

# Evidence Under the Lens

Use microscope observations and technology records to support a scientific claim.

**S5L3.a** "Gather evidence by utilizing technology tools to support a claim that plants and animals are comprised of cells too small to be seen without magnification."

NAME \_\_\_\_\_ DATE \_\_\_\_\_

## 1 READ AND MARK \_\_\_\_\_ Read it twice

**YOUR JOB** Underline each observation Leah made with a microscope, and circle each word or phrase that names a technology tool or magnification. Your marks will show the evidence used to support the claim.

### Leah Looks Closer

- ① Leah wanted evidence for a claim: plants are made of cells that are too small to see without magnification. She peeled a thin layer from an onion and placed it on a slide with a drop of water. Through a classroom microscope, a technology tool, she saw many small, boxlike spaces arranged in rows. Without the microscope, the layer looked like one smooth, pale piece.
- ② Next, Leah tested an animal sample. She gently rubbed the inside of her cheek with a cotton swab, mixed the sample with a stain, and viewed it on a slide. At low power, the cells were hard to see. When she increased the microscope's magnification, she observed separate, rounded cells with darker centers. The swab sample looked like a clear smear to her unaided eye.
- ③ Leah also used a tablet to take photographs through the microscope and saved labels for each sample. The images showed cell boundaries in the onion sample and separate cell shapes in the cheek sample. Her observations support the claim because both a plant and an animal sample showed cells only when magnification was used. To make her evidence clear, Leah recorded the tool and magnification for each observation.

**2 ANSWER WITH EVIDENCE** \_\_\_\_\_ Use the passage

**1** What claim was Leah investigating about plants?

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**2** What did Leah observe in the onion sample with the microscope, and what did it look like without the microscope?

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**3** Name the two technology tools Leah used. How did each tool help her gather or record evidence?

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**4** How do Leah's onion and cheek observations support the claim that plants and animals are made of cells?

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**3 YOUR TURN** \_\_\_\_\_ Your own words

Choose one plant sample and one animal sample you could examine. In 4 sentences, write a claim and an evidence plan that names a technology tool, explains what you would compare before and after magnification, and states what observation would support your claim.

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**PART 1 • READ AND MARK**

Underline each observation Leah made with a microscope, and circle each word or phrase that names a technology tool or magnification. Your marks will show the evidence used to support the claim. Accept any marking that follows this job and points at the right text.

**PART 2 • ANSWERS**

| # | QUESTION                                                                                                         | ANSWER                                                                                                                                  |
|---|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1 | What claim was Leah investigating about plants?                                                                  | <b>Plants are made of cells that are too small to see without magnification.</b>                                                        |
| 2 | What did Leah observe in the onion sample with the microscope, and what did it look like without the microscope? | <b>With the microscope, she saw many small, boxlike spaces in rows. Without it, the onion layer looked like one smooth, pale piece.</b> |
| 3 | Name the two technology tools Leah used. How did each tool help her gather or record evidence?                   | <b>She used a microscope to see magnified cells and a tablet to take and save labeled photographs of the samples.</b>                   |
| 4 | How do Leah's onion and cheek observations support the claim that plants and animals are made of cells?          | <b>The onion plant sample and the cheek animal sample both showed separate cells when viewed with magnification.</b>                    |

**PART 3 • YOUR TURN (SAMPLE ANSWER)**

Claim: Both a leaf peel and a prepared fish-skin slide are made of cells too small to see without magnification. I would first observe each sample with my unaided eyes and record what I can see. Then I would use a microscope to view and photograph both samples at higher magnification. Seeing many separate cells only through the microscope would support my claim.

Accept equivalent evidence-based answers that connect a plant sample and an animal sample to observations made using magnification. For the open task, students should include a testable claim, a technology tool, an unaided-versus-magnified comparison, and a supporting observation.