shut down. We then applied for and received a grant that has allowed us to create more than 100 full activity packets, ranging from Levels 1-3 of English proficiency, and grades K-12.

**The breakdown of packets is as follows:**

## **Level 1 – Entry into English**

Emphasis on developmentally appropriate interesting/challenging tasks

- K-2
- 3-5
- 6-8 with a literacy background
- 9-12 with a literacy background
- 6-8 without literacy background
- 9-12 without literacy background

## **Level 2 – Building Background**

- K-1
- 2-3
- 4-5
- 6-8
- 9-10
- 11-12

## **Level 3 – Interdisciplinary Inquiry**

- K-1
- 2-3
- 4-5
- 6
- 7-8
- 9-10
- 11-12

With this letter, is an “Activity Packet” that can be used freely with any group of students or families as you see fit. Each packet includes interdisciplinary activities designed to be completed within a week. Teachers from around the country have designed, developed, and created these packets, each focusing on the topics of their choice. Because learning academic content can happen within any thematic context, these packets are designed to be diverse, dynamic, and engaging for students of all backgrounds. The topics covered in these units range from cultures, animals, natural disasters, inventions, and much more. You will see each teacher’s personality reflected strongly in these packets, and our hope is that this will capture students in a way similar to that of a rich and immersive classroom environment.

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Our hope is that these materials can provide some meaningful learning supports to students and families who may not have access to online learning opportunities. However, we can also imagine a variety of ways that these packets can provide learning opportunities outside of our original intent and purpose. Please use these activity packets in any way you see fit for your students and families. We will be so pleased to learn of how they might be useful, particularly for your multilingual students and their families. We think it might be particularly helpful for you to print packets and mail them to families, but we also see opportunities to work with local agencies, leave printed-out packets for pick-ups at schools, etc.

We designed these activities based around several big ideas:

- Productive play and inquiry
- Grade level and English Language Development standards/curriculum
- Fostering multilingual language development
- Providing opportunity for all four language domains (reading, writing, speaking and listening)

These packets are self-contained. Everything a child will need to be successful with the activities is provided in the packet. Students will only need a writing utensil. Additional tools like crayons or scissors are optional.

We have also included a letter to parents. We hope this will help parents understand what students will be doing with the packet and that we encourage the use of all language resources available to the student. The packets are in English for the students, but the students can write, talk and engage with family members regarding the packet activities in any language they would like. We have translated the parent letter into Spanish, and we encourage districts to translate the letter into any other language that would be helpful for your local families.

Designing Activity Packets is a new initiative for us, though we have been designing professional learning opportunities (eWorkshops) for teachers of multilingual learners since 2011. Like our Activity Packets, those learning opportunities for teachers are free. To learn more about them and us, please visit our website at: <https://cehs.unl.edu/icmee/>

We are eager to be a helpful, collaborative partner in all learning needs related to multilingual students and their teachers, so please, do not hesitate to reach out to us with questions, ideas, concerns, feedback, etc. We are available at [icmee@unl.edu](mailto:icmee@unl.edu).

Sincerely,

Kara Mitchell Viesca, PhD

Associate Professor of Language Education

University of Nebraska Lincoln

Teaching, Learning and Teacher Education

PI: International Consortium for Multilingual Excellence in Education

This packet was designed and created by **Caryn G. Jones** in collaboration with Lauren Gatti and Alexa Yunes.



The Standards that Informed the Development of this Packet are:

**Standards:**

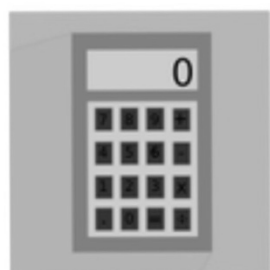
- **ELA Literacy RH.6-8.7:** Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
- **ELA-Literacy WHST.6-8.2:** Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
  - **Especially C:** Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
  - **Especially D:** Use precise language and domain-specific vocabulary to inform about or explain the topic.
- **Next Gen Science MS-LS3-1:** Complex and microscopic structures and systems can be visualized, modeled, and used to describe how their function depends on the shapes, composition, and relationships among its parts, therefore complex natural structures/systems can be analyzed to determine how they function.
- **Next Gen Science MS-LS3-2:** Cause and effect relationships may be used to predict phenomena in natural systems.
- **Next Gen Science MS-LS4-5:** Scientific knowledge can describe the consequences of actions but does not necessarily prescribe the decisions that society takes

**Language Functions:**

- Explain cause and effect relationships for natural processes using auxiliary verbs with conjunctions
- Classification of objects or ideas using verbs and conjunctions
- Compare and contrast ideas and data using adverbs and conjunctions

**7<sup>th</sup> – 8<sup>th</sup> grade • English Level 3**

# Learning PACKET #3



**Theme: Disasters #3**

# International Consortium for Multilingual Excellence in Education



August 15<sup>th</sup>, 2020

Dear Families:

During the COVID-19 pandemic, it became necessary for students to learn at home. Many students have limited access to technology, others struggle with online learning, and some simply want more to do while they are at home. With these things in mind, we have created an extensive resource of learning materials that we hope will be helpful for your children to engage with. These Activity Packets were designed with your students in mind and are aligned with each of their grade level content. Each activity in the packets will help students continue with their schooling as well as continue to grow their multilingualism. We encourage you to talk to your student about what they are doing and let your child ask you about the topics they are learning about. The packet is in English, but we encourage you and your children to speak and think together in any language you would like to. We strongly encourage you to use the language you feel most comfortable using with your student. Supporting their learning in all the languages they know is helpful—even for developing their English! So, please encourage your student to do the work in the packet in any language they would like.

We know that families are dealing with a lot of stress and uncertainty right now, so we encourage you to play the role you would like to play with your student and their Activity Packet based on what works best for you. We recommend reading the information about the packet and activities and then discussing with your student how the packet works and how they can work through it. We believe that with that introduction, your student can do a lot, if not all, of the work themselves. However, if you are available to work more closely with your student (or for a sibling or other family member to do so), we encourage that as well. Please know, this is not intended to be something that adds stress and work to your family during this demanding time. We hope that this is a helpful resource so your student can continue growing academically while in unusual situations.

We also hope you will find these packets interesting and fun. We have integrated activities from all of the grade level content standards: English Language Arts, Mathematics, Social Studies, Science, Physical Education and Art. We have also developed different packets for the different levels of English proficiency, so your child should feel challenged but also capable of largely understanding the content in front of them.

6<sup>th</sup>-12<sup>th</sup> grade students are encouraged to talk about their learning as much as possible, even if it is not to one person in particular. Some packets will include activities where students can “use a cell phone” to record voice messages and post on social media, which we hope might be ways in which they can be encouraged to speak in English or in any language they prefer.

In these packets, we have also included the following activities:

- Dictionary. Each day we hope that your student will engage with words they find interesting and want to keep track of. We encourage students to use the dictionary activities to keep track of words they learn and find interesting. We also encourage students to use any language they would like as well as pictures to help them remember what the words mean.

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- Journal. Students should be encouraged to write in any language (or combination of languages) that they feel most inclined to. They can also use pictures as appropriate. We hope these journal spaces will also be points of conversation for your child with someone in their home.
- This packet is the third in a unit about Disasters. Your student will practice using high-level English language while learning about a high-interest topic. The lessons will include working with language used in science, math, and social studies, as well as reading and writing.

Day 1: Your student will choose someone to “communicate” with throughout this unit. It can be someone they know outside your household or someone that they imagine and create. They will also understand the pathogens that cause diseases as well as the incubation and contagion periods of various diseases.

Day 2: Your student will explore the ways infectious diseases are passed from person to person and how transmission can be prevented.

Day 3: Your student will study the anatomy of the human body including organ systems. In addition, they will identify how symptoms affect the human bodies.

Day 4: Your student will analyze symptoms to diagnose disease and discover the differences between treating, curing, or preventing diseases.

Day 5: Your student will review all of the work they’ve done so far. They will use the information from throughout the week to diagnose and explain the treatments they would recommend for a patient.

We have included answers for activities in the packet so your or your student can check their work, as well as some graphic organizers that can help students as they work through specific activities.

We hope that these activities will enhance your child’s learning while we work through these very unusual circumstances. We also hope that they will give your child opportunities for productive play. If you have any questions or concerns about these packets, feel free to reach out to our project at [icmee@unl.edu](mailto:icmee@unl.edu) or by calling the Teaching, Learning and Teacher Education department at 402-472-2231.

