

WHAT IN THE WORLD?

LEVEL 2 (GRADES 8 AND UP)

Pandemic!

COVID-19 in Canada

What About the Economy?

The Science Behind the Outbreak

*** SPECIAL ISSUE ***
2019/2020: ISSUE 7



A monthly current events resource for Canadian classrooms

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TO THE TEACHER

WHAT IN THE WORLD?

Level 2, 2019/2020: Issue 7

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Please let us know if you or a colleague would like to receive a complimentary sample of any of our publications.

HAY'SXW'QA!

LesPlan is grateful to the Lkwungen Peoples, the Songhees and Esquimalt Nations, on whose unceded land we now live, and do our work.

We welcome your comments and appreciate your suggestions. Please contact us at any time.

MISSION STATEMENT

LesPlan Educational Services Ltd. aims to help teachers develop students' understanding of and ability to critically assess current issues and events by providing quality up-to-date, affordable, ready-to-use resources.

SUGGESTED APPROACH

WHAT IN THE WORLD? is a complete current events program that can be used on its own or to supplement an existing classroom routine. This classroom-ready resource offers 'something for everyone' and can be taught as a whole or in parts, in-class, or as a homework assignment.

WHAT IN THE WORLD?:

• ALLOWS FOR DIFFERENTIATED LEARNING

WHAT IN THE WORLD? is available in two levels to meet your students' varied learning needs.

A Word file containing each month's articles and questions is also posted online, so you can quickly and easily modify the articles and/or questions to suit your students' specific needs.

• IS TECH-FRIENDLY

Project each month's pdf on your Promethean or Smart Board to read articles together. Our pdfs also work seamlessly with assistive reading technology, and the Word version of the articles can be uploaded to Google Classroom.

• IS EASY TO USE

Easily access links referenced in **WHAT IN THE WORLD?** by visiting www.lesplan.com/en/links

PUBLICATION SCHEDULE

A publication schedule listing the release dates for each issue is posted on the Subscriber page of our website at:

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INTERNATIONAL THE COVID-19 PANDEMIC

– THREE MONTHS THAT HAVE CHANGED THE WORLD



Last December, doctors in Wuhan, China noticed an unusual cluster of patients with viral pneumonia. They soon identified the cause: a deadly new **coronavirus**. The source? One of the city's live animal markets.

On December 31, China alerted the World Health Organization (WHO). Then, Chinese health officials set about trying to contain the virus and limit its spread. That proved to be an impossible challenge.

LOCKDOWN

By January 22, the number of identified cases had grown from an initial 41 to 550, with 17 deaths. So, China took radical action. First it locked down the city of Wuhan, then the entire province of Hubei, an area more than double the size of Nova Scotia. It was the largest-known **quarantine** in history, affecting more than 60 million people. Then, the government built two hospitals in just over a week, equipped to treat 2500 coronavirus patients.

However, despite these measures, the virus began spreading quickly in other areas of the country. By January 30,

China had recorded nearly 8000 infections, with 170 deaths.

PUBLIC HEALTH EMERGENCY

At the same time, the virus was spreading to other countries. By the end of January, it had **infiltrated** 21 other nations, carried by people who'd visited Wuhan. The news prompted the WHO to declare the coronavirus outbreak a "public health emergency of international concern."

Two days later, on February 2, the Philippines reported the world's first death outside China, and shortly after that, countries began flying home citizens trapped inside China and other affected countries. Many nations also closed their borders to non-residents who had recently travelled to China.

SPREADING FAR AND WIDE

In mid-February, just as the number of new cases in China began to level off thanks to the Chinese government's aggressive containment measures, cases started spiking in South Korea and Iran. Northern Italy was the next region to face a massive outbreak, prompting a nationwide lockdown.

ITALY'S NIGHTMARE

The COVID-19 outbreak in Italy was especially **virulent**. It showed how quickly the virus can surge out of control if countries wait too long to lock down.

Shortly after the outbreak began in this European country, hospitals were overwhelmed with seriously ill patients. There weren't enough ventilators, nor beds.

"Well, you know, because we were watching [China] on TV, we saw them building up two hospitals in a week and I said, 'Well this is crazy,'" stated Italian Dr. Giacomo Grasselli. "Now, I completely understand why they did that... It's like a bomb of patients that blows and you just come out every day from 50, 60, 70 new patients and it's a challenge of how to find a place for each one of them."

By early April, Italy had almost 129,000 cases of COVID-19, and 15,000 deaths – more deaths than any other country. In fact, at 12 percent, Italy's fatality rate from the virus is the highest in the world.

DEFINITIONS

CORONAVIRUS: a family of viruses that can infect animals and humans, and that causes the common cold and COVID-19

INFILTRATE: to enter or pass through without permission

QUARANTINE: isolation to prevent spreading infectious disease

VIRULENT: infectious; having the ability to cause disease



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Then it was Spain's turn to experience a devastating outbreak.

On January 21, the first coronavirus case was identified in the United States, in Washington State. The first American coronavirus-related death occurred on February 29, also in this state.

DID YOU KNOW?

The new coronavirus didn't have a name until February 11, when WHO dubbed it COVID-19, short for Corona Virus Disease 2019.

"We had to find a name that did not refer to a geographical location, an animal, an individual, or group of people," explained the WHO's director-general.

PANDEMIC!

On March 11, the WHO declared the coronavirus a **pandemic**, acknowledging that it will likely spread to all countries.

As the virus strikes, country after country is locking down. One in three humans currently lives under mass quarantine. That includes most of Canada and 35 of 50 U.S. states. As a result, schools and universities have closed either on a nationwide or local basis in more than 160 countries, affecting approximately 97 percent of the world's student population.

As of April 5, more than 1.25 million cases of COVID-19 had been reported in over 200 countries and territories, resulting in approximately 68,100 deaths. More than 258,000 people had recovered.

HELPLESS TO HELP

The virus is now spreading out of control in the United States. The U.S. has already seen twice as many cases as Italy and Spain, and three times as many as China. New York State has been especially hard hit with over 123,000 cases and more than 4200 fatalities by early April. In all, the scientists leading the American government's fight against COVID-19 estimated the virus could kill between 100,000 and 240,000 Americans.

Now, Ashish Jha, director of the Harvard Global Health Institute, is waiting for the other shoe to drop.

"In three to six weeks, Europe and America will continue in the throes of this — but there is no doubt the centre will move to places like Mumbai, Rio de Janeiro, and Monrovia. We need to be very worried."

Why? A global pandemic is an even greater threat to developing nations, countries with **repressive** governments, and regions experiencing conflict, because it overwhelms everyone at once.

"We have some countries that we are more concerned about," admits Jarbas Barbosa, assistant director of the Pan American Health Organization. "The top priority are places like Haiti, where they have a very weak health system, and Venezuela, where they have very limited access to medicines."

Affluent nations that typically provide aid during a healthcare crisis are currently staggering under the weight of their own healthcare needs and economic challenges. Whether they step in to help or leave the

HEALTHCARE HEROES

This pandemic has put great strain on healthcare professionals, hospital staff, emergency personnel, and a variety of other workers. While the rest of the world self-isolates, they are working long hours, risking infection and putting their lives on the line to care for others.

Around the world, people are showing their gratitude. In Madrid, Rome, Amsterdam, New Delhi, and other cities, people are gathering nightly on their balconies and at their windows at prearranged times to applaud and cheer for healthcare workers. Even King Willem-Alexander of the Netherlands takes part from his palace in the Hague.

"We're clapping tonight out of respect and to say thank you to all the healthcare workers in the Netherlands who are protecting us against this horrible coronavirus," the King stated.

In the U.K., 100,000 people have signed an online thank you letter for National Health Service staff. People have also been recognizing retail workers, sending pizzas to grocery store staff and leaving cash and handwritten notes for pharmacists.

developing world to fend for itself is yet to be determined. WHO called the COVID-19 pandemic "the defining health crisis of our time." We will be defined by how we handle it. ★

DEFINITIONS

AFFLUENT: wealthy

PANDEMIC: an epidemic that is geographically widespread, occurring throughout a region or even throughout the world

REPRESSIVE: ruling or controlling people by the use of force or violence, or by laws that put unreasonable limits on their freedom



INTERNATIONAL
THE COVID-19 PANDEMIC
 – THREE MONTHS THAT HAVE CHANGED THE WORLD

ON THE LINES

Answer the following in complete sentences:

1. Explain what a coronavirus is.

2. What does COVID-19 stand for?

3. Where and when did this new coronavirus first appear? How do authorities believe it spread to humans?

4. Describe the measures China adopted to try to control the outbreak in early 2020.

5. What did the World Health Organization declare in late January? Why did it do this?

6. Which European country was hit hard by COVID-19? How many people in this nation were infected by early April?

7. What did the World Health Organization declare on March 11? Explain the significance of this designation.

8. What measures have many countries taken to try to slow the spread of COVID-19? What impact have these measures had on people's lives? Explain.

