

# Activity Preparation for Chapter 9

Activity/Investigation	Advance Preparation	Time Required	Other Considerations
<i>Try This!</i> (page 163) (TR page xx)	<ul style="list-style-type: none"> <li>• 2 to 3 days before               <ul style="list-style-type: none"> <li>– Gather materials.</li> </ul> </li> <li>• 1 day before               <ul style="list-style-type: none"> <li>– Photocopy Recommended BLMs.</li> </ul> </li> <li>• Day of               <ul style="list-style-type: none"> <li>– Set out materials.</li> </ul> </li> </ul>	• 20–25 min	• Caution students not to apply masking tape directly to skin.
<i>Find Out: Lens Power</i> (page 165) (TR page xx)	<ul style="list-style-type: none"> <li>• 2 to 3 days before               <ul style="list-style-type: none"> <li>– Gather materials.</li> </ul> </li> <li>• Day of               <ul style="list-style-type: none"> <li>– Set out materials.</li> </ul> </li> </ul>	• 10–15 min	• Remind students to be cautious with lenses.
<i>Find Out: Magnification</i> (page 168) (TR page xx)	<ul style="list-style-type: none"> <li>• Day of               <ul style="list-style-type: none"> <li>– Set out microscopes.</li> </ul> </li> </ul>	• 10–15 min	
<i>Try This!</i> (page 169) (TR page xx)	<ul style="list-style-type: none"> <li>• 2 to 3 days before               <ul style="list-style-type: none"> <li>– Gather materials.</li> </ul> </li> <li>• Day of               <ul style="list-style-type: none"> <li>– Set out wire and pencils.</li> </ul> </li> </ul>	• 10 min	• Consider making the hand lens in advance.
<i>Find Out: Viewing Slides</i> (page 171) (TR page xx)	<ul style="list-style-type: none"> <li>• 2 to 3 days before               <ul style="list-style-type: none"> <li>– Gather materials.</li> </ul> </li> <li>• 1 day before               <ul style="list-style-type: none"> <li>– Photocopy <b>Assessment Master 11 Using Tools and Equipment Checklist</b>.</li> </ul> </li> <li>• Day of               <ul style="list-style-type: none"> <li>– Set out microscopes and prepared slides.</li> </ul> </li> </ul>	• 20–30 min	<ul style="list-style-type: none"> <li>• Reinforce the importance of using equipment correctly by distributing and reading together <b>Assessment Master 11 Using Tools and Equipment Checklist</b>.</li> <li>• Consider the ability of students to sketch when offering them slides to view.</li> </ul>
<i>Try This!</i> (page 172) (TR page xx)	<ul style="list-style-type: none"> <li>• Several days/weeks before               <ul style="list-style-type: none"> <li>– Book the computer lab.</li> </ul> </li> </ul>	• 5–10 min	
<i>Find Out: Preparing a Dry Mount Slide</i> (page 173) (TR page xx)	<ul style="list-style-type: none"> <li>• 2 to 3 days before               <ul style="list-style-type: none"> <li>– Gather materials.</li> </ul> </li> <li>• Day of               <ul style="list-style-type: none"> <li>– Set out microscopes and slides.</li> </ul> </li> </ul>	• 20–30 min	• You may wish to set up lab stations with a different sample at each station to avoid overcrowding.
<i>Test It! Who Did It?</i> (page 176) (TR page xx)	<ul style="list-style-type: none"> <li>• 2 to 3 days before               <ul style="list-style-type: none"> <li>– Collect different coloured human hair from friends, or visit a salon.</li> </ul> </li> <li>• 1 day before               <ul style="list-style-type: none"> <li>– Prepare hair samples for each group. Store samples in labelled resealable plastic bags.</li> </ul> </li> <li>• Day of               <ul style="list-style-type: none"> <li>– Set out materials.</li> </ul> </li> </ul>	• 45 min	• Prepare enough hair samples for each group to have one sample from each suspect. To make it easy to keep the hairs separate, place the hair from each suspect in a different resealable plastic bag. Label each bag as A, B, C, or Crime Scene.
<i>Find Out: Preparing Wet Mount Slides</i> (page 181) (TR page xx)	<ul style="list-style-type: none"> <li>• 2 to 3 days before               <ul style="list-style-type: none"> <li>– Gather materials.</li> </ul> </li> <li>• Day of               <ul style="list-style-type: none"> <li>– Set out materials.</li> </ul> </li> </ul>	• 15–20 min	• Make sure to use coloured newsprint instead of coloured ink from a printer.
<i>Find Out: Viewing Plant Cells</i> (page 182) (TR page xx)	<ul style="list-style-type: none"> <li>• 1 to 2 days before               <ul style="list-style-type: none"> <li>– Purchase onions; gather or purchase water plants.</li> </ul> </li> <li>• Day of               <ul style="list-style-type: none"> <li>– Set out the materials in stations.</li> </ul> </li> </ul>	• 25–30 min	<ul style="list-style-type: none"> <li>• You may wish to set up lab stations around the classroom with the materials for a different specimen at each station.</li> <li>• Discuss safety precautions.</li> </ul>
<i>Find Out: Viewing Unicellular Animals</i> (page 186) (TR page xx)	<ul style="list-style-type: none"> <li>• 2 weeks in advance               <ul style="list-style-type: none"> <li>– Order amoebas and euglenas for delivery.</li> </ul> </li> <li>• 2 to 3 days before               <ul style="list-style-type: none"> <li>– Gather materials. Photocopy <b>Assessment Master 9 Safety Checklist</b> (optional).</li> </ul> </li> <li>• Day of               <ul style="list-style-type: none"> <li>– Set out materials.</li> </ul> </li> </ul>	• 25–30 min	• Consider using a quieting solution (e.g., methyl cellulose) to slow down movement for easier viewing. Alternatively, project the slides on a TV for everyone to see.