Sincerely,

Kara Mitchell Viesca, PhD  
Associate Professor of Language Education  
University of Nebraska Lincoln  
Teaching, Learning and Teacher Education  
PI: International Consortium for Multilingual Excellence in Education

This packet was designed and created by **Caryn Jones**  
in collaboration with Lauren Gatti and Alexa Yunes.

# Answer Keys

## Focus on infectious diseases Answers

Use the information in the table above to mark which of the four types of pathogens are described.

Disease/Description	Virus	Bacteria	Fungi	Protozoa
Malaria is caused by a parasite transmitted by mosquitoes. The parasite attacks red blood cells.				X
Streptococcus cells cause infections like strep throat and can be treated with antibiotics.		X		
People get histoplasmosis by breathing in spores that live near rivers.			X	
COVID-19 is a tiny germ that causes infections that cannot be treated with antibiotics.	X			

## Two more terms we need to understand:

**Incubation Period** – The amount of time from when a person is infected until they start showing symptoms.

**Contagion Period** – The amount of time when an infected person can infect others.

Disease	Incubation period	Contagious period	Duration of illness*	Notes
Chickenpox	10-21 days	2 days before rash, until 6-7 days later	5-10 days	That's a long incubation period.
Measles	8-12 days	4 days before rash until 4 days after	10 days	
Bronchitis	4-6 days	Start of cough through 7 days	Up to 2 weeks	Not contagious until you know you're sick.
Most Influenza	1-2 days	Onset of fever until fever is gone	3-7 days	That's a short incubation period.
Strep Throat	2-5 days	Onset of sore throat until on antibiotics 24 hours and fever is gone; 2-3 weeks if no antibiotics.	Symptoms may continue for up to 7 days after starting antibiotics	Antibiotics shorten things a long time. Symptoms last even after no longer contagious.
Cholera	Usually 2-3 days, but can start within hours or not until 5 days	Generally one week, until there are no symptoms	3-6 days	Super short incubation period
Paralytic Polio	7-21 days	For 7-10 days before and after symptomatic	2-5 days	That's a long period of contagion.
COVID-19	2-14 days	3 days before symptoms until 10 days after them	7-14 days	

\*For uncomplicated cases

## Think it through Possible Answers

Let's use the data on incubation and contagious periods from Lesson 1 to make some tough decisions.

Your cousin had a birthday and you slept over at their house on Friday, April 5, after racing go-karts. By the time you got back from racing, you were both hoarse from yelling so loud. Your cousin says their throat hurts from yelling so much and coughs. Later, while you were playing video games, your cousin kept grabbing your soda and drinking out of it. It didn't seem like any big deal, but by the next morning, your throat is fine, but your cousin says their throat hurts even more. That night, you aunt calls and tells your mom that your cousin has a fever now.

By Sunday evening, your throat is hurting again, worse than it had from yelling Friday night. Monday morning your mom takes your temperature and finds that you have a fever. She tells you to go back to bed. Later she calls to tell you that your cousin has strep throat and that she'll take you to the doctor in the afternoon. Your friends from school want to come play video games at your house.

Is it safe for your friends to come to your house today? It is not really safe. You are contagious.

If your mom takes you to the doctor this afternoon and you take your first dose of antibiotics around 5 pm, when would it be safe for them to come over? About 24 hours after I take my antibiotics it will be safe for them to come over, so they could come over tomorrow evening after 5 pm.

If they wanted to come over anyway, say to work on a group project that is due, what can all of you do to reduce their risk of catching your strep throat? Pay attention to how it is transmitted and be sure to talk about what YOU will do and what they can do. The best thing we can do is to meet over Zoom or Google Meet. That way they are not at-risk of catching strep throat. If they came over, however, we would have to be very careful because strep throat can be caught through all four modes of transmission. My mom would need to clean the furniture where they will sit to rid them of fomites. If they don't touch anything I have touched, and we all wear masks they should be safer, especially if I sit across the room.

## How do you feel? Answers

Each disease has a different set of symptoms, ways it affects the human body. These are the feelings we name when the doctor asks us to tell them what is wrong. Knowing our symptoms can help doctors narrow down our diagnosis (naming what disease or illness we have).

Some symptoms are clearly tied to an organ system. Others are harder to pinpoint. Headaches and fatigue (being very tired despite rest), for instance, take many different forms and cannot usually be tied to a specific organ system.

Additionally, while we think of fever as a symptom, it is also part of your immune system's fight against disease. Many viruses and bacteria are sensitive to temperature so often our body's first defense is to turn up the heat. If our body is using a fever to "burn out" an invading organism, we shouldn't always take medication to bring a fever down.

Let's chart the systems affected by the diseases we've studied. See my example then finish the chart.

Disease	Symptoms	Systems affected
Chickenpox	Itchy rash with fluid-filled blisters, fever, loss of appetite (not feeling hungry), headache, tiredness	Integumentary/rash, immune system/fever, digestive/loss of appetite
Measles	Fever, dry cough, runny nose, sore throat, inflammation of the eyes, rash made of large, flat blotches, tiny white spots on the inside of the cheek	Integumentary/rash and white spots, immune system/fever, respiratory/cough, sore throat, runny nose
Typical influenza	Fever/chills, cough, sore throat, runny/stuffy nose, muscle/body aches, headache, tiredness, rarely, vomiting and diarrhea	Immune system/fever, respiratory/cough, sore throat, runny nose, muscular system/aches, digestive/vomiting and diarrhea
Strep Throat	Sore throat, painful swallowing, red/swollen tonsils (might show white patches/streaks), tiny red spots at the back of the roof of the mouth, swollen lymph nodes in neck, fever, headache, body aches	Respiratory/sore throat, immune/fever, swollen lymph nodes
Cholera	Primary: A LOT of watery diarrhea, vomiting, rapid heart rate. Dehydration causes secondary: low blood pressure, dry mouth, extreme thirst, irregular heartbeat	Digestive/diarrhea, vomiting, cardiovascular (caused by secondary dehydration)/low blood pressure, rapid heartbeat, irregular heartbeat
COVID-19	Fever/chills, cough, shortness of breath/difficulty breathing, tiredness, muscle/body aches, headache, loss of taste/smell, sore throat, stuffy/runny nose, nausea/vomiting, diarrhea	Respiratory/cough, sore throat, breathing trouble, stuffy/runny nose, immune/fever
Polio	Fever, sore throat, headache, tiredness, back/neck pain/stiffness, severe muscle weakness, loss of reflexes	Respiratory/sore throat, muscular/pain, stiffness, weakness, loss of reflexes

## Diagnose it, doctor! Answers

I'm going to give you some information about someone who is ill. You will use their symptoms and the chart to **diagnose** (decide what disease they have) their illness.

Name: Susan Marlow

Which diseases might she have with those symptoms? Based on these symptoms, Susan might have measles, influenza, strep throat, COVID-19, or polio.

When you examine her, you find that she has a temperature of 101.4, the lymph nodes in her neck are swollen, and when you look in her throat you see that her tonsils are red and swollen with some white patches on them.

Which disease do you think Susan has? Her swollen tonsils and lymph nodes tell me that she has strep throat.

## Check your knowledge Answers

Match them up (draw a line between the treatment and the disease):

The doctor recommended Advil, cough medicine at night, and rest. To treat diabetes

Programs in clinics worldwide are vaccinating anyone who has not already had the disease. To treat the fever/cough of influenza

The doctor prescribed antibiotics and recommended Advil. To cure strep throat/treat a sore throat

She tests her blood several times a day and uses insulin shots to help keep her blood sugar balanced. To prevent/eradicate polio

# International Consortium for Multilingual Excellence in Education



15 de agosto del 2020

Estimadas familias:

Durante la pandemia del COVID-19, ha sido necesario que los estudiantes aprendan en casa. Muchos de los estudiantes tienen acceso limitado a la tecnología, otros tienen dificultad para aprender en línea y algunos simplemente quieren tener algo más que hacer mientras están en casa. Pensando en estas razones, hemos creado un recurso con una gran extensión de materiales de aprendizaje que esperamos serán útiles para que sus hijos participen activamente. Estos paquetes de aprendizaje fueron diseñados teniendo en mente a sus niños y están alineados a los contenidos de cada nivel de grado. Cada actividad en estos paquetes los ayudará a continuar con su escolarización, así como a seguir aumentando su multilingüismo. Lo alentamos a que hable con su estudiante sobre lo que está haciendo y deje que le pregunte sobre los temas que le interesan. El paquete está en inglés, pero le recomendamos a usted y a su estudiante que hablen y piensen juntos en el idioma que deseen. Le recomendamos encarecidamente que use el idioma con el que se sienta más cómodo al comunicarse con su estudiante, ya que respaldar su aprendizaje en todos los idiomas que sabe es útil, ¡incluso para su inglés! Por lo tanto, anime a su estudiante a hacer el trabajo en el paquete en cualquier idioma que desee.

