



Dear Homeschool Friend,

Thank you for ordering *BookShark's Science B Instructor's Guide*.

Unfortunately, the book *Pasteur's Fight Against Microbes* has recently gone out of print. We are replacing this title with *Louis Pasteur and Pasteurization*.

Enclosed, you will find a new schedule and Activity Sheets to use in your Science B Guide. Please replace Week 9 in your Instructor's Guide with the enclosed pages.

If you have any questions or concerns regarding this product update, please feel free to contact us. You can reach us at (303) 797-2954, 9:00 am to 4:00 pm MST Monday through Thursday and 9:00 am to 1:00 pm on Friday, or email us anytime at [main@BookShark.com](mailto:main@BookShark.com).

Thank you for making BookShark part of your homeschool day.

Sincerely,

The BookShark Team

Enclosure: Replacement schedule and Activity Sheets  
for *BookShark Science B, Week 9*.




1SBU Curriculum Update (2024)





# Science B

## Week 9 Schedule

Date:	Day 1	Day 2	Day 3	Day 4	Day 5
<b>Louis Pasteur and Pasteurization</b>	pp. 4–17 	pp. 18–29			
<b>The Usborne Children's Encyclopedia</b>			pp. 58–59		
<b>Activity Sheet Questions</b>	#1–4	#5–7	#8–10		
<b>Optional: Do Together</b>	Pasteurization	Germs!	Animal Survey		
<b>BookShark Science B Experiments Book</b>				#9 How do Smells Spread?	
<b>Supplies</b>	<p><b>We provide (1SK):</b> (no materials provided)  <b>Paper Packet:</b> How Do Smells Spread? Design Planning Sheet #9  <b>You provide:</b> 1 orange, 2 teaspoons ground cinnamon, cutting board and knife (with adult supervision), stopwatch, coffee beans or other pungent smell, pot with lid, stove, water, pencil, building materials: cardboard, construction paper, tape, markers, popsicle sticks, paper towel tubes, cotton balls, kitchen tools, heat-safe cups, etc., a partner (optional)</p>				
<b>Shopping/Planning List</b>	<p><b>For next week:</b> scissors, 1/4 cup sunflower seeds, cereal, or trail mix, 1/2 cup gummy fish or bears, spoon, 1 small bowl, 2 small plates, jar (pint or quart-sized), water, small jar, several small objects of the same type: marbles, pom-poms, small building bricks, grapes, etc., dry rice or other grain in a medium-sized (salad) bowl, cardboard, construction paper</p>				
Other Notes					

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 Special Note to Mom or Dad



# Notes

## Week 9

### Day 1

#### **Louis Pasteur and Pasteurization** | pp. 4–17

**Note:** Before you discuss with your students the idea that Louis Pasteur discovered microbes when he assisted Mr. Bigo to make alcohol from beet juice, you may want to prepare to have a conversation with your students about alcohol. While many things are made through a fermentation process, it is likely that the beet juice was being turned into an alcoholic beverage for adults.

Help your students locate France on a world map.

On pp. 10–11 we see Pasteur taking his time to dive deep into studying books and careful experiments. He knows it takes time to make discoveries. This is a helpful insight into the scientific method, which should avoid jumping to conclusions or deciding a scientific matter too quickly without enough information or experimentation. As the book demonstrates, Pasteur was careful and methodical in his research and analysis. He also possessed a certain amount of healthy inquisitiveness—curiosity in wanting to know how and why things work the way they do—that made him a great scientist. Similarly, as you work on experiments with your children, encourage their intellectual curiosity about how and why things work the way they do.

#### **Activity Sheet Questions** | #1–4

#### **Optional: Do Together** | Pasteurization

To reinforce what your children have learned thus far about Louis Pasteur, feel free to search the Internet for additional Pasteur-related videos that your children might enjoy.

As you read about Pasteur with them this week, make note of what questions they have and what most interests them about this famous scientist. Use these areas of interest to guide your efforts to find additional interesting facts about Pasteur. Have fun and enjoy your time together.

### Day 2

#### **Louis Pasteur and Pasteurization** | pp. 18–29

#### **Activity Sheet Questions** | #5–7

#### **Optional: Do Together** | Germs!

As you wrap up your children's studies of Louis Pasteur, take some time today to discuss germs with them. What are germs? And why are they bad? What harm can they cause? Can they benefit us in any way?

Talk with your children about the many ways in which harmful germs can be passed from one person to the next. Discuss with them what this means practically. How can they use this information to stay healthy? What things can they do to prevent the spread of germs?

Take some time to demonstrate for them the proper way to wash their hands. Talk about when and how often they should wash their hands. If you use antibacterial hand washes in your home, show your children how to use these substances to help kill any germs they may have picked up. Remind them of the consequences of getting sick and help them understand how staying clean improves their chances of staying healthy.

### Day 3

#### **The Usborne Children's Encyclopedia** | pp. 58–59

The book presents a broad and simple classification scheme for animals featuring six categories: mammals, birds, reptiles, amphibians, creepy-crawlies, and water life. You may also wish to explain the difference between vertebrates and invertebrates to introduce the concepts and terms. Vertebrates, of course, have a backbone or spinal column, while invertebrates don't. As far as specific kingdom classification names and such, don't worry about that at this stage in your children's science education. As they grow into more advanced science levels, these concepts will come up.