9. How many people had been infected by COVID-19 by early April? How many had died? How many had recovered?



INTERNATIONAL THE COVID-19 PANDEMIC

– THREE MONTHS THAT HAVE CHANGED THE WORLD

BETWEEN THE LINES

An **inference** is a conclusion drawn from evidence. A *plausible inference* is supported by evidence in the article and is consistent with known facts outside of the article.

What inferences can you draw from the fact that one in three humans worldwide is currently living under mass quarantine, including most of Canada and 35 of 50 U.S. states?

BEYOND THE LINES

Create a timeline to show how COVID-19 has spread since it was first discovered in December in China. Include a title for your timeline, label the events/dates neatly, and add a key image or symbol to represent each event. These links may help you:

- How to Make a Timeline #readalong: <https://www.youtube.com/watch?v=842mEdbuTJs> [1:14]
- Interactive online timeline generators: <http://www.readwritethink.org/classroom-resources/student-interactives/timeline-30007.html> and <https://time.graphics/>

An informative timeline is *accurate, easy to read (neatly labeled, title), and shows how the virus has spread.*

JUST TALK ABOUT IT

1. You are living through a moment in history. Years from now, students will be learning about the COVID-19 pandemic and its impact around the world, just as students today learn about the Great Depression and World Wars I and II. What is happening in your community and your province this week because of the pandemic? What have your experiences of the pandemic been so far? How has the virus impacted you and your family? What feelings are you experiencing? Consider keeping a daily journal recording your observations, experiences, and feelings during this pandemic.
2. Consider the following passage from the article: ***“WHO called the COVID-19 pandemic ‘the defining health crisis of our time.’ We will be defined by how we handle it.”***
 - a) What is your understanding of this passage?
 - b) Respond to this quote. What thoughts does it provoke, and what feelings does it evoke in you? Explain.
3.
 - a) As you see it, in what ways are healthcare workers the heroes in this unfolding pandemic? Explain.
 - b) What message would you like to send to healthcare workers putting their lives on the line to care for others during the pandemic? Explain.
4. Consider the following quote by the WHO’s director-general: ***“We had to find a name [for the new coronavirus] that did not refer to a geographical location, an animal, an individual, or group of people.”***

What reasons can you suggest to explain why the WHO had to be careful to avoid giving the virus a name from these categories? Explain.

ONLINE

Note: The links below are listed at www.lesplan.com/en/links for easy access.

1. Find COVID-19 updates on the World Health Organization’s website at www.who.int/
2. View a timeline of the pandemic at <https://www.businessinsider.com/coronavirus-pandemic-timeline-history-major-events-2020-3> ★



EDITORIAL CARTOON

BACKGROUND INFORMATION

WHAT ARE EDITORIAL CARTOONS?

Editorial cartoons are found in the editorial – or opinion – section of a newspaper. They are created by cartoonists as a way of visually commenting on and often criticizing the world around them – with humour. Editorial cartoonists express their ideas and opinions about issues (for example, what to do about Canada’s economy), events (such as the Olympic Games) or public figures (like the Prime Minister).

Because cartoons are drawn from the viewpoint of the cartoonist they do not tell the whole story about the event, issue or individual, but they reveal important messages. Their purpose is to grab people’s attention and cause them to re-examine their views on a subject. Editorial cartoons typically send a particular kind of message. The message is conveyed through images and wordplay. Their tone is generally ironic (portraying events in ways that are unexpected or contrary to how they seem), satiric (ridiculing the event, individual or issue), or humorous (inviting readers to laugh at themselves or at others).

In order to interpret the message of an editorial cartoon it is helpful to understand the *context* – the time, place and situation. It is also useful to understand some of the common *art techniques* used by cartoonists to emphasize their points. Considering these things will help you better decode and appreciate the message behind the cartoon.

WHAT COMMON ART TECHNIQUES ARE USED BY EDITORIAL CARTOONISTS?

Caption (a sentence or phrase that is the title or explanation of the cartoon);

Labels (words or numbers in the drawing to identify people, objects or dates);

Relative size (some images are drawn much larger or much smaller than others);

Light and dark (use of dark shading and white space to create an effect);

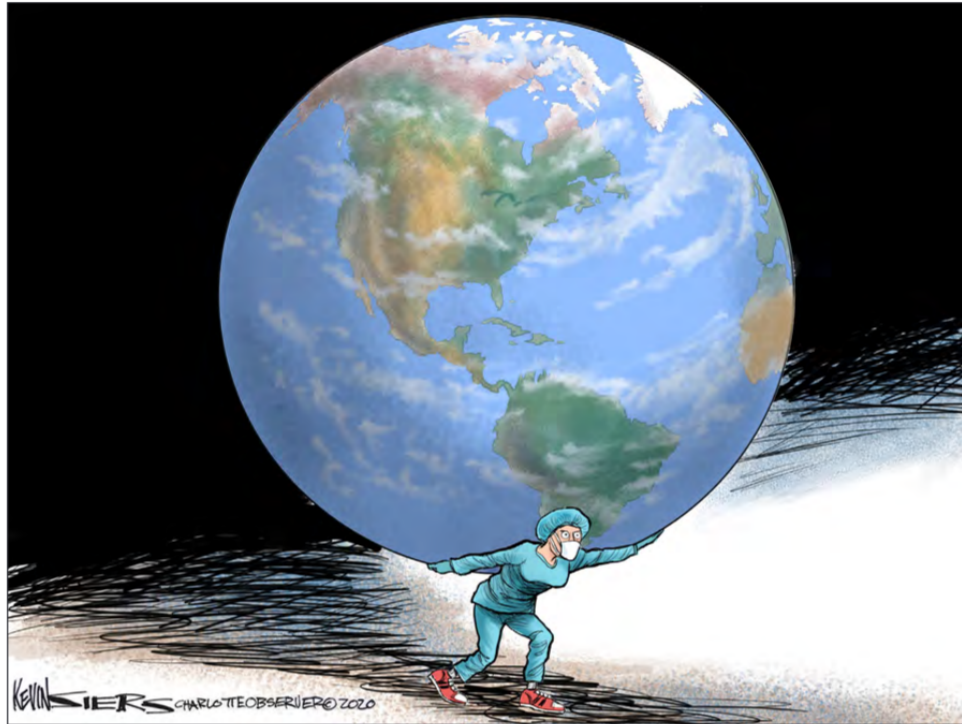
Composition (the arrangement or location of figures or objects in the centre or background);

Symbols (a sign or image to represent something else);

Caricature (a distorted, simplified or exaggerated representation of a figure).

(To learn more about interpreting political cartoons, read the *Toolkit: Decoding Political Cartoons* by Charles Hou on the Library and Archives Canada’s web site at <http://www.collectionscanada.gc.ca/education/008-3050-e.html>)

INTERNATIONAL
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YOUR TASK:

Examine the editorial cartoon. Then, use the questions below to help you decode the cartoon's message. Be specific and include as many details as possible in your answers.

INITIAL READING: What can an initial look reveal?

1. Glance quickly at the cartoon. What is your first impression – your “gut response”?
2. Consider your background knowledge. What do you already know about the context of the cartoon – the time, place or situation? (List key facts.)

CLOSER LOOK: What's happening in the cartoon?

3. Describe what you *see* in the cartoon.

DRAW CONCLUSIONS: What overall impression can you draw?

4. Identify possible biases. Whose perspective or point of view is expressed in the cartoon?
5. Explain the overall message of the cartoon in a paragraph. (Remember, a good interpretation is *specific* and *detailed*.) ★

Prepared with assistance from TC², The Critical Thinking Consortium. © 2020





MAP ASSIGNMENT

Complete this map assignment to better understand the article *The COVID-19 Pandemic*.

INSTRUCTIONS

1. Obtain the required resources and read all the instructions before starting.
2. Colour your map **after** all labelling is completed.
3. Print in pencil only first, then go over the printing in black ink.
4. Work carefully and neatly.

Resources Required: pencil, black pen, pencil crayons, ruler, eraser and an atlas.

Visit www.cnn.com/interactive/2020/health/coronavirus-us-maps-and-cases/ to see the current number of COVID-19 cases in the United States.

Part A Locate and label the states with over 100,000 cases in CAPITAL letters and shade each state purple.

Part B Locate and label the states with over 20,000 cases in CAPITAL letters and shade each state red.

Part C Locate and label the states with over 10,000 cases in CAPITAL letters and shade each state orange.

Part D Locate and label the states with over 5,000 cases in CAPITAL letters and shade each state pink.

