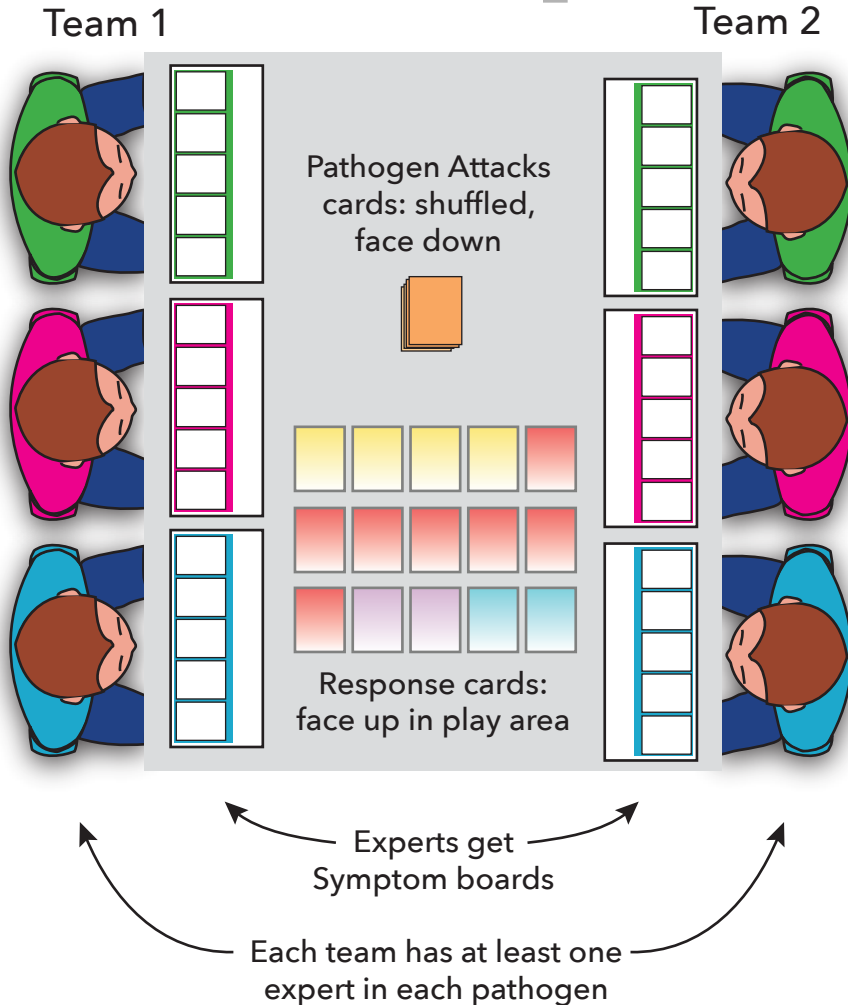


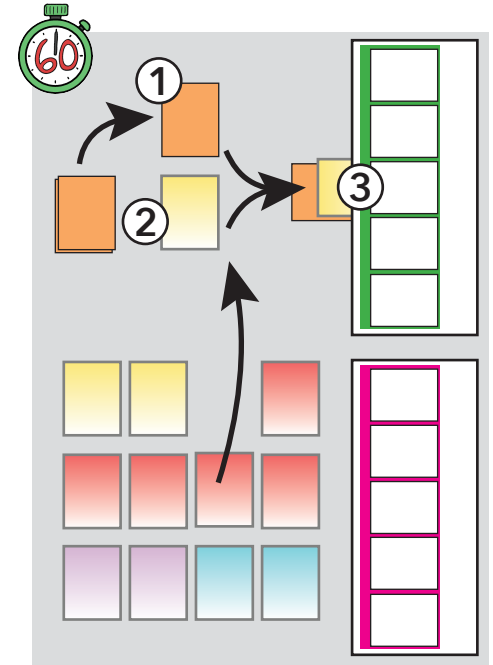
# Set-up



# Instructions

## On your team's turn

1. Draw a **Pathogen Attacks Card** and read it aloud. Set a 60-second timer.
2. Match to the correct **Response Card** in the play area (be sure to match with the correct type—e.g., Ouch or Immune Ninja).
3. Place the matched pair (Pathogen Attacks + Response) onto the matching symptom space on the correct **Symptom board**.