# Materials Needed for Chapter 9

Activity/Investigation	Apparatus	Materials	Blackline Masters
<i>Try This!</i> (page 163) (TR page xx)	<ul style="list-style-type: none"> <li>shoes with laces (1 pair per group)</li> <li>blindfold (1 per group)</li> <li>ear plugs (1 per group)</li> <li>heavy gloves (1 pair per group)</li> <li>tongue depressors (1 per group)</li> <li>stopwatch or timer that counts in seconds (1 per group)</li> </ul>	<ul style="list-style-type: none"> <li>masking tape</li> </ul>	<b>Recommended</b> BLM 9–1 What Is It Like to Be a Robot? Assessment Master 1 Co-operative Group Work Checklist Assessment Master 2 Co-operative Group Work Rubric
<i>Find Out: Lens Power</i> (page 165) (TR page xx)	<ul style="list-style-type: none"> <li>magnifying glasses (at least 2 per group)</li> </ul>	<ul style="list-style-type: none"> <li>objects to view (e.g., writing samples, pens, erasers, rocks, leaves, flowers, insects)</li> <li>lens paper</li> </ul>	
<i>Find Out: Magnification</i> (page 168) (TR page xx)	<ul style="list-style-type: none"> <li>microscope (1 per group)</li> <li>calculators (optional)</li> </ul>		
<i>Try This!</i> (page 169) (TR page xx)	<ul style="list-style-type: none"> <li>piece of fine wire (1 per student)</li> <li>pencil (1 per student)</li> </ul>	<ul style="list-style-type: none"> <li>water</li> <li>cup (1 per student)</li> <li>newspaper (1 piece per student)</li> </ul>	
<i>Find Out: Viewing Slides</i> (page 171) (TR page xx)	<ul style="list-style-type: none"> <li>microscope (1 per student/group)</li> <li>prepared slides of insect parts (e.g., wings, eyes, legs)</li> </ul>	<ul style="list-style-type: none"> <li>lens paper</li> </ul>	<b>Recommended</b> Assessment Master 11 Using Tools and Equipment Checklist Assessment Master 12 Using Tools and Equipment Rubric
<i>Try This!</i> (page 172) (TR page xx)	<ul style="list-style-type: none"> <li>computers</li> </ul>		
<i>Find Out: Preparing a Dry Mount Slide</i> (page 173) (TR page xx)	<ul style="list-style-type: none"> <li>piece of Plexiglas™ (optional)</li> <li>microscope (1 per student or group)</li> <li>slides (2 per student or group)</li> </ul>	<ul style="list-style-type: none"> <li>samples (e.g., eyelashes, hair, sawdust, dryer lint, sugar/salt, fabric)</li> </ul>	
<i>Test It! Who Did It?</i> (page 176) (TR page xx)	<ul style="list-style-type: none"> <li>microscope (1 per group)</li> <li>slides (4 per group)</li> <li>tweezers (1 per group)</li> </ul>	<ul style="list-style-type: none"> <li>human hair samples (1 set per group)</li> <li>resealable plastic bags</li> </ul>	
<i>Find Out: Preparing Wet Mount Slides</i> (page 181) (TR page xx)	<ul style="list-style-type: none"> <li>piece of Plexiglas™</li> <li>overhead transparency</li> <li>turkey baster</li> <li>tweezers (1 per student)</li> <li>slide (1 per student)</li> <li>medicine dropper (1 per student)</li> <li>cover slip (1 per student)</li> <li>microscope (1 per student)</li> </ul>	<ul style="list-style-type: none"> <li>black marker</li> <li>sample of coloured newsprint</li> <li>water</li> </ul>	
<i>Find Out: Viewing Plant Cells</i> (page 182) (TR page xx)	<ul style="list-style-type: none"> <li>slides (2 per student)</li> <li>tweezers (1 per student)</li> <li>cover slips (2 per student)</li> <li>microscope (1 per student)</li> <li>medicine dropper (1 per student)</li> </ul>	<ul style="list-style-type: none"> <li>leaf from a water plant such as elodea, hornwort, or cabomba</li> <li>water</li> <li>onion skin</li> <li>iodine solution</li> <li>lens paper</li> </ul>	<b>Recommended</b> Assessment Master 8 Scientific Communication Rubric <b>Optional</b> Assessment Master 7 Scientific Communication Checklist
<i>Find Out: Viewing Unicellular Animals</i> (page 186) (TR page xx)	<ul style="list-style-type: none"> <li>medicine droppers (1 each for amoeba and euglena container; 1 for salt water)</li> <li>slides (2 per student)</li> <li>cover slips (2 per student)</li> <li>microscope (1 per student)</li> </ul>	<ul style="list-style-type: none"> <li>amoebas</li> <li>salt water</li> <li>euglenas</li> </ul>	<b>Recommended</b> Assessment Master 10 Safety Rubric <b>Optional</b> Assessment Master 9 Safety Checklist