Sabemos que las familias están lidiando con mucho estrés e incertidumbre en este momento, por lo que lo alentamos a que desempeñe el papel que le gustaría desempeñar con su estudiante y su paquete de actividades según lo que funcione mejor para usted. Le recomendamos leer la información sobre el paquete y las actividades que contiene y luego discutir con su estudiante cómo funciona el paquete y cómo pueden trabajar en él. Creemos que, con esa introducción, su estudiante puede hacer mucho, si no todo, el trabajo por sí mismo. Sin embargo, si usted está disponible para trabajar más estrechamente con su estudiante (o un hermano u otro miembro de la familia), también lo recomendamos. Por favor, tenga en cuenta que esto no pretende ser algo que agregue estrés y trabajo a su familia durante este momento tan desgastante. Por el contrario, esperamos que este sea un recurso útil para que su estudiante pueda continuar desarrollándose académicamente durante esta situación tan inusual.

También esperamos que ustedes encontrarán estos paquetes interesantes y divertidos. Hemos integrado actividades de todos los estándares de contenido de nivel de grado: Artes del Lenguaje en inglés, Matemáticas, Estudios Sociales, Ciencias, Educación Física y Arte. También hemos desarrollado diferentes paquetes para los diferentes niveles de dominio del inglés, de esta manera su hijo podrá sentir el desafío y también será capaz de comprender en gran medida el contenido que se les presenta.

Los estudiantes de 6to a 12avo grado son motivados a hablar sobre su aprendizaje tanto como sea posible, aun cuando no sea a una persona en particular. Algunos paquetes incluirán actividades en donde los estudiantes pueden “usar un teléfono celular” para grabar mensajes de voz y subirlos a las redes sociales; esperamos que estas sean formas que los animarán a hablar en inglés o en el idioma de su preferencia.

En este paquete hemos incluido las siguientes actividades:

- Diccionario: Esperamos que cada día su estudiante aprenda palabras que encontrará interesantes y querrá tener un seguimiento y registro de estas. Al final de los paquetes encontrarán páginas en las que

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su estudiante podrá mantener su propio diccionario. Recomendamos ampliamente que los estudiantes usen estas páginas para registrar palabras que les gusten o les parezcan interesantes. También alentamos a los estudiantes a usar cualquier lenguaje que deseen, así como imágenes para recordar el significado de las palabras.

- Diario: Cada día, los estudiantes tienen un tema corto de escritura al que pueden responder. Los estudiantes deben ser alentados a escribir en cualquier idioma (o combinación de idiomas) que les parezca más conveniente. También pueden utilizar imágenes si lo consideran necesario. Esperamos que estos temas de escritura puedan utilizarse de puntos de conversación entre su estudiante y su amigo.
- Este paquete es el tercero de una unidad sobre desastres. Su estudiante practicará el uso del idioma inglés de alto nivel mientras aprende sobre un tema de gran interés. Las lecciones incluirán trabajar con el lenguaje usado en ciencias, matemáticas y estudios sociales, así como también lectura y escritura.
- Día 1: Su estudiante elegirá a alguien con quien “comunicarse” a lo largo de esta unidad. Puede ser alguien que conocen fuera de su hogar o alguien que imaginan y crean. También comprenderán los patógenos que causan enfermedades, así como los períodos de incubación y contagio de diversas enfermedades.
- Día 2: Su estudiante explorará las formas en que las enfermedades infecciosas se transmiten de persona a persona y cómo se puede prevenir la transmisión.
- Día 3: Su estudiante estudiará la anatomía del cuerpo humano, incluidos los sistemas y los órganos. Además, identificarán cómo los síntomas afectan al cuerpo humano.
- Día 4: Su estudiante analizará los síntomas para diagnosticar enfermedades y descubrirá las diferencias entre tratar, curar o prevenir enfermedades.
- Día 5: Su alumno revisará todo el trabajo que ha realizado hasta ahora. Utilizarán la información de toda la semana para diagnosticar y explicar los tratamientos que recomendarían a un paciente.

Hemos incluido respuestas para las actividades en el paquete para que usted o su estudiante puedan verificar su trabajo, así como algunos organizadores gráficos que pueden ayudar a los estudiantes mientras trabajan en actividades específicas.

Esperamos que estas actividades mejoren el aprendizaje de su hijo mientras trabajamos juntos para atravesar estas circunstancias tan inusuales. También esperamos que le darán a su hijo oportunidades de juego productivo. Si tiene alguna pregunta o inquietud acerca de estos paquetes, siéntase en libertad de comunicarse con nuestro proyecto a [icmee@unl.edu](mailto:icmee@unl.edu) o llamando al departamento de Enseñanza, Aprendizaje y Educación para maestras (Teaching, Learning, and Teacher Education) al 402-472-2231.

Sinceramente,

Kara Mitchell Viesca, PhD  
Associate Professor of Language Education  
University of Nebraska Lincoln  
Teaching, Learning and Teacher Education  
PI: International Consortium for Multilingual Excellence in Education

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## Share your learning!

Share a picture of any of your work by using **#MultilingualProud** on social media.

We'd love to see what you've done with this packet!



## Instructions Key



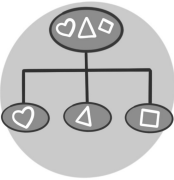
- Share with someone else
- Comparte con alguien más
- مشاركتها مع شخص آخر
- La wadaag qof
- Chia sẻ với ai đó



- Read
- Lee
- اقرأ
- Akhriso
- Đọc



- Write
- Escribe
- اكتب
- Qor
- Viết



- Sort
- Ordena
- رتب
- Kala sooc
- Lựa chọn



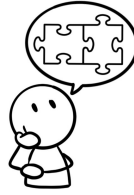
- Move your body
- Mueve tu cuerpo
- حرك جسمك
- Dhaqdhaqaaqa jirkaaga
- Di chuyển cơ thể của bạn



- Cut
- Corta
- قص الورقة
- Waraaqda jar
- Cắt giấy



- Read out loud
- Lee en voz alta
- قراءة بصوت عال
- Kor u aqri
- Đọc to



- Make a connection
- Hacer una conexión
- إجراء اتصال
- Xiriir samee
- Tạo kết nối

123

- Count
- Cuenta
- العدد
- Tiri
- đếm



- Draw
- Dibuja
- رسم
- Sawir
- Vẽ tranh



- Find
- Encuentra
- وجد
- Soo hel
- Tìm thấy


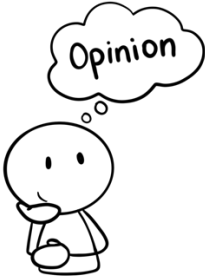

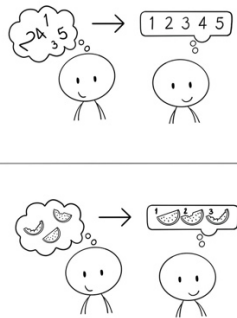



- Color
- Colorea
- لون
- Midab gudaha
- làm cho hoa mỹ



- Share with your Buddy
- Comparte con tu Buddy
- شارك مع صديقك
- La wadaag asxaabtaada
- Chia sẻ với bạn bè của bạn

## Thinking Skills Glossary

Word	Definition	Picture
Fact 事实 Hecho	something we know, without question 我们知道的毫无疑问 Algo que podemos comprobar	
Opinion 意见 Opinión	something we think or believe 我们认为或相信的事情 Algo que pensamos	
Compare 相比 Comparar	think about how two or more things are the same or different 考虑一下两个或多个事物是相同还是不同 Pensar en qué se parecen y en qué son diferentes dos o más cosas	
Sequence 序列 Secuencia	to put things in the right order from first to last 从头到尾正确地安排事情 Poner las cosas en orden , del primero al último	
Classify Sort Categorize 分类 Clasificar Organizar	to put things into groups by how they are the same 通过相同的方式将事物分组 Agrupar cosas por cómo se parecen	

# Question Words



Who?