**Challenging:** If the cards played at the end of the 60 seconds are incorrectly matched or placed on the wrong symptom, the other team can challenge. To challenge, use evidence to show your teacher that the match is incorrect, and describe the correct match. If the challenging team is correct, they take the cards; if they're incorrect, the challenging team loses 1 point.

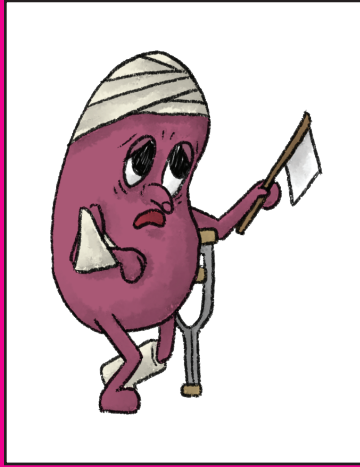
NOTE: Unless you are being challenged, you may adjust cards on your boards at any time.

Play ends when the second-to-last Pathogen Attacks Card has been matched. Flag down your teacher to check the final matches. No points for mismatches. Tie breaker goes to the team who was never correctly challenged.

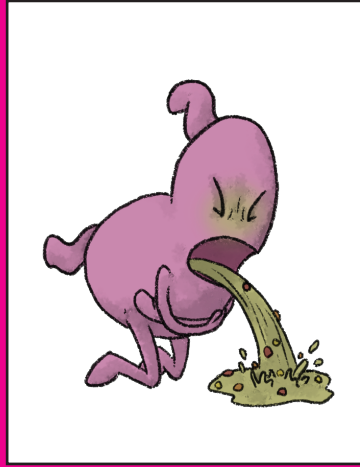
DIARRHEA



KIDNEY FAILURE



VOMITING



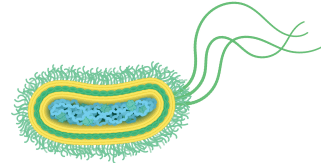
ABDOMINAL PAIN



STROKE



***E. coli* Eviscerator**

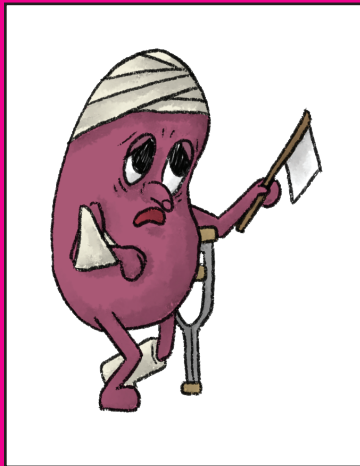


Symptom board **B**

DIARRHEA



KIDNEY FAILURE



VOMITING



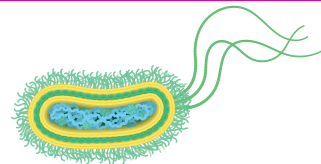
ABDOMINAL PAIN



STROKE



**Gut Guru**



Symptom board **B**



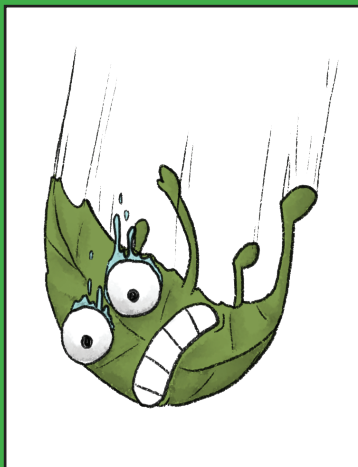