Part E Locate and label the states with over 2,000 cases in CAPITAL letters and shade each state yellow.

Part F Shade all remaining U.S. states light green.

Part G Locate and label the capital of the United States and underline this city name.

Part H Locate and label the following in CAPITAL letters and shade each country as indicated:

Canada (grey)

Mexico (brown)

Cuba (grey)

The Bahamas (brown)

Part I Locate and label the Great Lakes and shade them light blue.

Part J Locate and label the following and shade all ocean water dark blue:

Atlantic Ocean

Gulf of Mexico

Pacific Ocean

Part K Colour the key on your map.

Part L Complete your map with a frame, title and compass. ★



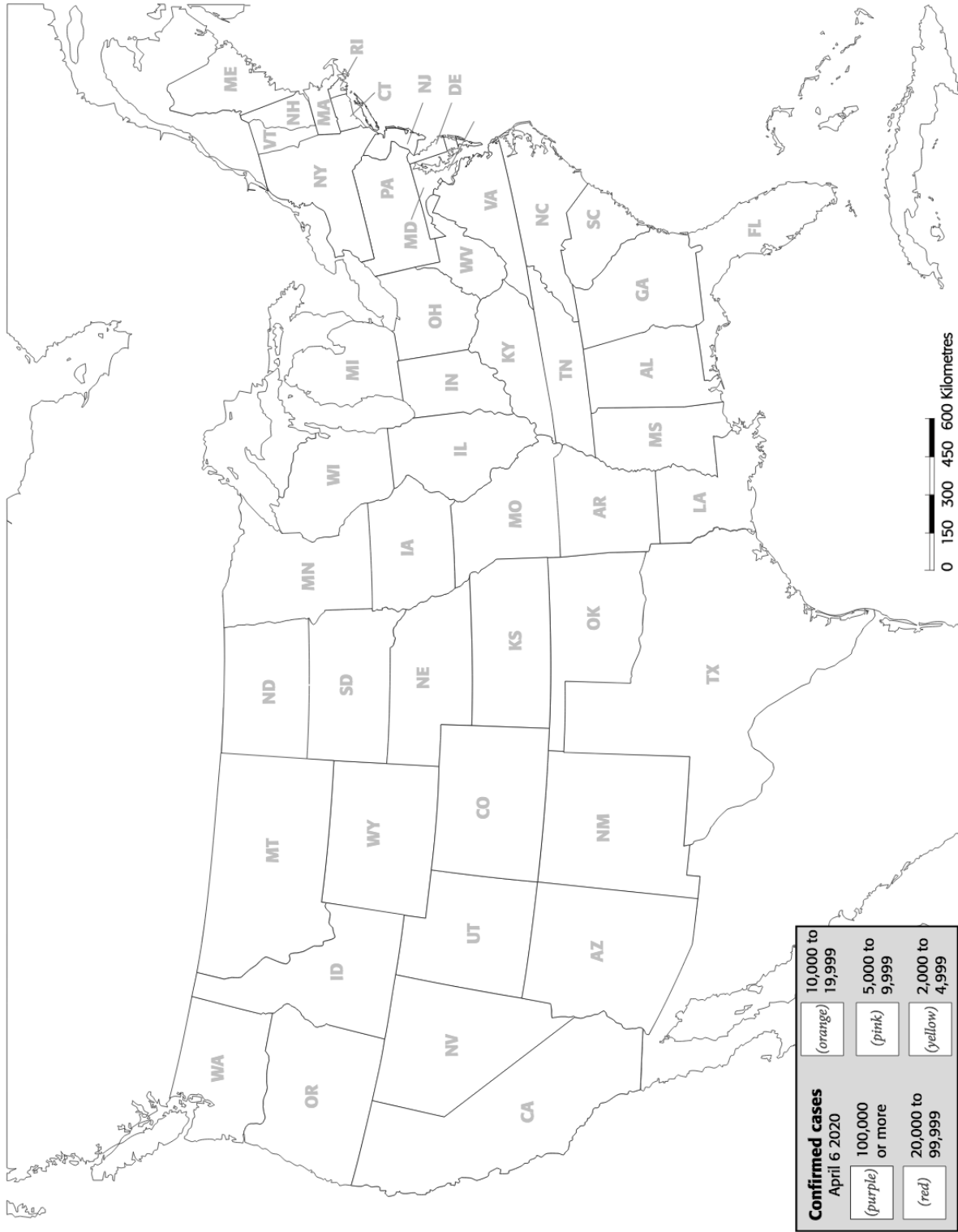
New York



New Jersey



United States



NATIONAL COVID-19 IN CANADA

– CANADIANS HELPING CANADIANS THROUGH A DIFFICULT TIME



The first Canadian case of COVID-19 was confirmed January 25. Like most early cases, it was carried into the country by a traveller returning from China. Within a month, the number of cases rose to 14, shared between Ontario and B.C. Then cases started popping up in Quebec.

THE VIRUS MOVES IN

Two months after the first case emerged, the country is wrestling with over 16,000 cases. More than 320 Canadians have died. The virus has inched into every province and territory except Nunavut.

Life quickly changed as the cases mounted. Hospitals began treating an influx of sick patients and scrambling to prepare for many more. Cities and provinces struggled to control the spread of the new **coronavirus**. By March 23, every province and territory had declared a state of emergency.

SHUT IT DOWN

Today, Canada is a very different place than it was at the start of 2020. Almost overnight, sporting events large and small were cancelled. So were performances and concerts. Libraries, recreation centres, and

movie theatres closed their doors. Public transportation was reduced. Schools and workplaces were ordered to close and people were asked to stay home. Why? To reduce person-to-person spread of COVID-19 in the community.

Now, Canadian cities look like ghost towns. Streets and sidewalks that usually bustle with traffic are deserted. Shopping centres, restaurants, and parking lots are empty.

COME HOME

As borders closed in many countries, including Canada, airlines began operating fewer flights. Canada announced just four airports would continue to accept incoming international flights to allow for more efficient health screening of Canadians returning home. The prime minister urged Canadians to return to Canada while they still could.

“If you’re abroad, it’s time for you to come home,” he stated on March 16.

Many followed the prime minister’s advice and booked flights. Others were stranded in foreign countries or on cruise ships. The government worked hard to **repatriate** them, arranging

special flights and covering their costs. Meanwhile, returning travellers were told they had to self-quarantine for 14 days. Those who did not could face jail time or fines.

The Canada-U.S. border was also closed to all non-essential travel.

STAY HOME!

In his daily updates on the pandemic, Prime Minister Trudeau begged Canadians to stay home as much as possible, to practice **social distancing** when they had to go out, and to self-isolate if exposed to someone who might have the virus. On March 22, he specifically thanked Canadian kids for the sacrifices they’re making in the battle to slow the spread of COVID-19.

“All of a sudden you’ve heard you can’t go on play dates or have sleepovers. Your playgrounds and schools have closed and your March Break was certainly different than what you’d hoped for. And you’re having to wash your hands – a lot... So, a special thanks to all you kids.”

But the prime minister had harsh words for people who weren’t taking social distancing seriously.

DEFINITIONS

REPATRIATE: to bring back into the country

CORONAVIRUS: a family of viruses that can infect animals and humans, and that causes the common cold and COVID-19

SOCIAL DISTANCING: keeping a distance of two metres from others and avoiding large groups to prevent the spread of disease



NATIONAL COVID-19 IN CANADA

– CANADIANS HELPING CANADIANS THROUGH A DIFFICULT TIME

“We’ve all seen the pictures online of people who seem to think they’re **invincible**,” he said. “Well, you’re not. Go home. And stay home.”

TEAM CANADA

During March, the federal government introduced various measures and programs to help Canadian families, workers, and businesses stay afloat during the shutdown. The opposition parties gave their support, and legislation was quickly passed. Everyone was working together.

“If I could take off my **partisan** hat for just a moment,” Conservative House leader Candice Bergen noted. “I think we all recognize what a difficult time this is, obviously, for the country, for the world, and for the Canadian government, of any political stripe, this is a very heavy load to bear.

“And I’m glad that we can be here together, not always agreeing, but agreeing on one thing, and that is that we are putting the needs of our fellow Canadians first and foremost.”

NDP Leader Jagmeet Singh said he thinks “that people want people to work together.”

“They want politicians, they want leaders to work together. They want to see **collaboration**. There’s a common threat and it’s scary,” Mr. Singh said.

STRONGER TOGETHER

Since the outbreak in Canada began, the federal government and the premiers have also been working as a team. At a video conference to discuss the shortage of personal protective equipment (PPE) and **ventilators**, the premiers agreed to pool lifesaving

resources to ensure provinces with outbreaks had what they needed.