When?



Where?



What?



Why?



# iPhone Instruction Icons



Write a text message  
写短信  
Escribe un mensaje



Tweet: write one sentence  
推特：写一句话  
Tweet: escribe una oración



Post on Facebook: write a few sentences  
在Facebook上发布：写几句话  
Publica en Facebook: escribe algunas oraciones



Post on Instagram: write a sentence and draw a picture  
在Instagram上发布：写一个句子并画一幅画  
Publica en Instagram: escribe una oración y dibuja



Write an email: write a paragraph  
写一封电子邮件：写一个段落  
Escribe un correo electrónico: escribe un párrafo

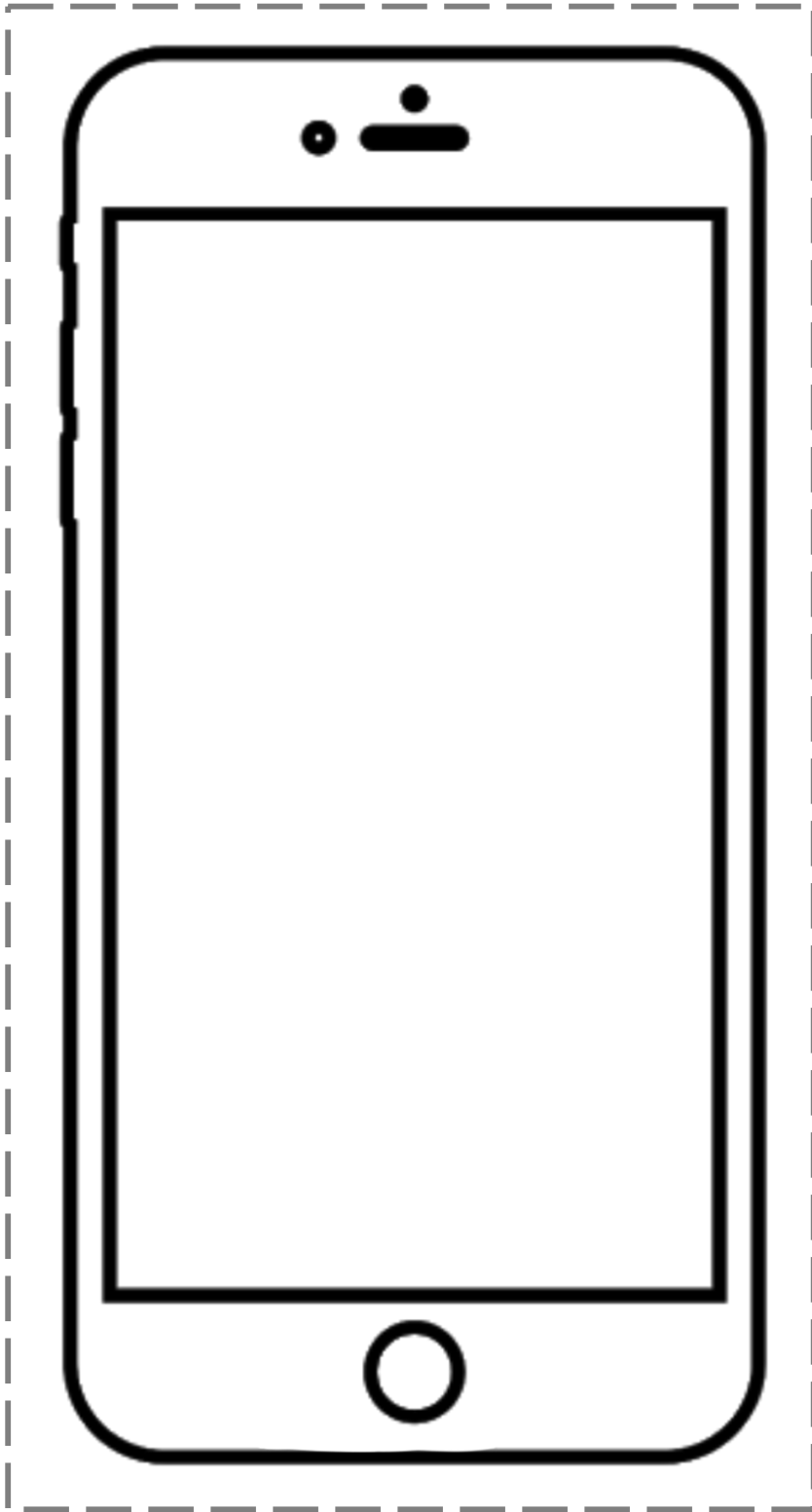


Record a voice message  
录制语音留言  
Graba un mensaje de voz



Make a phone call  
打个电话  
Haz una llamada





# Pandemic!

Grades 7-8

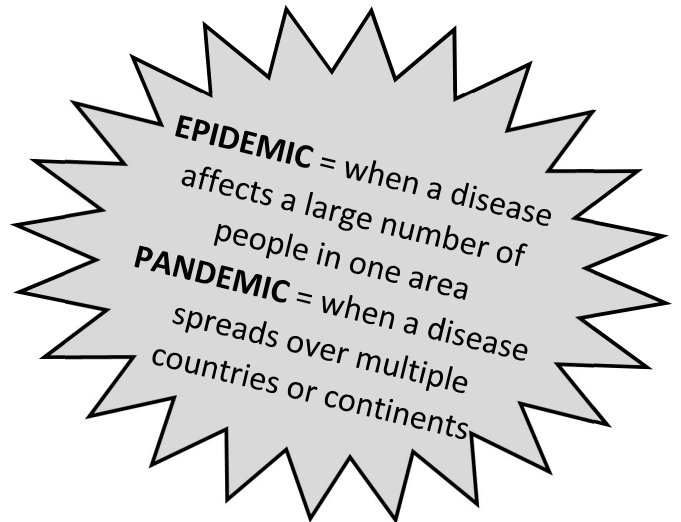
## ***Contagion closes in***

There have been hundreds of illnesses that have changed the course of history by disrupting life around the world in ways we could not predict or even imagine. Just like other natural disasters, there are ways to prepare and to stay as safe as possible.

## ***Language matters***

In addition to learning about this topic, we are practicing how we work with language.

We have many different ways to use the English language. This week we will use high-level academic language explain the sequence and duration of actions within an event, to explain cause and effect relationships for natural processes and for feelings, actions, and physical conditions, and make predictions and inferences about actions or events based on data.





# Building academic language

Our goal, every day, in every lesson, is to use the English language to communicate in any situation, particularly in school or work. To do that, we are building:

**Cohesion** (adjective) *unified, well-structured*

- Does the way I organized my ideas help my readers understand?
- Have I used transitions to help my sentences fit together?
- Did I write enough to fully explain my thinking without repetition?

**Flexibility** (adjective) *able to be changed/adapted to make it better*

- How can I say or write this in a higher-level way?
- Have I used the right structures to help my readers understand?
- Did I use different types of sentences for different purposes?

**Precision** (adjective) *exact, exactly right*

- Did I use the right words/vocabulary to explain my thinking?
- How can I say this accurately or correctly?
- Has my language painted the picture I want readers to see?

**Transfer** (verb) *to move from one place to another*

- How can I use this language in my social studies/science class?
- Can I use this language in my math class?
- Is there a way to use this language outside school?

## I already speak English

I know you do! You have so much experience with the English language, but we have to keep building. Even native English speakers need to work at it. The more proficient you are in using high-level academic language, the more opportunities you will have. We use language differently with our friends and families than we do to explain our thinking in school or at jobs.

# Understanding the COVID-19 Pandemic

This week we are taking a look at a natural disaster that has affected every one of us. We need to remember that all of the information in this packet is based on the data we had in early July 2020. Some of this information will change as we learned more about the disease and from our experience dealing with it.

Week 2: Pandemic!

