

Biology > Big idea BHD: Health and disease > Topic BHD3: Health and infectious disease

Progression toolkit: Pathogens

Learning focus	The health of humans, other animals and plants can be affected by infection with pathogens, including viruses and some bacteria and fungi.				
As students' conceptual understanding progresses they can:					
As students' conceptual understanding progresses they can:	Recall that 'germs' are disease-causing microorganisms also known as pathogens, including bacteria, fungi and viruses. P	Recall that pathogens cause some but not all diseases in humans, other animals and plants. P	Recognise that not all microorganisms cause ill health.	Explain simply how pathogens cause symptoms of ill health.	Apply the idea that pathogens do not cause symptoms of ill health until they are present in sufficient numbers. B
Diagnostic questions	Timmy's tummy 'bug'	Causes of disease	Yogurt drink	Sam's symptoms	Food poisoning
Diagnostic questions	'Germs'	Attack of the pathogens!			
Response activities	What do bacteria look like?	Plant disease detectives	Microorganisms on trial!	The hole story	Divide and conquer
Response activities	Pathogens				

Key:

P Prior understanding from earlier stages of learning

B Bridge to later stages of learning

<p>Timmy's tummy 'bug'</p>  <p>Drawing</p>	<p>'Germs'</p>  <p>Confidence grid</p>	<p>Causes of disease</p>  <p>Simple multiple choice</p>	<p>Attack of the pathogens!</p>  <p>Simple multiple choice</p>	<p>Yogurt drink</p>  <p>Confidence grid</p>
<p>Sam's symptoms</p>  <p>Talking heads, simple multiple choice</p>	<p>Food poisoning</p>  <p>Two-tier multiple choice</p>			

<p>What do bacteria look like?</p>	<p>Pathogens</p>	<p>Plant disease detectives</p>	<p>Microorganisms on trial!</p>	<p>The hole story</p>																
<p>Discussion, critiquing a representation</p>	<p>Discussion, talking heads</p>	<p>Fieldwork</p>	<p>Role play, discussion</p>	<p>Discussion, card sort</p>																
<p>Divide and conquer</p>																				
<table border="1"> <thead> <tr> <th>Time</th> <th>Number of Bacteria</th> </tr> </thead> <tbody> <tr> <td>Start (0 hours)</td> <td>100</td> </tr> <tr> <td>After 1 hour</td> <td>200</td> </tr> <tr> <td>After 2 hours</td> <td>400</td> </tr> <tr> <td>After 3 hours</td> <td>800</td> </tr> <tr> <td>After 4 hours</td> <td></td> </tr> <tr> <td>After 5 hours</td> <td></td> </tr> <tr> <td>After 6 hours</td> <td></td> </tr> </tbody> </table>					Time	Number of Bacteria	Start (0 hours)	100	After 1 hour	200	After 2 hours	400	After 3 hours	800	After 4 hours		After 5 hours		After 6 hours	
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