**DARK SPOTS**



**WILTING**



**LEAF DROP**



**PLANT COLLAPSE**



**SLOW GROWTH**



**Warrior of Wilt**



*Symptom board* ©

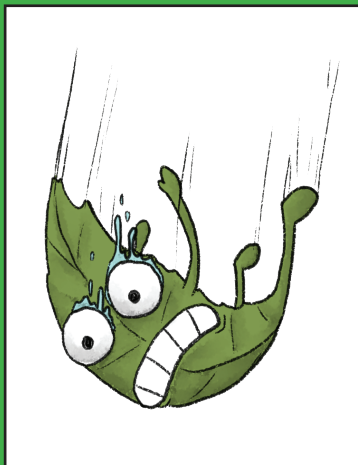
**DARK SPOTS**



**WILTING**



**LEAF DROP**



**PLANT COLLAPSE**



**SLOW GROWTH**

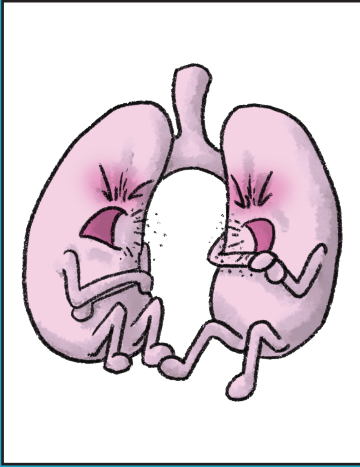


**Plant Professor**

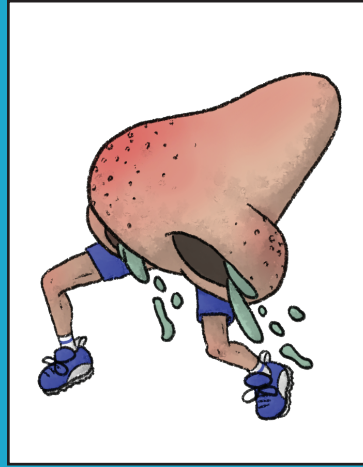


*Symptom board* ©

COUGHING



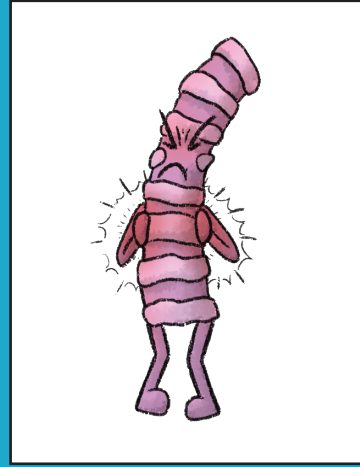
RUNNY NOSE



FEVER



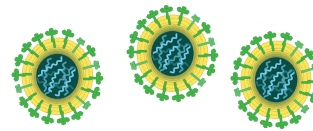
SORE THROAT



BODY ACHES

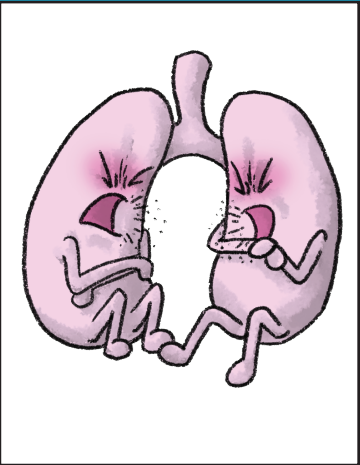


**Flu Fighter**

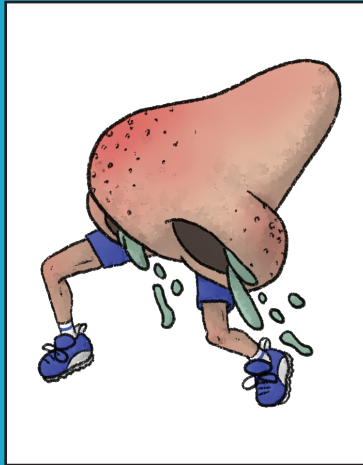


Symptom board **A**

COUGHING



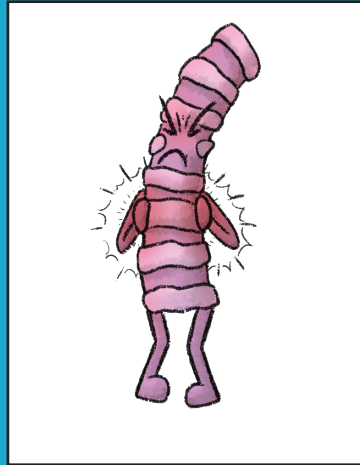
RUNNY NOSE



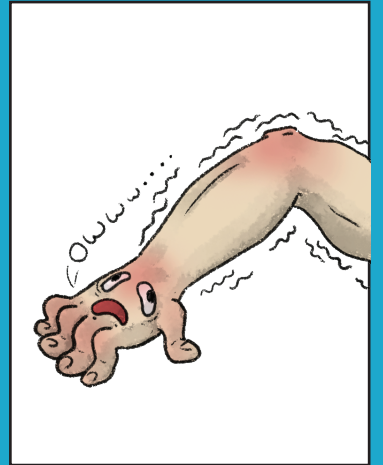
FEVER



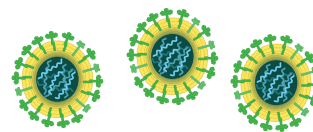
SORE THROAT



BODY ACHES



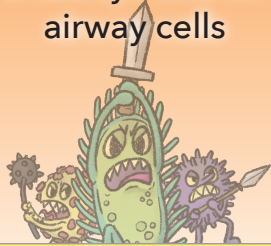
**Bronchus Brainiac**



Symptom board **A**

### PATHOGEN ATTACKS!

Destroys cilia on airway cells



Match to  
**SYSTEM STRIKES BACK**

### PATHOGEN ATTACKS!

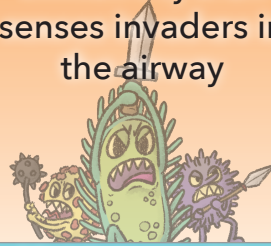
Cuts through mucus layer to get to cells



Match to  
**SYSTEM STRIKES BACK**

### PATHOGEN ATTACKS!

Immune system senses invaders in the airway