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Defining diseases	How disease moves	Human anatomy	Treatment vs vaccine vs cure	Diagnose and treat a patient
Exploring pathogens	Passing on illness and how NOT to pass it on	Systems affected	Process of the research	
Time is everything	Personal preventive measures	Symptom in systems		

## What will you do in this packet?

- Learn/refine (make better) your understanding of vocabulary and sentence structure
- Explore cause and effect relationships of diseases
- Classify symptoms according to anatomical system
- Compare/contrast data about the diseases by location and type
- Reflect on your learning and how you can use it in the real world

At the end of each lesson, you will enter the vocabulary you learned in your personal dictionary and write to tell your colleague what you've learned.

**Be prepared! We're working with a LOT of vocabulary this week. YES!**



# Check in with your colleague

You will continue to communicate with the colleague you “worked” with while learning about disasters and survival techniques. Take a moment to record what their experience has been like so far.

## Updates about my colleague

Name \_\_\_\_\_

Age \_\_\_\_\_ Where do they currently live? \_\_\_\_\_

Their COVID experiences so far:

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## Remember the vocabulary we practiced before

Word/Phrase	Emerging (Good)	Developing (Better)	Expanding (Best)
Ways to refer to disasters (Nouns)	Thing, stuff, problem  One thing you should look for...	Threat, risk, challenge, trouble, emergency,	Danger, hazard, disaster, crisis, tragedy
Ways to say “look for” (verbs)	Look for, see, watch for	Consider, keep an eye out for, notice, pay attention to	Observe, recognize, contemplate
Ways to say “stay away from”	Stay away from	Escape	Avoid, avert, evade,
Ways to say something is dangerous (adjectives)	Bad, hard, unsafe	Dangerous, deadly, risky, serious,	Threatening, fatal, perilous
Ways to name a place (Nouns)	Place, house, area	Location, town, spot	Environment, locale*, region
Sentences	One thing you should look for are unsafe stuff in your new place.	Consider keeping an eye out for serious threats in your new town.	If you learn to recognize hazards in your new region, you could avoid a crisis.
Ways to compare/contrast	+___ and ___ are the same because ____. +___ and ___ are the different because ____.	+___ is _____ in the same way as _____. + _____ is _____, however, _____ is _____.	+ ___ is __ similarly/likewise, ___ is _____. + _____ is _____ on the other hand/on the contrary _____ is ____.

	Emerging (good)	Developing (better)	Expanding (best)
Positive Superlatives to compare personal traits	good/better/best	strong/stronger/strongest experienced/more experienced/most experienced smart/smarter/smartest	capable/more capable/most capable accomplished/more accomplished/most accomplished qualified/more qualified/most qualified wise/wiser/wisest
Negative Superlatives to compare personal traits	bad/worse/worst	weak/weaker/weakest	incapable/less capable/least capable less accomplished/least accomplished less qualified/least qualified
Verb: find an item/place	Find, look for, spot	Determine, recognize,	Seek out, locate, identify
Verb: keep your position	Stay, wait	Hang on, sit tight, lie low	Remain, shelter, bide your time
Verb: stay away from	Stay away from	Avoid, protect...from	Stave off, ward off, prevent
Noun: broken objects	Junk, stuff, trash	Wreckage, ruins (usually used for old stuff after it's settled)	Debris, rubble,

You can and should continue to use this language when it is useful, adding in the new language in Pandemic lessons.

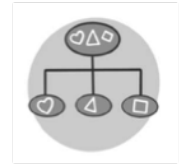
**Challenge:** Circle the types of language you think we will use as we talk about diseases and COVID.

**Noun** – a word for a person, place or thing  
**Verb** – a word that names an action/state of being  
**Adjective** – a word that describes a noun or pronoun (he/she/it/they, etc.)  
**Adverb** – a word that describes a verb, an adjective, or another adverb

We're also going to need language to explain whether something has or has not happened.

	Emerging (good)	Developing (better)	Expanding (best)
Adverbs we use to talk about time without being specific	Already Anymore Just Soon Still yet	In the past, earlier, Is done (v), is finished (v) Barely, hardly Shortly, before long, quickly Continues (v) Until now, up to now, so far	Previously, heretofore Was completed (v), is through (v) Just a while ago, recently In short order, expeditiously Proceeds (v), progresses (v) Thus far, hitherto, as yet
Ways to use verbs to show a completed action	Past participles are verbs, usually ending in -ed and used with have/has/had, this also works with irregular verbs We can also use have/has/had with the preposition "been"		

# Lesson 1 – Define and classify diseases



## Infectious vs. noninfectious diseases

When we talk about diseases one way we classify (sort) them is by whether or not they can be caught from others. The difference will make a difference in the way doctors treat the diseases.

### Infectious Diseases

Diseases that are caused by an organism that is not produced by the body. They are diseases that are “caught” from an outside influence.

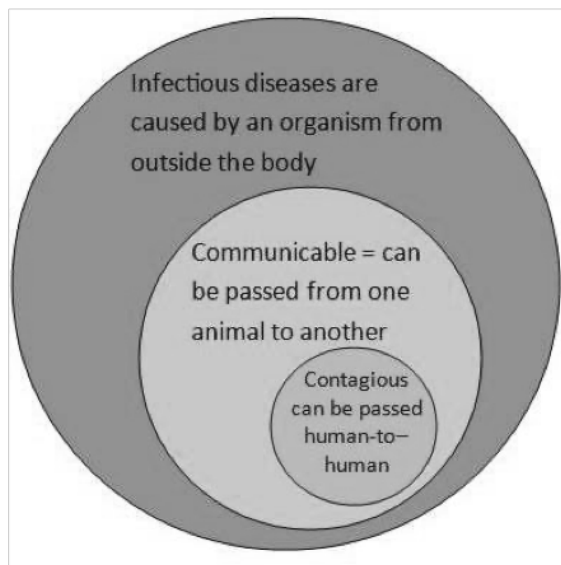
### Noninfectious Diseases

Noninfectious diseases are caused by our environment or by genetic mutations. Cancer, heart disease, and diabetes are noninfectious diseases.

Noun Form	Adjective Form	Definition
Contagion	Contagious	Can pass from human to human
Virus	Viral	Microscopic molecules that can cause disease
Bacteria	Bacterial	Single-celled organism that can cause disease
Fungus	Fungal	A spore-producing organism like mold, yeast, etc.
Protozoa	Protozoan	A single-celled parasitic organism (lives by eating other cells)

**PRECISION MATTERS:** Some people may use the terms infectious, contagious and communicable as though they mean the same thing. They do NOT. The differences are small but important.

**Communicable** diseases are infectious diseases that can be spread from one organism to another, including from animals to humans or from humans to animals. Remember, a contagious disease is one that is passed from human to human. See the difference?



**We can say that:**

**All** communicable and contagious diseases **are** infectious, but **not all** infectious diseases are communicable diseases.

**Now compare communicable and contagious diseases:**

**All** \_\_\_\_\_ diseases **are** \_\_\_\_\_ diseases, but **not all** \_\_\_\_\_ diseases **are** \_\_\_\_\_.

## Focus on infectious diseases

Use the information in the table above to mark which of the four types of pathogens are described.

Disease Description	Virus	Bacteria	Fungi	Protozoa
Malaria is caused by a parasite transmitted by mosquitoes. The parasite attacks red blood cells.				
Streptococcus cells cause infections like strep throat and can be treated with antibiotics.				
People get histoplasmosis by breathing in spores that live near rivers.				
COVID-19 is a tiny germ that causes infections that cannot be treated with antibiotics.				

### Two more terms we need to understand:

**Incubation Period** – The amount of time **from** when a person is infected **until** they start showing symptoms.

**Contagion Period** – The amount of time **when** an infected person can infect others.

Disease	Incubation period	Contagious period	Notes
Chickenpox	10-21 days	2 days before rash, until 6-7 days later	We're contagious before we even know we're sick.
Measles	8-12 days	4 days before rash until 4 days after	
Bronchitis	4-6 days	Start of cough through 7 days	
Most Influenza	1-2 days	Onset of fever until fever is gone	
Strep Throat	2-5 days	Onset of sore throat until on antibiotics 12 hours and fever is gone	
Cholera	Usually 2-3 days, but can start within hours or not until 5 days	Generally one week, until there are no symptoms	
Paralytic Polio	7-21 days	For 7-10 days before and after symptomatic	
COVID-19	2-14 days	2 days before symptoms until 10 days after	

# Lesson 1 Reflections

## Word-Wise

I told you there would be a lot of vocabulary this week!! Open your Personal Dictionary at the back of the packet. You should enter the words:

**infectious    contagion/contagious    virus/viral    bacteria/bacterial    fungus/fungal**  
**protozoa/protozoan    communicable    contagious    incubation period**  
**contagion period**

We don't necessarily need to include noninfectious because we know that when we add **non-** to a word it means NOT. So noninfectious means not passed on. You may add it if you want to or just make a note of the meaning of the prefix **non-**. Add other words you want to remember, of course!

