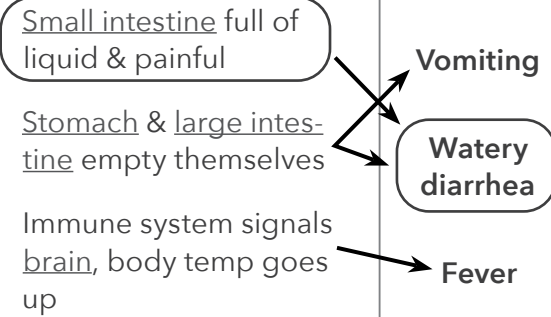


Hijacked Teams! Organizer

Pathogens disrupt cells, tissues, and organs. Track down what's happening at each level to cause the pathogen's specific symptoms.

1. Which infection are you modeling? _____
2. Fill in the symptoms for your pathogen infection (from the Symptoms Chart).
3. Fill in the table. Use the specific names of cells, tissues, and organs—then underline the names.
4. Draw an arrow from the cell-, tissue-, or organ-level effect to the symptom it causes.
5. Circle the effects that come directly from the pathogen (e.g., not the immune system or other indirect effects).

	Cell-level effects <i>(underline cell types)</i>	Tissue-level effects <i>(underline tissue names)</i>	Organ-level effects <i>(underline organ names)</i>	Symptom(s)
EXAMPLE – Rotavirus	<div style="border: 1px solid black; border-radius: 10px; padding: 5px;"> <p><u>Absorptive cells</u> lose electrolyte balance, make fewer digestive enzymes. Cytoskeleton in microvilli comes apart; some cells explode.</p> </div>	<div style="border: 1px solid black; border-radius: 10px; padding: 5px;"> <p><u>Intestinal epithelium</u> absorbs less nutrients & liquid; loses finger-like shape.</p> <p><u>Blood vessels</u> can't distribute oxygen & nutrients as well in misshapen tissue</p> </div>	<div style="border: 1px solid black; border-radius: 10px; padding: 5px;"> <p><u>Small intestine</u> full of liquid & painful</p> <p><u>Stomach & large intestine</u> empty themselves</p> <p>Immune system signals <u>brain</u>, body temp goes up</p> </div>	<p>Vomiting</p> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;"> <p>Watery diarrhea</p> </div> <p>Fever</p> 
Your pathogen infection				

Question Pathogens need hosts to survive. They also need a way to spread to new hosts, from one individual to another. How does your pathogen get out of one host and spread to another?

NAME _____ DATE _____

Symptom Chart

A – Influenza v. Airway Cell

B – *E. coli* v. Intestine Cell

C – TSWV v. Plant Cell

Body aches	Abdominal pain	Dark spots
Coughing	Diarrhea	Leaf drop
Fever	Kidney failure	Plant collapse
Runny nose	Stroke	Slow growth
Sore throat	Vomiting	Wilting