At the same time, companies have retooled their factories to produce more ventilators, test kits, and protective equipment such as masks, visors, gloves, and hand sanitizers. Universities are making **respirators** and face shields using 3D printers. Everyone is chipping in to help.

Canada’s support for China earlier this year is also paying **dividends** now. In February, when the outbreak in China was at its peak, Canada shipped over 16 tonnes of personal protective equipment. On March 29, the Chinese Embassy informed Canada that China would repay the kindness by sending 30,000 medical masks along with gowns, gloves, and goggles to protect our healthcare teams.

A GLIMMER OF HOPE

How long will the crisis last? At the end of March, Canada’s Chief Public Health Officer, Dr. Theresa Tam, said that it was still too early to tell. But on March 29, Quebec Premier François Legault said the number of cases in his province “seems to be stabilizing.”

B.C.’s provincial health officer thinks social distancing is starting to work in her province as well. When travel and social distancing restrictions were introduced on March 12, the daily increase in new cases was 24 percent. As of March 27, it was just 12 percent.

“I’m trying not to over-call it, but I do believe we’ve seen a flattening, a falling-off of that curve,” says Dr. Bonnie Henry.

However, she cautions that the rate of infection could accelerate again if people don’t continue to stay home.

WHEN WILL THINGS GET BACK TO NORMAL?

“Every day someone asks me how long these restrictions will be in place,” says Mr. Trudeau. “The truth is, we don’t know yet.”

Schools and businesses could reopen by June. But scientists believe the virus could re-emerge once it’s **suppressed**. We could face two or three waves over the next two years.

The prime minister acknowledges that the uncertainty isn’t easy.

“This is an adjustment for all of us. But I want to remind all Canadians that social distancing doesn’t mean we have to stop talking to each other. Pick up the phone. Write an email. FaceTime. The strength of our country is our capacity to come together and care for each other, especially in times of need.

“So, call your friends. Check in with your family. Think of your community. Buy only what you need at the store. But if you’re heading out to grab groceries, ask your neighbour if you can get them anything. And if you know someone who is working on the front lines, send them a thank you. See how they’re holding up.

“Because that is what Canadians do in difficult times. We pull together and we look after each other. ★

DEFINITIONS

COLLABORATION: the act of working together with others

DIVIDEND: a bonus; something extra

INVINCIBLE: too strong to be defeated

PARTISAN: adhering to a particular political party

RESPIRATOR: a protective mask with a filter

SUPPRESS: to keep under control; keep in check

VENTILATOR: a machine that pushes air in and out of someone’s lungs when they cannot breathe on their own



NATIONAL
COVID-19 IN CANADA
– CANADIANS HELPING CANADIANS THROUGH A DIFFICULT TIME

ON THE LINES

Answer the following in complete sentences:

1. When was the first COVID-19 case reported in Canada? Where did this person come from?

2. How many cases of COVID-19 have been reported since then?

3. Explain what **social distancing** means.

4. List at least four measures that Canadian authorities have implemented to hinder the spread of COVID-19.

5. Describe the recent changes at Canada's airports. How many airports are now allowing international arrivals?

6. What are travellers required to do after they arrive from a foreign country?

7. What has the federal government done to help workers and businesses who are experiencing reduced incomes as a result of the pandemic?

8. Describe how Ottawa is working with the provinces to slow the spread of COVID-19.

9. How have many businesses and universities contributed to the fight against the pandemic?



NATIONAL COVID-19 IN CANADA

– CANADIANS HELPING CANADIANS THROUGH A DIFFICULT TIME

BETWEEN THE LINES

An *inference* is a conclusion drawn from evidence. A *plausible inference* is supported by evidence in the article and is consistent with known facts outside of the article.

What inferences can you draw from the fact that Canadian cities look like ghost towns – streets and sidewalks are deserted, and shopping centres, restaurants, and parking lots are empty?

BEYOND THE LINES

Watch Chris Hadfield talk about how to cope with isolation at https://www.youtube.com/watch?v=4uL5sqe5Uk8&fbclid=IwAR2oTWVAHByoBoCWubLQlm8RzlyfOF_g4oKtp5Vu_imTopleT42lXVf5FGA Then, listen to Chris Hadfield and Clara Hughes talk about COVID-19 at <https://www.cbc.ca/radio/thecurrent/the-current-for-march-20-2020-1.5504386/three-of-canada-s-brightest-on-why-they-re-proud-of-the-country-s-response-to-covid-19-1.5504752>

What tips do these Canadians offer to help us get through the pandemic?

JUST TALK ABOUT IT

1. In what ways has your life changed since the pandemic began? Explain.
2. What feelings do you have about the pandemic? Who can you talk to about your feelings? What other steps can you take to take care of your mental and physical health during this pandemic?
3. In what ways are Canadians helping each other during this crisis? Explain. What help are you or your family receiving, and in what ways could you help someone else?

ONLINE

Note: The links below are listed at www.lesplan.com/en/links for easy access.

1. View up-to-date numbers of confirmed COVID-19 cases in Canada by province and territory at <https://newsinteractives.cbc.ca/coronavirustracker/>
2. Find out more about COVID-19 in Canada on Health Canada's website at www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19.html
3. What is a state of emergency? Find out at <https://globalnews.ca/news/6688620/coronavirus-state-of-emergency/> ★



MAP ASSIGNMENT

Complete this map assignment to better understand the article *COVID-19 in Canada*.

INSTRUCTIONS

1. Obtain the required resources and read all the instructions before starting.
2. Colour your map after all labelling is completed.
3. Print in pencil only first, then go over the printing in black ink.
4. Work carefully and neatly.

Resources Required: pencil, black pen, pencil crayons, ruler, eraser and an atlas.

Visit <https://newsinteractives.cbc.ca/coronavirustracker/> to see the current number of COVID-19 cases in Canada.

Part A Locate and label the provinces with over 5,000 COVID-19 cases in CAPITAL letters and shade each one purple.

Part B Locate and label the provinces with over 1,000 COVID-19 cases in CAPITAL letters and shade each one red.

Part C Locate and label the provinces with over 200 COVID-19 cases in CAPITAL letters and shade each one pink.

Part D Locate and label the provinces and territories with less than 200 COVID-19 cases in CAPITAL letters and shade each one light pink.

Part E Locate and label the capital of each province and territory and underline each city name.

Part F Locate the capital of Canada. Label this city in CAPITAL letters and underline.

Part G Locate and label the following territory and countries in CAPITAL letters and shade each one grey:

| | |
|---------------|---------------------|
| United States | Greenland [Denmark] |
| Iceland | Russia |

Part H Locate and label the following and shade all ocean water dark blue:

| | |
|----------------|--------------|
| Pacific Ocean | Arctic Ocean |
| Atlantic Ocean | |

Part I Locate and label the following lakes on your maap, and shade them light blue:

| | |
|-----------------|------------------|
| Great Bear Lake | Great Slave Lake |
| Lake Winnipeg | Lake Superior |
| Lake Huron | Lake Michigan |
| Lake Erie | Lake Ontario |

Part J Colour the key on your map.