## Talk it through



At the back of the packet\* you will also find a place for your lesson reflections.

Reflect on what you learned and did today. What do you need to tell your colleague so that they can understand? This can be about COVID, or it could be about the skills and language you practiced. Here's a list of ideas of what you might talk about. You do NOT have to write about all of them or any of them if you have something else to say. You should write 3-5 sentences.

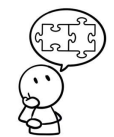
### USE PAST PARTICIPLES from the chart on page 5 to talk about what you "have been" learning.

- Discuss whether you think it is better to have an infectious or noninfectious disease.
- Compare the incubation and contagious periods of most types of influenza and COVID.
- Why is the difference between infectious, communicable, and contagious important?

You should start your writing off with a greeting or introduction to your colleague. Here are some ways you can do that:

- Dear \_\_\_\_\_
- \_\_\_\_\_, I have some important information for you.
- I worked on something challenging today. Let me tell you about it.
- You'll never guess what I learned today.

## Looking Ahead



Considering what you learned today, make some notes on other ideas that you want/need to know about COVID-19.

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# Lesson 2 – Psssttt...DON'T pass it on

The terrible thing about infectious diseases is that they're...infectious. People can infect others, sometimes before they even know that they are sick themselves. One key to stopping the spread of a disease is to know how it gets passed between humans. For contagious diseases, there are four **modes of transmission**:

- **airborne** – a person can be infected by breathing in pathogens in the air
- **droplet** – a person can be infected when they come into direct contact with an infected person's bodily fluids (blood, spit, mucus (that means snot), etc.
- **fomite** – a person can touch something that has been touched by an infected person and become infected when the germs enter their own body (by touching eyes, nose, mouth, etc. before washing or sanitizing hands)
- **water/food borne** – a person can be infected if they **ingest** (eat or drink) something that germs in it

Preventive measures	Airborne	Droplet	Fomite	Water/food borne
Wearing a mask to protect yourself	X	X		
Masking infected individuals	X	X		
Washing hands frequently	X		X	X
Sanitizing surfaces and items		X	X	X
Social distancing	X	X		
Isolation of infected individuals	X	X	X	X
Covering coughs/sneezes	X		X	

Disease	Airborne	Droplet	Fomite	Water/Food Borne
Chickenpox	X	X		
Measles	X	X		
Typical Influenza	X	X		
Strep Throat	X	X	X	X
Cholera				X
COVID-19	?	X	X	
Polio		X		X

Measles is a highly-contagious disease. It is transmitted primarily (mostly) airborne or by fomite. Measles can live up to 2 hours in the air. That means that if someone infected with measles coughs in an elevator, anyone (who is not vaccinated against measles) who gets in the elevator any time in the next 2 hours is 90% certain to catch measles.

At this point, scientists know for certain that COVID-19 is transmitted by droplet (someone who is sick coughs on someone who breathes in the virus. There is some evidence that COVID-19 might be passed on airborne or be able to survive on fomites and so be caught by touching a light switch or door handle soon after an infected person. Some studies show that the COVID virus can live on materials like plastic or metal for up to 3 days. So stay 6 feet back, wear those masks and wash your hands!!!

## Think it through

Let's use the data on incubation and contagious periods from Lesson 1 to make some tough decisions.

*Your cousin had a birthday and you slept over at their house on Friday, April 5, after racing go-karts. By the time you got back from racing, you were both hoarse from yelling so loud. Your cousins says their throat hurts from yelling so much and coughs. Later, while you were playing video games, your cousin kept grabbing your soda and drinking out of it. It didn't seem like any big deal, but by the next morning, your throat is fine, but your cousin says their throat hurts even more. That night, you aunt calls and tells your mom that your cousin has a fever now.*

*By Sunday evening, your throat is hurting again, worse than it had from yelling Friday night. Monday morning your mom takes your temperature and finds that you have a fever. She tells you to go back to bed. Later she calls to tell you that your cousin has strep throat and that she'll take you to the doctor in the afternoon. Your friends from school want to come play video games at your house.*

Is it safe for your friends to come to your house today? \_\_\_\_\_

\_\_\_\_\_

If your mom takes you to the doctor this afternoon and you take your first dose of antibiotics around 5 pm, when would it be safe for them to come over? \_\_\_\_\_

\_\_\_\_\_

If they wanted to come over anyway, say to work on a group project that is due, what can all of you do to reduce their risk of catching your strep throat? Pay attention to how it is transmitted and be sure to talk about what YOU will do and what they can do. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Draw a picture showing how you can still work together.**

# Lesson 2 Reflections

## Word-Wise

Now you are going to turn to your Personal Dictionary at the back of the packet\*. You should enter the word: **airborne** **droplet** **fomite** **food/water borne** **preventive**

You may add other words you want to remember, of course! Look back at the sample for the word **disaster** if you need to remember how to complete the dictionary entry.

## Talk it through

It's time to report to your colleague. What do you want to share about today's learning? You do NOT have to write about all of them or any of them if you have something else to say. You should write 3-5 sentences.



- What are some preventive measures we should ALWAYS practice to stay healthy?
- Why is it important to know the incubation and contagious periods of diseases?
- Think about the fact that we don't know all of the facts about COVID-19 because it is a "novel" virus. How do we keep ourselves safe when we aren't really sure what modes of transmission it uses?

**USE PAST PARTICIPLES from the chart on page 5 to talk about what you "have been" learning.**

You should start your writing off with a greeting or introduction to your colleague. Here are some ways you can do that:

- Dear \_\_\_\_\_
- \_\_\_\_\_, I have some important information for you.
- I worked on something challenging today. Let me tell you about it.
- You'll never guess what I learned today.

## Looking Ahead

Considering what you learned today, make some notes on other ideas that you want/need to know about surviving disasters.



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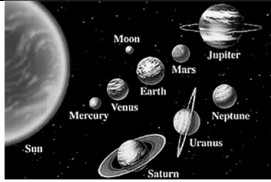






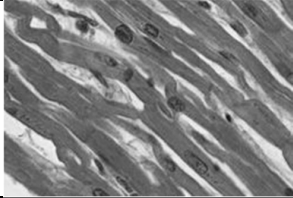

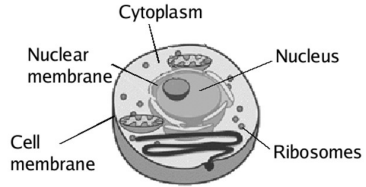

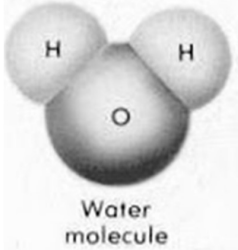

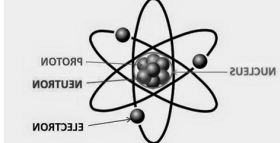
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# Lesson 3 – GROSS...anatomy

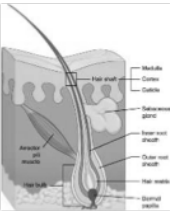
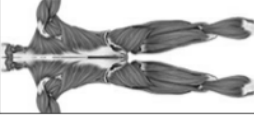
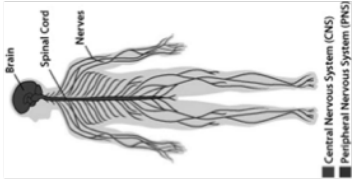
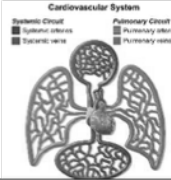
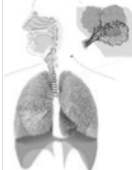
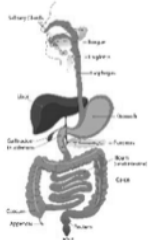
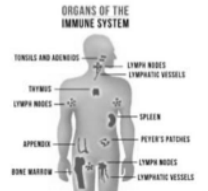
## It's not really gross!