Match to any blue  
**IMMUNE NINJA**

### PATHOGEN ATTACKS!

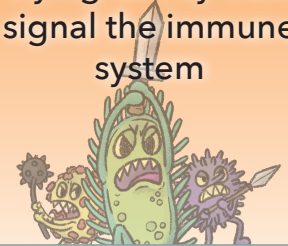
Turns airway cells into virus-making factories



Match to  
**OUCH!**

### PATHOGEN ATTACKS!

Dying airway cells signal the immune system



Match to any blue  
**IMMUNE NINJA**

### PATHOGEN ATTACKS!

Destroys microvilli to make smooth attachment sites



Match to  
**OUCH!**

### PATHOGEN ATTACKS!

Releases toxin that damages blood vessels in the kidneys



Match to  
**OUCH!**

### PATHOGEN ATTACKS!

Steals food from the intestine and multiplies



Match to  
**SYSTEM STRIKES BACK**

### PATHOGEN ATTACKS!

Invading bacteria and toxins signal the immune system



Match to  
**IMMUNE NINJA**

### PATHOGEN ATTACKS!

Releases toxin that damages blood vessels in the brain



Match to  
**OUCH!**

### PATHOGEN ATTACKS!

Spreads through tiny tunnels to infect nearby leaf cells



Match to  
**IMMUNE NINJA**

### PATHOGEN ATTACKS!

Hijacks cell to make more viruses until the leaf cell is packed



Match to  
**OUCH!**

### PATHOGEN ATTACKS!

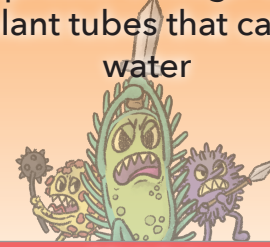
Kills heavily infected leaf cells as it spreads