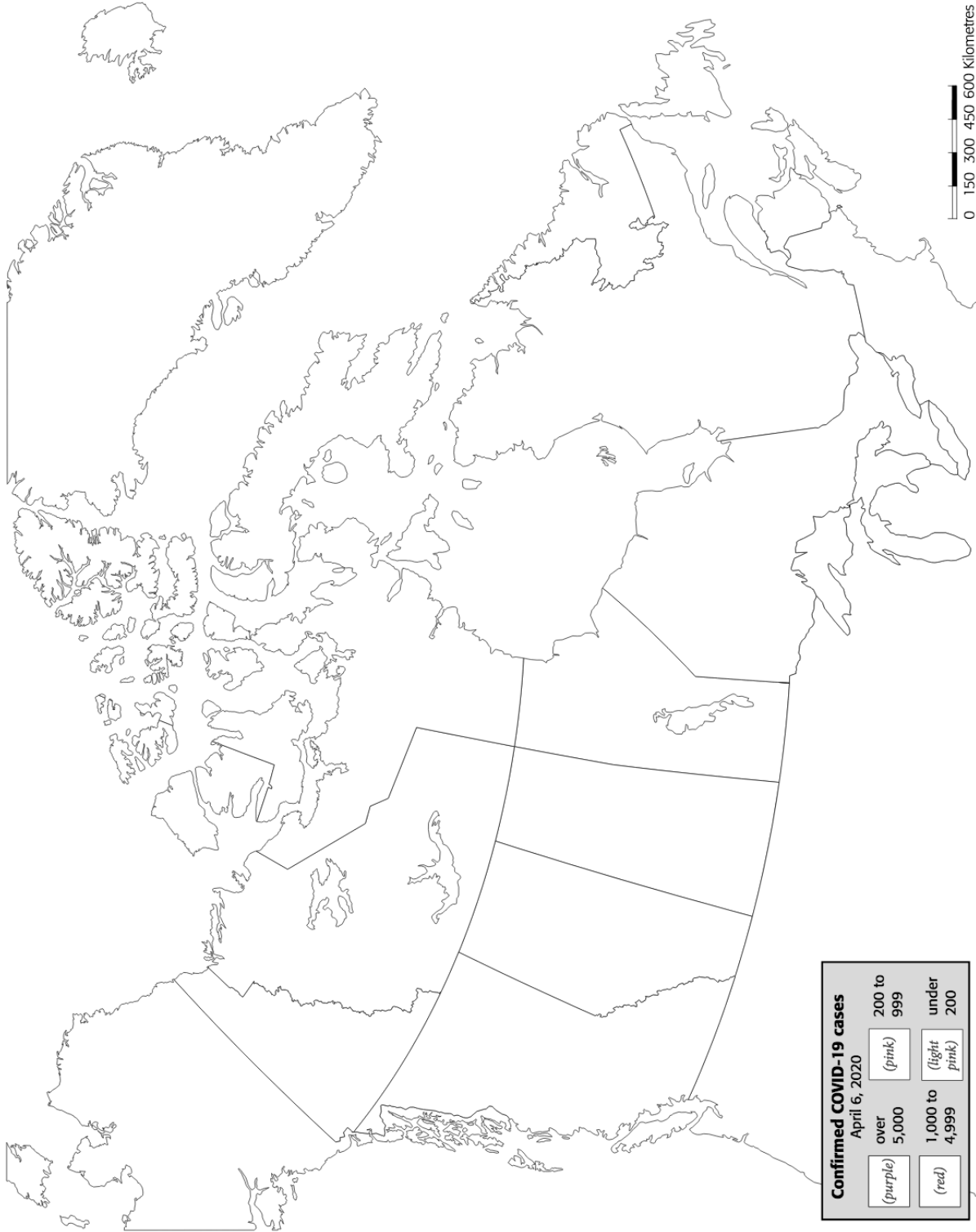
Part K Complete your map with a frame, title and compass bearing. ★



Quebec



Canada





**NATIONAL
COVID-19 IN CANADA**
– CANADIANS HELPING CANADIANS THROUGH A DIFFICULT TIME

QUIZ

A. Write the letter that corresponds to the best answer on the line beside each question:

_____ 1. Which country did the first person who contracted COVID-19 in Canada travel to?

- | | |
|-------------------|----------|
| a) United States | b) Italy |
| c) Australia | d) China |
| e) United Kingdom | |

_____ 2. For how long are returning international travellers required to self-quarantine?

- | | |
|------------|------------|
| a) 4 days | b) 7 days |
| c) 10 days | d) 12 days |
| e) 14 days | |

_____ 3. Keeping two metres from others and avoiding people to stop the spread of COVID-19 is called:

- | | |
|------------------------|-----------------------|
| a) social distancing | b) social awareness |
| c) social appreciation | d) social recognition |
| e) social sensibility | |

B. Mark the statements T (True) or F (False). If a statement is True, write one important fact to support it on the line below. If a statement is False, write the words that make it true on the line below.

_____ 4. **True or False?** The U.S.-Canada border is completely closed.

_____ 5. **True or False?** The federal opposition parties cooperated with the government to pass new laws and create new programs to help those affected by the COVID-19 pandemic.

_____ 6. **True or False?** By early April, over 16,000 cases of COVID-19 had been reported in Canada.

C. Fill in the blanks to complete each sentence.

7. By late March every province and territory had declared a state of _____ .

8. Arriving international flights are only allowed to land at _____ Canadian airports.

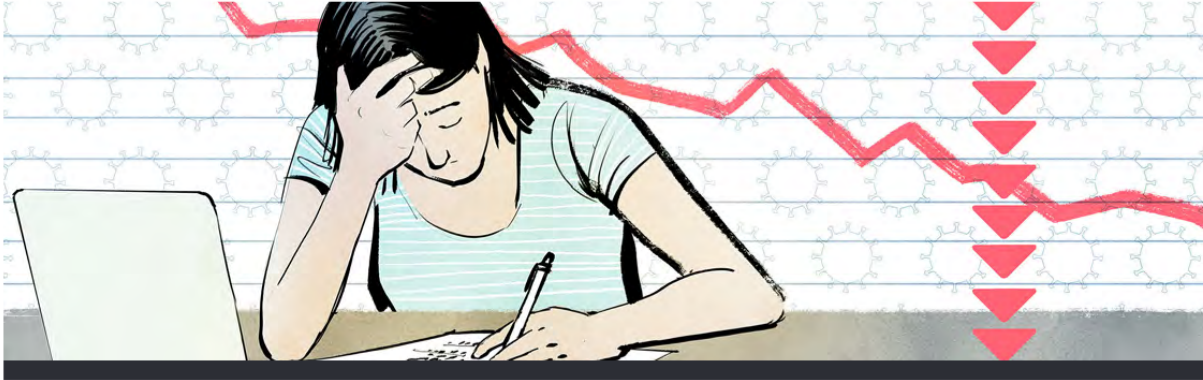
9. PPE = Personal _____ Equipment.

D. Respond to the following question in paragraph form. (*Use a separate sheet of paper if necessary.*)

What evidence can you offer to support the following statement: *Canadians are working together to help each other during this time of crisis?*

INTERNATIONAL COVID-19 AND THE ECONOMY

– PANDEMIC SPARKS A MAJOR ECONOMIC DOWNTURN



Rent is due in Mississauga, Ontario for a restaurant worker with a family to support. She counts on the generous tips she receives from customers in addition to her hourly wage. But now, her workplace is shut down. Government officials have ordered all non-essential businesses to close, to help slow the spread of COVID-19. So the server's boss has laid her off.

There's some good news: New federal and provincial assistance programs might cover a portion of her salary. Still, without customers, she can't collect tips. How will she pay her bills? And when – if ever – will her sense of financial security return?

These troubling questions are being faced by people around the world who, in a variety of different ways, are dealing with the severe economic fallout caused by the deadly pandemic. As governments order the closures of beauty salons, coffee shops, sports facilities, clothing stores, and more, the ripple effects of these measures are turning into massive, crashing waves.

AN ECONOMIC TSUNAMI

The global economy is on shaky ground for several reasons, say the experts.

A STOCK MARKET PRIMER

A stock market is where investors connect to buy and sell shares of companies, called stock. Companies issue shares because they want to raise funds to help them grow – by expanding their production and workforce, for example. The five largest stock markets are in New York, Tokyo, Shanghai, Hong Kong, and London.

Owning stock gives a person part ownership of a company. Say a firm issues 100 shares of stock. If you bought 10 shares, you would own 10 percent of the enterprise – and you would become a stockholder. Stockholders share the profits in good times and suffer losses in bad times. Suppose you bought shares for \$10 each. If company profits go up, so does your stock, making it worth, say, \$12 or \$15, if you sold it. But if the firm loses money, those \$10 shares might each become worth far less than you paid for them. If the company goes out of business, you may lose all your money.

COVID-19 has hit stock markets especially hard. Following years of steady growth, they began to crash in late February when the coronavirus pandemic caused consumers to lose confidence in the economy. From February 24 to 28, worldwide markets experienced their largest one-week declines since the 2008 financial crisis. By late March, the value of global stocks had fallen by up to 30 percent.

One major contributor? **Social distancing.** Most countries around the world have adopted social distancing measures to try to contain the pandemic. But that means workers have been **furloughed** and people are staying home. Combined, those two factors have had a powerful impact on businesses and the entire economy.

Here's why. A country measures the health of its economy by its gross domestic product (GDP) – the value of goods and services it produces in a year. In a healthy economy, the GDP grows as jobs are added and businesses prosper.

Now, however, given job worries and isolation, many consumers aren't spending in a way that fuels the economy and contributes to the GDP. In addition, most government revenue

DEFINITIONS

FURLOUGH: when an employee is told not to come to work and is not paid

SOCIAL DISTANCING: keeping a distance of two metres from others and avoiding large groups to prevent the spread of disease



INTERNATIONAL COVID-19 AND THE ECONOMY

– PANDEMIC SPARKS A MAJOR ECONOMIC DOWNTURN

comes from taxes, so the money that is being collected is also plummeting. Governments around the world will need to borrow huge sums of money to maintain services and programs.

As well, the worldwide **supply chain** has been disrupted. Fewer people are on the job moving raw materials to factories – and that’s slowing down the manufacturing of everything from baby clothes to cars. Even when companies can make products, there is a shortage of workers to see that these goods get to their global destinations.