It's actually pretty cool. **Anatomy** is the study of the structures in a living **organism**. It is important to see how we can narrow the parts of a structure down from a large view (our solar system or the human body) all the way to a narrow view (our street or the atoms that make up everything around us). For the purposes of our study of pandemics, we're going to be mostly concerned with systems and organs, but it's good to know what they contain.

Locations	Anatomy	
Solar System		Organism 
Planet		System 
Continent		Organ 
Country		Tissue 
State		Cell 
City		Molecule 
Street		Atom 

# Systems of the Human Body

There are 12 body systems, but we won't really cover the endocrine, reproductive, or skeletal systems this week.

System Name	What does it do?	What are its parts?
Integumentary System 	Protects our body from the outside	Skin, hair, nails
Muscular System 	Allows our bodies to move	Muscles, tendons
Nervous System 	Manages communication within the body	Brain, spinal cord, nerves
Cardiovascular System 	Pumps blood throughout the body	Heart, veins, arteries, capillaries
Respiratory System 	Brings oxygen in and carbon dioxide out	Lungs, pharynx, larynx, trachea, bronchi, nose
Digestive System 	Processes nutrients from what we <b>consume</b> and <b>eliminates</b> waste	Mouth, pharynx, esophagus, stomach, small and large intestines, rectum, anus
Immune System 	Defends our bodies on the inside	Lymph vessels and nodes

## How do you feel?

Each disease has a different set of symptoms, ways it affects the human body. These are the feelings we name when the doctor asks us to tell them what is wrong. Knowing our symptoms can help doctors narrow down our diagnosis (naming what disease or illness we have).

Some symptoms are clearly tied to an organ system. Others are harder to pinpoint. Headaches and fatigue (being very tired despite rest), for instance, take many different forms and cannot usually be tied to a specific organ system.

Additionally, while we think of fever as a symptom, it is also part of your immune system's fight against disease. Many viruses and bacteria are sensitive to temperature so often our body's first defense is to turn up the heat. If our body is using a fever to "burn out" an invading organism, we shouldn't always take medication to bring a fever down.

Let's chart the systems affected by the diseases we've studied. See my example then finish the chart.

Disease	Symptoms	Systems affected
Chickenpox	Itchy rash with fluid-filled blisters, fever, loss of appetite (not feeling hungry), headache, tiredness	Integumentary/rash, immune system/fever, digestive/loss of appetite
Measles	Fever, dry cough, runny nose, sore throat, inflammation of the eyes, rash made of large, flat blotches, tiny white spots on the inside of the cheek	
Typical Influenza	Fever/chills, cough, sore throat, runny/stuffy nose, muscle/body aches, headache, tiredness, rarely, vomiting and diarrhea	
Strep Throat	Sore throat, painful swallowing, red/swollen tonsils (might show white patches/streaks), tiny red spots at the back of the roof of the mouth, swollen lymph nodes in neck, fever, headache, body aches	
Cholera	Primary: A LOT of watery diarrhea, vomiting, rapid heart rate; Dehydration causes secondary: low blood pressure, dry mouth, extreme thirst, irregular heartbeat	
COVID-19	Fever/chills, cough, shortness of breath/difficulty breathing, tiredness, muscle/body aches, headache, loss of taste/smell, sore throat, stuffy/runny nose, nausea/vomiting, diarrhea	
Polio	Fever, sore throat, headache, tiredness, back/neck pain/stiffness, severe muscle weakness, loss of reflexes	

# Lesson 3 Reflections

## Word-Wise

Now you are going to turn to your Personal Dictionary at the back of the packet\*. You should enter the word: **anatomy    organism    integumentary    muscular    respiratory    digestive**  
**cardiovascular    nervous    immune    consume    eliminate**

You may add other words you want to remember, of course! Look back at the sample for the word **disaster** if you need to remember how to complete the dictionary entry.

## Talk it through

It's time to report to your colleague. What do you want to share about today's learning? You do NOT have to write about all of them or any of them if you have something else to say. You should write 3-5 sentences.



- What is your LEAST favorite type of illness to have, one that affects your respiratory system or your digestive system?
- Why is it useful to think about the systems affected by different diseases? How can we use that information?
- Why wouldn't we automatically want to take medication to bring down a fever?

**USE PAST PARTICIPLES from the chart on page 5 to talk about what you “have been” learning.**

You should start your writing off with a greeting or introduction to your colleague. Here are some ways you can do that:

- Dear \_\_\_\_\_
- \_\_\_\_\_, I have some important information for you.
- I worked on something challenging today. Let me tell you about it.
- You'll never guess what I learned today.

## Looking Ahead

Considering what you learned today, make some notes on other ideas that you want/need to know about surviving disasters.



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# Lesson 4 – Treatment vs Cure vs Vaccine

## Symptoms can be beneficial

Our bodies have an amazing **defense** system. The immune system responds to diseases in ways that make us feel awful sometimes. As we said, fever is the immune system's way of making our bodies **inhospitable** (uncomfortable) for the germs.

When we have respiratory illnesses, immune system manufactures more mucus (snot or boogers, ewwww) to help clear the germs out of your airways. A cough that pulls mucus up from our chest can be painful and make it hard to sleep, but it is supposed to help you get the germs out of your body.



With this in mind, we want to think about whether we need to take medications immediately if we have a fever or a cough. If a fever is higher than 102°, you might want to take medication. If it's lower and you aren't uncomfortable, make sure you're getting lots of rest and drinking lots of fluids (your body uses a lot of energy and fluid to produce a fever). Treating a cough and stuffy or runny nose is a great idea at night so that you can get the rest your body needs to keep fighting.

## Diagnose it, doctor!

I'm going to give you some information about someone who is ill. You will use their symptoms and the chart to **diagnose** (decide what disease they have) their illness.

Name: Susan Marlow

Symptoms: Susan says she has a sore throat, a headache, and feels achy.

Which diseases might she have with those symptoms? \_\_\_\_\_

When you examine her, you find that she has a temperature of 101.4, the lymph nodes in her neck are swollen, and when you look in her throat you see that her tonsils are red and swollen with some white patches on them.

Which disease do you think Susan has? \_\_\_\_\_



## Beyond diagnosis

Of course, the best course of action is to prevent getting sick at all, right? That's why we wash our hands and, when necessary, wear masks out in public. However, once an illness is out there, we have to think about how to make people feel better. Once they are feeling better, we need to figure out how to get rid of the disease. After that, if the disease is dangerous enough, we try to create a vaccine, a way to prevent people from getting the disease even if they are exposed to it.

### Treating the symptoms

The first priority for medical professionals is to treat symptoms that might be dangerous in the short term.

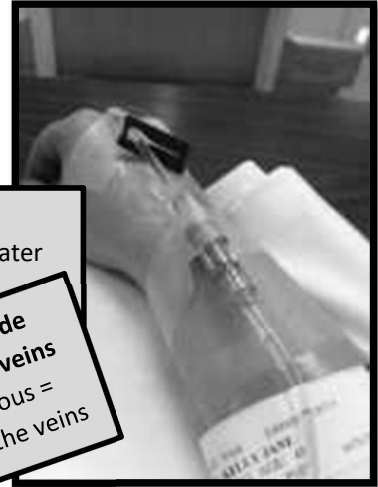
**Dehydration**, high fever, difficulty breathing and any sort of bleeding need to be treated right away.

For instance, cholera can kill within hours by dehydrating the patient. Therefore the first course of action is to rehydrate the individual by giving them water mixed with oral rehydration salts (ORS). If they continue to be dehydrated, they will probably need to receive **intravenous** fluids.

#### Homemade ORS

Five cups of clean safe water  
6 tsp sugar  
½ tsp salt

intra = inside  
venous = veins  
intravenous =  
within the veins



We take ibuprofen, acetaminophen, aspirin to treat fevers, and pain. Ibuprofen can also be used if we have swelling from an injury.

### Curing the disease

Some diseases can be cured through the use of medications and treatments to rid the body of the germs. Protozoan and fungal diseases can be cured. Many bacterial diseases can be cured with antibiotics.