Match to  
**OUCH!**

### PATHOGEN ATTACKS!

Spreads through the plant tubes that carry water



Match to  
**OUCH!**

### PATHOGEN ATTACKS!

Spreads through the plant, taking over cells



Match to  
**SYSTEM STRIKES BACK**



<p><b>SYSTEM STRIKES BACK!</b></p> <p>Expels built-up mucus from the airway</p>  <p>2 POINTS</p>	<p><b>SYSTEM STRIKES BACK!</b></p> <p>Goblet cells make extra mucus to protect against viruses</p>  <p>2 POINTS</p>	<p><b>IMMUNE NINJA!</b></p> <p>Brain sets body temperature higher to fight the infection</p>  <p>2 POINTS</p>	<p><b>OUCH!</b></p> <p>Infected throat cells die</p>  <p>1 POINT</p>	<p><b>IMMUNE NINJA!</b></p> <p>Muscles are inflamed because of the immune response</p>  <p>2 POINTS</p>
<p><b>OUCH!</b></p> <p>Nutrient &amp; water absorption decrease leaving watery waste</p>  <p>1 POINT</p>	<p><b>OUCH!</b></p> <p>Kidneys can't clean the blood</p>  <p>1 POINT</p>	<p><b>SYSTEM STRIKES BACK!</b></p> <p>Stomach forcefully ejects contents</p>  <p>2 POINTS</p>	<p><b>IMMUNE NINJA!</b></p> <p>Immune cells rush to small intestine and cause swelling</p>  <p>2 POINTS</p>	<p><b>OUCH!</b></p> <p>Dead blood vessel cells cause clogs in the brain</p>  <p>1 POINT</p>
<p><b>IMMUNE NINJA!</b></p> <p>Immune system kills leaf cells to contain the spread</p>  <p>2 POINTS</p>	<p><b>OUCH!</b></p> <p>Vacuoles have less room</p>  <p>1 POINT</p>	<p><b>OUCH!</b></p> <p>Dead cells can't hold water, so leaves dry out</p>  <p>1 POINT</p>	<p><b>OUCH!</b></p> <p>Damaged vessels in stems can't support the weight of the plant</p>  <p>1 POINT</p>	<p><b>SYSTEM STRIKES BACK!</b></p> <p>Plant redirects resources to fight the virus</p>  <p>2 POINTS</p>



## Summary card for checking matches

Influenza	<b>COUGHING</b> <b>PATHOGEN ATTACKS!</b> Destroys cilia on airway cells	<b>RUNNY NOSE</b> <b>PATHOGEN ATTACKS!</b> Cuts through mucus layer to get to cells	<b>FEVER</b> <b>PATHOGEN ATTACKS!</b> Immune system... either/or Dying airway cells...	<b>SORE THROAT</b> <b>PATHOGEN ATTACKS!</b> Turns airway cells into virus-making factories	<b>BODY ACHES</b> <b>PATHOGEN ATTACKS!</b> Immune system... either/or Dying airway cells...
	<b>SYSTEM STRIKES BACK!</b> Expels built-up mucus from the airway	<b>SYSTEM STRIKES BACK!</b> Goblet cells make extra mucus to protect against viruses	<b>IMMUNE NINJA!</b> Brain sets body temperature higher to fight the infection	<b>OUCH!</b> Infected throat cells die	<b>IMMUNE NINJA!</b> Muscles are inflamed because of the immune response
E. Coli	<b>DIARRHEA</b> <b>PATHOGEN ATTACKS!</b> Destroys microvilli to make smooth attachment sites	<b>KIDNEY FAILURE</b> <b>PATHOGEN ATTACKS!</b> Releases toxin that damages blood vessels in the kidneys	<b>VOMITING</b> <b>PATHOGEN ATTACKS!</b> Steals food from the intestine and multiplies	<b>ABDOMINAL PAIN</b> <b>PATHOGEN ATTACKS!</b> Invading bacteria and toxins signal the immune system	<b>STROKE</b> <b>PATHOGEN ATTACKS!</b> Releases toxin that damages blood vessels in the brain
	<b>OUCH!</b> Nutrient & water absorption decrease leaving watery waste	<b>OUCH!</b> Kidneys can't clean the blood	<b>SYSTEM STRIKES BACK!</b> Stomach forcefully ejects contents	<b>IMMUNE NINJA!</b> Immune cells rush to small intestine and cause swelling	<b>OUCH!</b> Dead blood vessel cells cause clogs in the brain
TSWV	<b>DARK SPOTS</b> <b>PATHOGEN ATTACKS!</b> Spreads through tiny tunnels to infect nearby leaf cells	<b>WILTING</b> <b>PATHOGEN ATTACKS!</b> Hijacks cell to make more viruses until the leaf cell is packed	<b>LEAF DROP</b> <b>PATHOGEN ATTACKS!</b> Kills heavily infected leaf cells as it spreads	<b>PLANT COLLAPSE</b> <b>PATHOGEN ATTACKS!</b> Spreads through the plant tubes that carry water	<b>SLOW GROWTH</b> <b>PATHOGEN ATTACKS!</b> Spreads through the plant, taking over cells
	<b>IMMUNE NINJA!</b> Immune system kills leaf cells to contain the spread	<b>OUCH!</b> Vacuoles have less room	<b>OUCH!</b> Dead cells can't hold water, so leaves dry out	<b>OUCH!</b> Damaged vessels in stems can't support the weight of the plant	<b>SYSTEM STRIKES BACK!</b> Plant redirects resources to fight the virus