“Now, anywhere you look in the global economy we are seeing a hit to domestic demand on top of those supply chain impacts,” says economist Innes McFee. “It’s incredibly worrying.”

WHO’S HARDEST HIT?

Some industries are experiencing a bigger impact than others. For example, tourism and travel-related businesses, affected by strict social distancing rules, are suffering big losses as authorities encourage consumers to stay home. Some estimates predict that COVID-19 could see airlines’ revenues around the world drop as much as US\$113 billion this year. Hotel companies’ profits are plunging, too. Meanwhile, movie makers around the globe could lose over US\$5 billion as people stay home from theatres.

A GLOBAL RECESSION

All this has caused economists to sound the alarm that we are set to undergo a deep global **recession**.

Experts say the United States, the world’s largest economy, is about to embark on a period of **negative growth**. So is Europe. Canada, Japan, South Korea, Singapore, Brazil, Argentina, and Mexico will also be affected. China, the world’s second-largest economy, will see its growth dramatically slow down, too. In fact, the world’s economy could grow at its slowest rate since the last major recession sent shock waves everywhere in 2009.

“This is a generation-defining moment,” said economist Mohamed El-Erian. “I’ve never seen an economic stop on this scale, certainly never in big countries and all at once.”

GOVERNMENTS REACT

Some governments around the world are doing their best to shore up their own economies. For example, the U.S. passed a \$2 trillion rescue package to support businesses and laid-off workers. Other countries have issued trillions of dollars in credit and loan guarantees to support enterprises that can’t pay workers, and consumers who have debt burdens.

Canada, too, is trying to keep its citizens financially secure. During the last two weeks of March, over two million Canadians applied for **employment insurance (EI)**, mostly due to job losses caused by COVID-19. In response to this flood of newly unemployed people and other concerns, the federal government has established a special \$200 billion program. These funds will provide a 75 percent wage **subsidy**

for qualifying businesses for up to three months. They will also make applying for employment insurance easier and faster, and provide support for some people who don’t qualify for EI. Some income tax payments were also **deferred**, and a \$25 billion emergency fund was created to allow banks to offer interest-free loans to small businesses.

IS IT ENOUGH?

Canada’s efforts and those of other nations may ease the pain to some extent, preventing large numbers of businesses from failing, and allowing unemployed people to pay their bills and obtain other essentials.

However, experts worry that the downturn could be harder and last longer than expected – possibly into next year and beyond. It may even change how people behave after the crisis is over. For example, they may not want to return to shopping malls and sports facilities for fear of being exposed to another dangerous virus.

“This is already shaping up as the deepest dive on record for the global economy for over 100 years,” analyst Kenneth Rogoff said.

Yet others are more optimistic.

“I am attached to the notion that this is a temporary crisis,” said economist Marie Owens Thomsen. “You hit the pause button, and then you hit the start button, and the machine starts running again.” ★

DEFINITIONS

DEFER: to delay something

EMPLOYMENT INSURANCE: a Canadian program allowing those who have lost a job to receive temporary financial assistance

NEGATIVE GROWTH: a decrease in a country’s gross domestic product (GDP) during any quarter of a given year

RECESSION: a time of decreased economic activity and job loss
SUBSIDY: money paid by a government to help a business or organization continue to function

SUPPLY CHAIN: a network between a company and its suppliers to produce and distribute a specific product to the final buyer



INTERNATIONAL
COVID-19 AND THE ECONOMY
 – PANDEMIC SPARKS A MAJOR ECONOMIC DOWNTURN

ON THE LINES

Answer the following in complete sentences:

1. Explain what **GDP** stands for and what it means.

2. How has social distancing affected the global economy? How have consumers' habits changed in recent weeks?

3. Where do governments get most of their revenue from? What will most governments need to do if they want to maintain their programs?

4. Explain what a **supply chain** is.

5. How has the COVID-19 pandemic affected global supply chains? Explain.

6. List at least three industries that have been especially hard hit by the pandemic.

7. Explain what a **recession** is.

8. What do many experts predict will happen to the global economy in the near future as a result of the pandemic?

9. What have the U.S., Canada, and other countries done to support their economies? Explain.



INTERNATIONAL COVID-19 AND THE ECONOMY

– PANDEMIC SPARKS A MAJOR ECONOMIC DOWNTURN

BETWEEN THE LINES

An **inference** is a conclusion drawn from evidence. A *plausible inference* is supported by evidence in the article and is consistent with known facts outside of the article.

What inferences can you draw from the fact that airlines' revenues around the world could drop as much as US\$113 billion this year as a result of the pandemic? Explain.

BEYOND THE LINES

A **sociogram** is a diagram that uses pictures instead of words to pass on information (although sometimes, single words may be used to label parts of the sociogram).

Sketch a sociogram to explain the reasons for the current global economic downturn. A *good sociogram* is clear, contains all relevant facts, and is visually appealing.

JUST TALK ABOUT IT

1. As you see it, what is the significance of this article? Explain.
2. Consider the following two quotes from the article:

“Experts worry that the downturn could be harder and last longer than expected – possibly into next year and beyond. It may even change how people behave after the crisis is over. ‘This is already shaping up as the deepest dive on record for the global economy for over 100 years,’ analyst Kenneth Rogoff said.”

“I am attached to the notion that this is a temporary crisis,” said economist Marie Owens Thomsen. ‘You hit the pause button, and then you hit the start button, and the machine starts running again.’”

What evidence can you offer in support of the perspective conveyed in the first quote? What evidence can you offer in support of the second perspective? Overall, which quote best captures your opinion of the long-term economic impact of COVID-19? Give reasons to explain your response.

ONLINE

Note: The links below are listed at www.lesplan.com/en/links for easy access.

1. Read more about the federal government's COVID-19 Economic Response Plan at <https://www.canada.ca/en/department-finance/economic-response-plan.html>
2. Watch ‘How Does the Stock Market Work?’ at https://www.youtube.com/watch?v=p7HKvqRI_Bo [4:29].
3. Learn more about GDP by watching ‘What is GDP’ at <https://www.youtube.com/watch?v=hBqWRayc1kE> [1:46].
4. Find out more about the causes of recessions at <https://www.youtube.com/watch?v=SwaCg7Gwtzw> [5:04]. ★

CROSSWORD
COVID-19 AND THE ECONOMY
 – PANDEMIC SPARKS A MAJOR ECONOMIC DOWNTURN



Image by Pete Linforth from Pixabay

ACROSS

- 4) the U.S. government established a \$2 _____ rescue package
- 5) a time of lower economic activity and job loss
- 8) _____ distancing
- 9) a person who is an expert in the study of economics
- 12) governments will need to _____ large sums of money
- 14) governments get most of their money from these
- 15) industry that is really suffering due to COVID-19 outbreak
- 17) money given to thank someone for good service

DOWN

- 1) unpaid temporary leave from work
- 2) when a disease affects many people over a vast area
- 3) companies issue shares so they can _____
- 6) person who spends money to buy goods or services
- 7) shares of companies are called _____
- 10) city with the largest stock market (2)
- 11) Gross _____ Product
- 13) money paid at regular times for the work a person has done
- 16) _____ chain



INTERNATIONAL
COVID-19 AND THE ECONOMY
 – PANDEMIC SPARKS A MAJOR ECONOMIC DOWNTURN

QUIZ

A. Write the letter that corresponds to the best answer on the line beside each question:

- _____ 1. GDP = Gross _____ Product.
 a) Demand
 b) Detached
 c) Dedicated
 d) Dividend
 e) Domestic
- _____ 2. Shares of a company that can be purchased or sold by investors are called:
 a) capital gains
 b) stocks
 c) profits
 d) investments
 e) dividends
- _____ 3. Where do most governments get most of their revenue from?
 a) fees and licenses
 b) investments
 c) tariffs
 d) taxes
 e) sales of assets and resources

B. Mark the statements T (True) or F (False). If a statement is True, write one important fact to support it on the line below. If a statement is False, write the words that make it true on the line below.

