

Topic 6 *Infection, immunity and forensics*

Resources overview

Resource type	Title	Interactive component	Student sheet	Teacher sheet	Technician sheet	Description
Topic introduction		Yes (presentation)	No	No	No	An interactive presentation to give you an overview of the topic.
Activity 6.1	Restriction enzymes and gel electrophoresis	Yes (tutorial)	Yes	Yes	No	A simulation to explore gel electrophoresis.
Activity 6.2 CORE	Practical DNA gel electrophoresis	No	Yes	Yes	No	A practical on gel electrophoresis
Activity 6.3	DNA profiling summary	No	Yes	Yes	No	Complete the worksheet in this activity to refresh your memory about the use of restriction enzymes, PCR, gel electrophoresis, Southern blotting and DNA probes in DNA analysis.
Activity 6.4 CORE	DNA photocopying: the polymerase chain reaction	Yes (tutorial)	Yes	Yes	No	Visualise what is happening in the PCR reaction using this interactive tutorial.
Activity 6.5	Crime investigation	Yes (tutorial)	Yes	Yes	No	Explore the various methods used in forensic investigations in a role play.
Activity 6.6	Bacteria and viruses	No	Yes	Yes	No	Produce an animation brief for a new prokaryotes' section for the virtual cell.
Activity 6.7	Phagocytosis	Yes (tutorial)	Yes	Yes	No	The interactive tutorial lets you discover what is meant by phagocytosis.
Activity 6.8	The specific immune response	Yes (tutorial)	Yes	Yes	No	The interactive tutorial allows you to explore the specific immune response.
Activity 6.9	Tuberculosis	No	Yes	Yes	No	A comprehension exercise on TB.
Activity 6.10	Gram staining bacteria	No	Yes	Yes	Yes	Try out a staining technique for bacteria.
Activity 6.11	HIV worksheet	No	Yes	Yes	No	Complete this worksheet that looks at the structure of HIV in detail.

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Activity 6.12	Protein synthesis	Yes (tutorial)	Yes	Yes	No	Use the interactive tutorial to look in detail at protein synthesis.
Activity 6.13	DIY protein synthesis kit	No	Yes	Yes	Yes	A cut and stick activity to help you understand protein synthesis.
Activity 6.14	Preventing infection	No	Yes	Yes	No	Complete the summary diagram in this activity to show the mechanisms that prevent microbial entry.
Activity 6.15 CORE	Which antibiotic is most effective?	No	Yes	Yes	Yes	Compare the effectiveness of different antibiotics in this practical.
Activity 6.16	Classifying antibiotics	No	Yes	Yes	No	Test your understanding of bactericidal and bacteriostatic antibiotics using this activity.
Activity 6.17	TB and macrophages	No	Yes	Yes	No	Use this activity to link some of the ideas covered throughout the topic.
Activity 6.18	Check your notes	No	Yes	No	No	Use this activity to check your notes for revision.
Topic test		Yes (test)	No	No	No	Interactive end-of-topic test.
Topic test		No	Yes	Yes	No	Exam style written end-of-topic test
Extension 6.1	Fingerprint analysis	No	Yes	Yes	Yes	Examine fingerprints in detail and find out if all of a person's fingers have the same pattern.
Extension 6.2	Identifying the Romanovs	No	Yes	Yes	No	Physical resemblance is used to identify skeletons of the Russian royal family.
Extension 6.3	Probiotic foods	No	Yes	Yes	No	Find out what probiotic foods are in this extension.