

Animals Unit Read Me

The Animals Unit is a tool kit, not a script.

While the *Animals Unit* Teachers' Guide may *look* like a script with lots of activities to do one after another, it is actually designed to be more like a user's manual for a set of tools. You can decide which tools are right for your students and your goals. This document alerts you to choices to make before each lesson.

Making Your Choices

Here is a brief summary of choices for teaching *Animals*. See the Teacher's Guides for more in depth discussions of your choices.

Lesson 1

All students should complete Lesson 1.

Lesson 2: Choose how to use repeating activities.

Activities 2.1, 2.2, and 2.3 are *exactly the same* as the equivalent activities in the *Plants* and *Decomposers* units. These are important and foundational activities, but students may not need to repeat them. Within Activity 2.1, the Cells: The Building Blocks Reading is optional.

Activity 2.4 is animal-specific, so we recommend teaching it.

Lesson 3

All students should complete Lesson 3.

Lesson 4: Choose how to use repeating Activity 4.1 and scaffolds in 4.2.

The molecular modeling part of Activity 4.1 is *exactly the same* as the molecular modeling for cellular respiration in the *Plants* and *Decomposers* units. Consider skipping the molecular modeling parts of the activity if you have already done them in another unit.

There are a set of scaffolding tools you can choose to use with your students in Activity 4.2, These tools include:

- The Explanation Tool, which gives the students both more structured and less-structured ways to construct explanations that answer the Three Questions
- The 4.2 Explaining How Cows Move and Function: Cellular Respiration PPT
- The Three Questions Explanation Checklist, which students can use to evaluate their own explanations or other examples
- Example explanations that students can analyze and discuss
- A reading (4.2 How do Animals get the Energy They Need to Move? Reading), and a graphic organizer (Matter and Energy in Animals Graphic Organizer)

You may find that you use more of these scaffolds early on and gradually use fewer over time depending on your students' needs. Use your professional judgement about the best choice for your students.

Lesson 5: Choose whether to use Activity 5.2 and scaffolds in 5.3 and 5.4.

The molecular modeling part of Activity 5.2 is *exactly the same* as the molecular modeling for biosynthesis in the *Plants* and *Decomposers* units. Additionally, it is a 2-turtle activity which means it involves a higher level of complexity. Consider skipping the activity if you have already

taught it in another unit or if it is too advanced for your class.

In Activities 5.3 and 5.4, you may choose from similar scaffolding tools listed for Activity 4.2.

Lesson 6: Choose how students will share their work in Activity 6.1 and which option students will complete in Activity 6.2.

Activity 6.1 engages students in reading about three different animals and explaining how they grow, move, and function. You probably don't want every student to do a worksheet on all three animals, so there are several ways that students could become "experts" on one animal, then compare what they have learned: a jigsaw activity, working in groups to make posters, etc.

For Activity 6.2, students can compare flames and animal (6.2a) or develop a summary explanation that applies to all animals (6.2b). Both provide students with a review of the unit concepts in preparation for the posttest, so you should select one of the versions based on if you have previously taught Systems and Scale and your students' needs.

- For Activity 6.2a, students will compare what they know about flames from the Systems and Scale Unit to what they have learned about animals in the Animals Unit.
- For Activity 6.2b, students will work with partners or groups to complete the provided worksheet, make a poster, or make a PowerPoint presentation.

Key to text colors:

Black Text Activities for All Students



Orange Text 2-Turtle Activities



Blue Text *Repeated or Optional Activities (Omit if students have already completed and/or are proficient)*

Lesson 1	Use this opportunity to learn more about what your students already know and think they know about how animals grow, move, and function.	
		1.1 Animals Unit Pretest
		1.2 Expressing Ideas about Animals
Lesson 2	Consider your knowledge of your students and learning goals. Decide whether to teach the Repeating Activities in this lesson, modify them, or skip them.	
		<i>2.1 Zooming into Plants, Animals, and Decomposers</i>
		<i>2.2 Molecules Cells Are Made of</i>
		<i>2.3 Molecules in Cells Quiz</i>
		2.4 Questions about Animals
Lesson 3	Use this lesson to gather evidence about mealworms and set a purpose with students' questions for Lessons 4 and 5.	
		Activity 3.1 Predictions about Mealworms Eating
		Activity 3.2 Observing Mealworms Eating
		Activity 3.3 Evidence-Based Arguments about Mealworms Eating
Lesson 4	Consider your knowledge of your students and learning goals. Decide whether to teach the Repeating Activity in this lesson, modify it, or skip it.	
		<i>4.1 Molecular Models for Cows Moving and Functioning</i>
		4.2 Explaining Cellular Respiration

Lesson 5	Consider your knowledge of your students and learning goals. Decide whether to teach the Repeating Activity in this lesson, modify it, or skip it.	
		5.1 Tracing Cows Growing
		<i>5.2 Molecular Models for Cows Growing</i> 
		5.3 Explaining Digestion
		5.4 Explaining Biosynthesis
Lesson 6	Consider your knowledge of your students and learning goals. Decide how students will share their work in the activities and which version of 6.2 you will teach.	
	6.1 Explaining Other Examples of Animals Growing, Moving, and Functioning	
	6.2a Comparing Animals and Flames OR 6.2b Functions of All Animals	
	6.3 Animals Posttest	