_____ 4. **True or False?** A furlough is a permanent job loss.

_____ 5. **True or False?** Travel companies have not been greatly affected by the COVID-19 pandemic.

_____ 6. **True or False?** COVID-19 has severely impacted global financial markets.

C. Fill in the blanks to complete each sentence.

7. Economists are predicting that the world economy will enter a period of _____ .

8. A supply _____ is a network between a company and its suppliers.

9. Many consumers have changed their _____ habits because of the pandemic.

D. Respond to the following question in paragraph form. (*Use a separate sheet of paper if necessary.*)

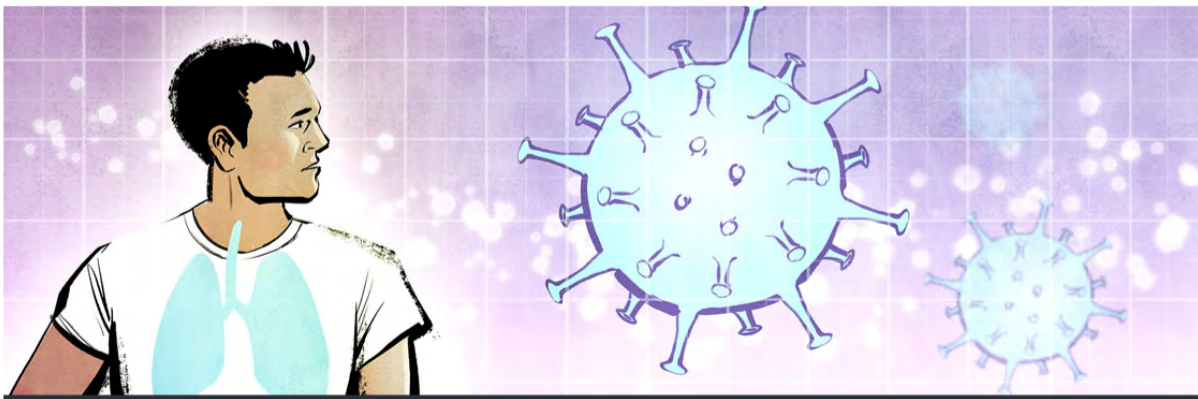
As you see it, what is the significance of the global economic downturn? Explain.



SCIENCE, TECHNOLOGY, AND THE ENVIRONMENT

COVID-19 BACKGROUNDER

– WHAT DOES THE SCIENCE SAY?



This hugely challenging pandemic has turned our lives upside down. It's easy to get caught up in the fear and anxiety, the rumours and 'noise.'

Instead, let's focus on the science. There are things **epidemiologists** and infectious disease experts still do not know about the **coronavirus** that causes COVID-19. We have only been aware of the virus for just over three months. But we're on a fast learning curve.

A TINY VIRUS GOES PANDEMIC

A virus is a microscopic piece of genetic material (a strip of ribonucleic acid or RNA) surrounded by a capsule made of protein. If you've had a cold, the flu, or chicken pox, you've had experience with viruses. They can make you sick.

A virus cannot survive by itself. It needs to get inside a 'host.' Often the host is an animal, but sometimes the **pathogen** is transmitted to a human host.

Some viruses are highly contagious, while others spread less easily. COVID-19 is very infectious. It spreads through **respiratory** droplets coughed out by those infected with the virus. The virus may also linger on surfaces after sick people cough into their hands and then touch those surfaces.

Those exposed to the pathogen may not show symptoms for two to 14 days, with the average **incubation period** being five days. Yet even without symptoms, infected people can pass the virus on to others.

"I'VE BEEN INFECTED!"

Inside a host, COVID-19 – a spherical capsule covered with spikes – latches onto a healthy cell in the respiratory tract. It breaks into the cell and makes copies of itself, before breaking out of the cell again, killing it in the process.

Fortunately, the body's immune system is designed to fight off invaders like viruses. While the battle rages, the sick person will exhibit symptoms such as fever, a cough, and tiredness.

The good news is that about 80 percent of COVID-19 cases are relatively mild. With a strong immune system, the body will win. After a very unpleasant couple of weeks of self-isolation, rest, and drinking plenty of fluids, most patients recover.

More serious cases usually feature pneumonia. The virus is able to travel down to the lower respiratory system and attack the lungs. Patients may need to be hooked up to a **ventilator** to help them breathe and circulate oxygen through their bodies.

In Canada, seven percent of COVID-19 cases are serious enough to require hospitalization, with three percent requiring intensive care. One percent of Canadian COVID-19 cases are fatal. Usually these patients are older or have underlying medical conditions that have weakened their respiratory or immune systems.

FLATTENING THE CURVE

Without a COVID-19 vaccine, there is no way to stop the pandemic. So the strategy is to slow its spread.

DEFINITIONS

CORONAVIRUS: a family of viruses that can infect animals and humans, and that causes the common cold and COVID-19

EPIDEMIOLOGIST: a medical scientist who studies the transmission and control of epidemic diseases

INCUBATION PERIOD: the period between infection and the appearance of symptoms of a disease

PATHOGEN: something such as bacteria or a virus that causes disease

RESPIRATORY: relating to the process of breathing air in and out

VENTILATOR: a machine that pushes air in and out of someone's lungs when they cannot breathe on their own



SCIENCE, TECHNOLOGY, AND THE ENVIRONMENT

COVID-19 BACKGROUNDER

– WHAT DOES THE SCIENCE SAY?

Although only a small fraction of the total infected population requires hospitalization, a small fraction of a very large number is a large number – certainly enough to overwhelm Canada's health system.

Were the virus to spread too quickly, as it did in Italy, for instance, the number of very sick people would skyrocket. But if the spread was slower, these seriously ill patients would appear over a longer period of time. That would be more manageable for Canada's health care system.

Imagine a graph with a sharply rising line showing the increase in cases of COVID-19. By "flattening the curve" of this line, we would avoid overwhelming our hospitals. That's our country's urgent focus: to flatten the curve.

PREVENTION - WE'RE ALL IN THIS TOGETHER

The best way to avoid getting COVID-19 is to wash your hands with soap and water often. Don't touch your face with contaminated hands.

Health educators say a good hand wash takes at least 20 seconds, enough time to sing "Happy Birthday" twice. Scrub all parts of your hands – palms, backs, between the fingers, the finger tips, and the thumbs. Hand washing with soap is best, but alcohol-based hand sanitizer also works.

The other way to slow the spread of the virus? Get serious about social, or physical, distancing. Stay two metres away from everyone except members of your household. That's about two arm lengths, which is further than the droplets from someone's cough will travel.

Staying home as much as possible also helps contain the virus. The more

A HISTORY OF INFECTIOUS DISEASES

Throughout history, nothing has killed more human beings than infectious disease. It's only in the last century that the development of sanitation, along with medical advances like vaccines and antibiotics, has changed all that.

For example, the plague of Justinian struck in the 6th Century and killed as many as 50 million people, perhaps half the global population at the time. The Black Death of the 14th Century – likely caused by the same pathogen – may have killed up to 200 million people. Smallpox is thought to have killed as many as 300 million people in the 20th Century alone. When European colonists introduced smallpox and other infectious diseases to North America, Indigenous populations were **decimated**.

Some 50 to 100 million people died in the 1918 influenza pandemic – the so-called "Spanish flu." It infected one in every three people on the planet.

These viral epidemics were simply a terrible fact of life back then. But COVID-19 reminds us that infectious diseases haven't vanished. We had outbreaks of polio in the 1950s. Severe acute respiratory syndrome (SARS) in 2003. HIV (human immunodeficiency virus) is still **prevalent**; it has killed an estimated 32 million people and infected 75 million. And now COVID-19.

There are several reasons we are seeing these new infectious diseases. For one, over the past 50 years, we've more than doubled the number of people on the planet. This means more human beings to get infected and in turn to infect others, especially in densely-populated cities. We also have more livestock now, and some viruses can leap from those animals to us. And we have an integrated global economy, which enables new infectious diseases to spread around the world as fast as a jet plane.

citizens stay home, and don't go to work, school, or anywhere else, the less likely it is that the virus can spread within the community.

Meanwhile, anyone showing symptoms of COVID-19, or anyone who could have come into contact with an infectious person, or anyone returning to Canada from elsewhere, should self-isolate for two weeks at home and monitor themselves for symptoms.

NO TIME TO REST

Behind the scenes, scientist are busy on multiple fronts. They are testing to see if anti-viral drugs used to fight other kinds of viral attacks can be re-purposed for use on COVID-19. They are experimenting with injecting

ill patients with blood plasma taken from recovered COVID-19 survivors to boost their immunity. Dozens of companies are racing to create a vaccine, although that is probably more than a year and a half away.

In the meantime, we must do all we can to stay healthy. Every time we stop one case of infection, we not only keep that person healthy, but we break the chain of transmission. We protect all the people that person might have infected, and the people who those people would have infected, and so on. It makes a big difference.

"If we act now, even if it seems like a big ask, things will be better tomorrow," says Prime Minister Justin Trudeau. ★

DEFINITIONS

DECIMATE to kill or destroy in very large numbers

PREVALENT: very common



SCIENCE, TECHNOLOGY, AND THE ENVIRONMENT
COVID-19 BACKGROUNDER
 – WHAT DOES THE SCIENCE SAY?