#### **Activity Sheet Questions** | #8–10

**Optional: Do Together** | Animal Survey

Your children learned this week that there are literally millions of different animals in the world. How many can they find where you live? Pick an area (for example, the backyard or the street you live on) and head out on a wildlife survey with your children. Help them find as many animals as they can. Take along a notepad and pencil and help them make their list. Before they begin, have them guess how many animals they're going to find. Are there fish nearby? What about birds? How many different types of birds can they identify? What about reptiles, amphibians, or other creepy-crawlies? Are there any deer nearby? Or squirrels? Chipmunks? Alligators? Camels? How many animals did they find? How close was their initial guess?

Day 4

**BookShark Science B Experiments Book** | #9

How do Smells Spread? ■

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Week 9 Activity Sheet

*Louis Pasteur and Pasteurization*

- What was the problem with Monsieur Bigo's sugarbeet juice? (p. 8)  
*(some of it was turning into sour slime instead of alcohol)*
- Pasteur studied the sour juice problem by... (pp. 10–12)  
(Put an X by all that apply.)
 

<input checked="" type="checkbox"/> thinking about it	<input type="checkbox"/> watching TV
<input type="checkbox"/> calling a friend	<input checked="" type="checkbox"/> observing what was happening
- Circle True or False for each statement about Pasteur's discoveries. (pp. 12–15)
 

Yeast are alive.	True	False
Yeast turns into black rods.	True	False
Some microorganisms live in the air.	True	False
- Circle which environment led to the most germs growing. (p. 16)
 

		
Warm and Moist	Hot and Dry	Cold

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Science B | Week 9 | Student Activity Sheet 25

Week 9 Activity Sheet

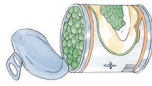
5. What new scientific theory gave pasteurization a new purpose? (p. 24)

- Theory of relativity
- Germ theory of disease
- Cell theory



6. Put Pasteur's process in order using numbers 1-4. (pp. 20-21)

- (4) Serve wine with no harmful microorganisms.
- (2) Heat the wine for 30 minutes.
- (3) Cool down the wine in cold spring water.
- (1) Heat the wine to 145 degrees.



7. List three things besides milk that are often pasteurized. (p. 29)

(answers will vary. Possible: apple cider, juices, water, canned goods)

The Usborne Children's Encyclopedia

8. Use an **R** to label true statements for reptiles. Use an **A** to label true statements for amphibians. Use a **B** if the statement is true for both. (pp. 58-59)

- (R) I have dry skin.
- (A) My skin is moist.
- (B) I lay eggs.

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Week 9 Activity Sheet

9. What kinds of animals have you seen around you? Try to think of one animal you have seen from each of the types listed in your book and write the name of it here. (pp. 58-59)

(Answers given are possible responses.)

- Mammal: (cat) Amphibian: (frog)
- Bird: (robin) Creepy-Crawly: (ants)
- Reptile: (lizard) Water Life: (goldfish)

10. Use the words in the box to complete the following. (pp. 58-59)

reptiles      mammals      insects      birds



- 1) (Birds) are the only animals that have feathers. All have wings, but not all can fly.
- 2) Almost all (mammals) have hair or fur and feed their babies milk.
- 3) All (insects) have six legs and most have wings.
- 4) (reptiles) have dry scaly skin and live in the warmer parts of the world.

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## Week 9 Activity Sheet

### Louis Pasteur and Pasteurization

1. What was the problem with Monsieur Bigo's sugarbeet juice? (p. 8)

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2. Pasteur studied the sour juice problem by... (pp. 10–12)

(Put an X by all that apply.)

thinking about it

watching TV

calling a friend

observing what was happening



3. Circle True or False for each statement about Pasteur's discoveries. (pp. 12–15)

Yeast are alive.

**True**

**False**

Yeast turns into black rods.

**True**

**False**

Some microorganisms live in the air.

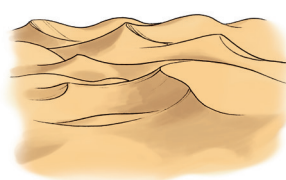
**True**

**False**

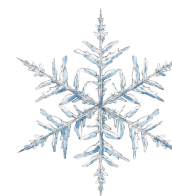
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Warm and Moist



Hot and Dry

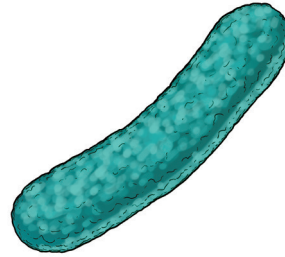


Cold

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### *The Usborne Children's Encyclopedia*

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- \_\_\_\_\_ I have dry skin.                      \_\_\_\_\_ I lay eggs.
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Amphibian: \_\_\_\_\_

Bird: \_\_\_\_\_

Creepy-Crawly: \_\_\_\_\_

Reptile: \_\_\_\_\_

Water Life: \_\_\_\_\_

10. Use the words in the box to complete the following. (pp. 58–59)

reptiles

mammals

insects

birds



- 1) \_\_\_\_\_ are the only animals that have feathers. All have wings, but not all can fly.
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