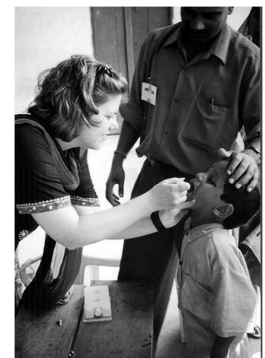
Still other diseases have **protocols** (methods of treatment) that might cure the disease. Chemotherapy and radiation therapies for cancer can sometimes rid the body of some types of cancer. These treatments often cause the body almost as much harm as the cancer, and they are not effective.

Some **chronic** (longterm) diseases, like diabetes can be managed by treating the symptoms (using medication, diet, and exercise to balance blood sugar, insulin, etc. but we have not yet found a cure.

### Preventing infection

We know that it's better to prevent getting sick than it is to treat or cure an illness. We have cured some terrible diseases by creating **vaccines** that prepare the immune system to fight a specific disease. Children are routinely vaccinated to prevent measles, diphtheria, tetanus, polio, and other diseases. These vaccines stay the same and continue to help keep people healthy.

Some diseases aren't as easy to **pin down**. Each year there is a different **strain** of influenza because the disease tends to mutate (change) enough to keep surviving. That means that we need to get the flu vaccine each year instead of just a few times in our

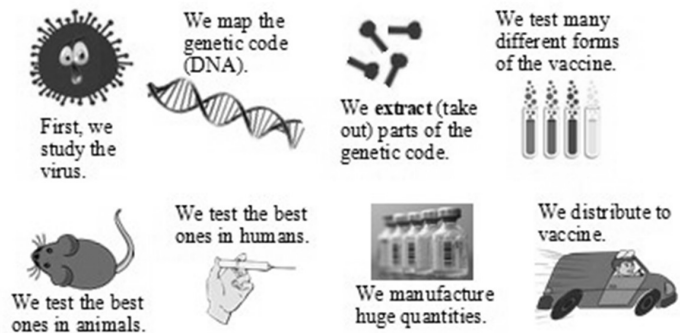


lives. Scientists do their best to create a vaccine that they hope will match that year's new strain of influenza.

Vaccines work by giving the immune system parts of the disease so that it will recognize the virus and know how to fight it. When the scientists have a vaccine that works to kill the virus in the lab, they test it on animals to be sure it is safe and to refine (make it better). They test the final product on humans. If it works to make people immune to the virus, the **manufacture** (make large quantities) of it and then it is **distributed** (shipped) so people can get it from their doctor.

Scientists are working on vaccines for tens of thousands of illnesses at any given time. However, sometime a disease affects so many people that it is made a priority. As of July 23, 2020, according to the World Health Organization (WHO) more than 15 million

people around the world have been infected with COVID-19 and nearly 620,000 people have died. Just in the 24 hours before these numbers were reported, almost 250,000 had been diagnosed and just over 7,000 people had died from the disease.



**Typically**, it takes about 10 years to develop a vaccine. However, in a situation like COVID-19, the best labs across the world all focus on the same disease. Governments and nongovernmental organizations focus funding (money) and resources (people, labs, etc.) on finding a vaccine that will allow us to prevent as many people as possible from being infected.

### Ending an epidemic

Once a vaccine has been created, the next step is to get the vaccine to as many people as possible throughout the world. Once that has happened, a disease can be considered to have been **eradicated**. Very few diseases have been eradicated, but smallpox and polio have been considered to be gone.

If a vaccine is not found, an epidemic/pandemic ends when all of those who are not naturally immune have either died or recovered with immunity. There may be more than one wave of an epidemic, especially if people have quarantined and then return to "normal" life.

### Check your knowledge

#### Match them up (draw a line between the treatment and the disease):

The doctor recommended Advil, cough medicine at night, and rest.

Programs in clinics worldwide are vaccinating anyone who has not already had the disease.

The doctor prescribed antibiotics and recommended Advil.

She tests her blood several times a day and uses insulin shots to help keep her blood sugar balanced.

To treat diabetes

To treat the fever/cough of influenza

To cure strep throat/treat a sore throat

To prevent/eradicate polio

# Lesson 4 Reflections

## Word-Wise

Now you are going to turn to your Personal Dictionary at the back of the packet\*. You should enter the word: **defense**    **inhospitable**    **dehydration**    **intravenous**    **protocol**  
**chronic**    **vaccines**    **pin down**    **strain**    **manufacture**    **distribute**

You may add other words you want to remember, of course! Look back at the sample for the word **disaster** if you need to remember how to complete the dictionary entry.

## Talk it through

It's time to report to your colleague. This time, write about how the information you have learned so far about COVID-19 has made you think or feel.



**USE PAST PARTICIPLES from the chart on page 5 to talk about what you “have been” learning.**

You should start your writing off with a greeting or introduction to your colleague. Here are some ways you can do that:

- Dear \_\_\_\_\_
- \_\_\_\_\_, I have some important information for you.
- I worked on something challenging today. Let me tell you about it.
- You'll never guess what I learned today.

## Looking Ahead

Considering what you learned today, make some notes on other ideas that you want/need to know about surviving disasters.



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# Use your knowledge: Diagnose and treat



Name: Susan Marlow

Symptoms: Susan says she has a sore throat, a headache, and feels achy.

*When you examine her, you find that she has a temperature of 101.4, the lymph nodes in her neck are swollen, and when you look in her throat you see that her tonsils are red and swollen with some white patches on them.*

**Prompt:**

Write a short essay explaining what disease you think she has by comparing it to other diseases that have some similar symptoms. You could start your paragraph "Based on the symptoms Susan reported, I thought she might have... (list 2-3 diseases she might have had based on what she told us). Next, consider what you would do to both treat her symptoms, and to cure her of the disease.

- Which symptoms did you observe that narrowed down what disease she has?
- Be sure to name the diseases you know she doesn't have as you explain.
- How would you treat her symptoms?
- What can you do to cure her illness?

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*Example essay*

Remember, we are stretching our language, using longer sentences and details to be more precise. Here are two examples of my essay, one is too simple; the other more proficient. The disease I diagnosed is a virus and does not have a cure. If it could be cured, I would have written a third paragraph.

**Less proficient**

Edgar Ruiz had a fever and a headache. His mom said he has not eaten much in two days. He had a few small blisters on his stomach. He didn't have a sore throat. I think he has chickenpox.

He should take Advil and take a bath with oatmeal. He can put on calamine lotion or take Benadryl too.



**More proficient**

Edgar Ruiz came in with a fever and a headache. His mom said that he had not been hungry the past two days. When I was examining him I found the beginnings of a rash – four tiny, fluid-filled blisters. When I asked and looked at his throat there was no sign of a sore throat or runny nose. Based on the way the rash looked, small blisters rather than large, flat blotches, and no sore throat, I diagnosed Edgar with chickenpox rather than measles.

There is no cure for chickenpox. It is a virus that goes away after a week or ten days. However, we can help Edgar feel better in the meantime. I recommended ibuprofen to help with the headache and fever. That should also help him feel well enough to eat and drink. The biggest problem during chickenpox is always the itching. I suggested a bath with ground-up oatmeal, calamine lotion, and, if the itching is really uncomfortable or keeping him awake, giving him some antihistamine (like Benadryl). I reminded them to call my office if they needed anything or had any questions.

## Looking Back



What information/skill/practice was most interesting to you?

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## Looking Ahead

Considering what you've learned about epidemics/pandemics, what do you still want to learn? How could you learn more?

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## My Packet Journal

In this packet I learned \_\_\_\_\_

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ICMEE is housed within:







### Reference Sheet

#### LENGTH

Metric	Customary
1 kilometer = 1000 meters	1 mile = 1760 yards
1 meter = 100 centimeters	1 mile = 5280 feet
1 centimeter = 10 millimeters	1 yard = 3 feet
	1 foot = 12 inches

#### CAPACITY AND VOLUME

Metric	Customary
1 liter = 1000 milliliters	1 gallon = 4 quarts
	1 gallon = 128 ounces
	1 quart = 2 pints
	1 pint = 2 cups
	1 cup = 8 ounces

#### MASS AND WEIGHT

Metric	Customary
1 kilogram = 1000 grams	1 ton = 2000 pounds
1 gram = 1000 milligrams	1 pound = 16 ounces

#### TIME

1 year = 365 days
1 year = 12 months
1 year = 52 weeks
1 week = 7 days
1 day = 24 hours
1 hour = 60 minutes
1 minute = 60 seconds



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