ON THE LINES

Answer the following in complete sentences:

1. Explain what a **virus** is.

2. Explain how a virus usually spreads from person to person.

3. How infectious is COVID-19? How long is the average incubation period for this coronavirus?

4. How does a virus survive?

5. How does the COVID-19 coronavirus attack the human body? How does the body's immune system respond?

6. What happens to most people who come down with COVID-19?

7. How does COVID-19 affect the minority of infected people who develop serious complications? Explain.

8. Explain what '**flattening the curve**' means. What can happen if the disease curve is not flattened?

9. List the three strategies health authorities are asking people to do to help flatten the COVID-19 curve.



SCIENCE, TECHNOLOGY, AND THE ENVIRONMENT

COVID-19 BACKGROUNDER

– WHAT DOES THE SCIENCE SAY?

BETWEEN THE LINES

An **inference** is a conclusion drawn from evidence. A *plausible inference* is supported by evidence in the article and is consistent with known facts outside of the article.

What inference(s) can you draw from the fact that even without symptoms, people infected with COVID-19 can pass the virus on to others?

BEYOND THE LINES

Create an infographic using one of the templates from Canva, found at <http://www.canva.com>, to show what a virus is and how people can prevent catching and spreading COVID-19.

A good infographic is *visually appealing and easy to understand, and shares an important message (or messages) using images and text.*

JUST TALK ABOUT IT

1. What reasons can you suggest to explain why the world continues to experience new infectious diseases?
2. For what reasons is it important to try to slow the spread of COVID-19? Explain.
3. What can you do to prevent catching and spreading COVID-19? Explain.

ONLINE

Note: The links below are listed at www.lesplan.com/en/links for easy access.

1. Watch ‘How soap kills coronavirus’ at <https://youtu.be/-LKVUarhtvE> [3:44]. Then, check out the ‘Wash Your Lyrics’ app at <https://washyourlyrics.com/>
2. Listen to The Germ Guy (Microbiologist Jason Tetro) talk about the symptoms and possible treatments of COVID-19 at <https://www.cbc.ca/player/play/1711476291817> [9:32] audio
3. Learn more about ‘flattening the curve’ at https://www.washingtonpost.com/graphics/2020/world/corona-simulator/?itid=pm_pop
4. Check out these helpful charts:
 - Cold, flu, or COVID-19? https://i.cbc.ca/1.5495357.1584032407!/fileImage/httpImage/image.jpg_gen/derivatives/original_1180/toronto-symptoms.jpg
 - Coronavirus prevention: https://i.cbc.ca/1.5438673.1579831234!/fileImage/httpImage/image.jpg_gen/derivatives/original_1180/virus.jpg
 - Self-isolation guide: https://i.cbc.ca/1.5496099.1584053025!/fileImage/httpImage/image.jpg_gen/derivatives/original_780/self-isolation-guide.jpg
5. Explore common COVID-19 questions and answers at www.ctvnews.ca/health/coronavirus/should-you-wipe-down-your-groceries-answers-to-that-and-other-questions-1.4856659#anchor1
6. Find out more about viruses by watching ‘What is a Virus?’ at <https://www.youtube.com/watch?v=YS7vsBgWszI> [4:21] ★



IMAGES IN THE NEWS

COVID-19 BACKGROUNDER

– WHAT DOES THE SCIENCE SAY?

The saying *A picture is worth a thousand words* refers to the idea that complex stories can be described with a single, still image. Photographs have tremendous power to communicate information. One of the reasons photojournalists take pictures is to inform their audiences about newsworthy events. By examining the content of photographs viewers can often, at a glance, ‘see’ who was involved, what happened and perhaps even determine where and when the event happened. Careful consideration of the less obvious details is equally important as they give additional clues that can be used to infer more about what is going on in the photograph. For example, tears rolling down a young girl’s cheek show how upset she is or wet streets help explain why the driving conditions were more dangerous. Careful ‘reading’ of a photograph is a useful and quick way of gaining a lot of information about an event or subject (picture or object).

Directions:

First, label everything you see in the photograph on page 14. Be specific. Include obvious and less obvious details. For example, if there is a man in the photo, label everything you see on the man, such as:

- facial features – blue eyes, crooked nose, toothless smile, graying hair;
- clothing – torn black pants, rubber boots, plaid, long-sleeved shirt;
- actions – sitting, holding a puppy;
- surroundings – street, sidewalk, bench, trees, grass.

If you do this thoroughly, the photograph will be covered with words.

Then, write the ‘1000 word’ story told by the photograph using as many of the labeled words as you can. The completed story should be *accurate (facts are consistent with what is shown in the photograph and with what is known outside the photograph)*, *complete (reports the important 5W’s + H)* and *clear (well-written, free from errors)*.



IMAGES IN THE NEWS

COVID-19 BACKGROUNDER

– WHAT DOES THE SCIENCE SAY?




(https://commons.wikimedia.org/wiki/File:Social_distancing_during_COVID-19_pandemic_Haslemere_02.jpg)

SCIENCE, TECHNOLOGY, AND THE ENVIRONMENT
COVID-19 BACKGROUNDER
 – WHAT DOES THE SCIENCE SAY?

Directions: Respond to the infographic below. What information conveyed in the infographic is new to you? What is interesting to you? What seems to be especially significant? Why? Overall, how does the information in this infographic enhance your understanding of how to prevent catching or spreading COVID-19? Explain.

How soap annihilates a virus

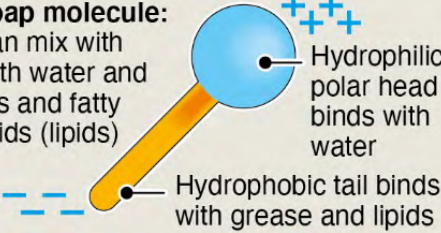
Viruses are a package of nucleic acid bundled inside a collection of lipids and proteins which can include a fat-based viral envelope – soap can destroy a virus from your hands before it can lead to infection



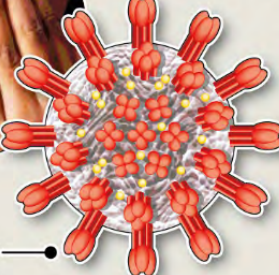
Sars-CoV-2 virus
 Protein spikes
 Virus relies on spike to enter human cell and replicate

Infection: Studies show that people on average touch their faces 23 times per hour, including 10 contacts with eyes, nose or mouth – infection points of coronavirus

Soap molecule:
 Can mix with both water and oils and fatty acids (lipids)





Hydrophilic polar head binds with water
 Hydrophobic tail binds with grease and lipids



Virus genome
Protective lipid envelope

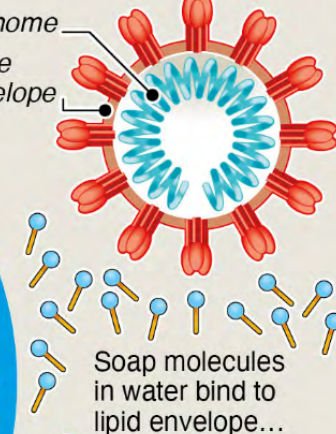
Destruction of virus takes at least 20 seconds





Hand sanitizers:
 Vigorous hand-clean with alcohol-based sanitiser with alcohol concentration of at least 60% is good alternative

Soap molecules in water bind to lipid envelope...



...breaking down fragile envelope. Viral particles are washed away by water

Sources: American Journal of Infection Control, RNZ Picture: Getty Images © GRAPHIC NEWS

SCIENCE, TECHNOLOGY, AND THE ENVIRONMENT
COVID-19 BACKGROUNDER
 – WHAT DOES THE SCIENCE SAY?

Directions: Respond to the infographic below. What information conveyed in the infographic is new to you? What is interesting to you? What seems to be especially significant? Why? Overall, how does the information in this infographic enhance your understand the importance of ventilators in treating patients with COVID-19? Explain.

Global race to make ventilators

Inventors, academics, carmakers and aerospace firms are rushing to build hundreds of thousands of ventilators to help save the lives of people with Coronavirus-related breathing difficulties

MECHANICAL VENTILATOR

Ventilator unit: Pushes air into lungs, replicating normal breathing when disease causes lungs to fail. Patient must be heavily sedated

Humidifier
Matches air to body temperature and adds moisture

Carbon dioxide flow from patient

Oxygen flow to patient

Tube inserted into windpipe

Medication relaxes respiratory muscles so breathing can be fully regulated by machine

NON-INVASIVE VENTILATOR

Face mask covers nose and mouth

Continuous Positive Airway Pressure (CPAP) device delivers oxygen to lungs without need for ventilator

Mercedes F1 is offering engineering expertise to University College London to build up to 1,000 CPAP machines per day

Sources: AP, BBC, UCL Picture: UCL © GRAPHIC NEWS

