



# IronBeekeeper 4H Beekeeping Workbook and Record Book

On completion of this workbook, make an appointment to meet with your club's adult leader to discuss the results of this project. Those who successfully complete this workbook will be awarded certification as an *Iron Beekeeper*.



Name: \_\_\_\_\_

Age: \_\_\_\_ Years in 4-H \_\_\_\_ Years in Club \_\_\_\_

Club Name: Iron County 4-H Beekeeping Club

Club Leader: Blaine Nay (435-590-7569)

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Adapted for Utah: October 2014 by Blaine Nay

A PDF copy of this workbook is available at <http://tinyurl.com/qxfhnav>.



## Why complete a record book?

A record book is not intended to be a chore. Instead, it is a guide to help you to learn. Here are some important reasons why 4-H expects you to complete a 4-H record book for your project.

Keeping a 4-H record book will help you:

- Learn how to organize yourself
- Learn how to set reasonable goals for yourself
- Appreciate what you've learned this year from the goals you reached
- Recognize what things you learned in your 4-H project
- Explain what you've learned
- Keep track of costs of your project
- Gather information needed to apply for awards and scholarships
- Complete applications and resumes for jobs and college
- Meet requirements to participate in some county, state, or national 4-H events
- Meet requirements for certification as an *Iron Beekeeper*

## Member in good standing requirements

In general, all 4-H members are expected to meet the following standards each year. These are the minimum requirements. Your club may have additional requirements.

- Attend at least 70 percent of regular club meetings and/or activities.
- Complete a 4-H project (eg maintain at least one honey bee colony) which is your own work with minimal assistance from parents.
- Give a club or county 4-H public presentation.
- Complete a project record book (like this one).

## Club Calendar and Syllabus

- This workbook is designed to reinforce club activities planned over the Iron County 4-H Beekeeping Club's annual calendar-syllabus (<http://tinyurl.com/kj7bw3u>).

## Suggested Beekeeping Texts Available as Free PDF Downloads

- *Beekeeping Basics* by MAAREC (<http://tinyurl.com/4mz5d99>)
- *Basic Beekeeping Manual* by Pam Gregory (<http://tinyurl.com/mo3ex6l>)
- *Advanced Beekeeping Manual* By Pam Gregory (<http://tinyurl.com/laergu4>)
- *4-K Basic Beekeeping* by Purdue University (<http://tinyurl.com/msuvrqm>)
- *4-H Advanced Beekeeping* by Purdue University (<http://tinyurl.com/ncn9tvr>)
- *4-H Basic Beekeeping* by Malcolm Sanford (<http://tinyurl.com/p7n36ec>)
- *4-H Advanced Beekeeping* by Malcolm Sanford (<http://tinyurl.com/pny2dbf>)
- *New Jersey 4-H Beekeeping Manual* (<http://tinyurl.com/786xsro>)
- *Beginning Beekeeping for Kentuckians* by Bessin & Townsend (<http://tinyurl.com/obzhuou>)

- **Starting Out - My goals for the 4-H year (October through the following September)**

The beginning of the 4-H year is a good time to begin thinking about what you'd like to do or learn in 4-H during the upcoming months. List some of your goals for the year and what plan you have to accomplish your goals.

Talk to your leader and parents, then decide what goals are realistic to finish this year.

My goals for this year	What I need to do to reach this goal
1.	
2.	
3.	
<i>Example: I will learn how to give a public presentation</i>	<i>Attend county public presentation workshop. Have my leader and parents help me pick a topic. Practice my presentation. Give the presentation at a club meeting</i>

**Signatures for goal setting**

I will work toward the above goals I have set for myself for the upcoming 4-H year to the best of my ability.

Member signature \_\_\_\_\_ Date \_\_\_\_\_

I will support my son's/daughter's goals for the upcoming 4-H year.

Parent's signature \_\_\_\_\_ Date \_\_\_\_\_

I will help support this member's goals for the upcoming 4-H year.

Club leader signature \_\_\_\_\_ Date \_\_\_\_\_

**Basic beekeeping knowledge**

A honey bee is an insect because:

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_

Name the three castes in a honey bee colony, approximate number of each, and what they are responsible for.

1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

Why do people keep bees?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

The diet of a honey bee is:

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

Name the parts of your hive.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_
- 7. \_\_\_\_\_

What basic steps should you follow to prevent an unexpected swarm?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What is the brood? Where is it located?

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How many days does it take to develop a honey bee from egg to adult?

Queen \_\_\_\_\_ Worker \_\_\_\_\_ Drone \_\_\_\_\_

What are the stages of development of the bee from egg to adult?

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Describe the queen, and tell how her body shape, wing size, and stinger are important.

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What is a drone and what does it do?

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What are the duties of the worker bee?

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Why are Africanized Bees bad? Why are Africanized Bees good?

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Who discovered the "bee space"? \_\_\_\_\_ When? \_\_\_\_\_

Explain how the frames are built to maintain the "bee space."

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What is burr comb? Why is it made?

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Name three different things that can be found in the cells of honey comb.

- 1.
- 2.
- 3.

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Give two reasons why is it necessary to have your hive elevated off the ground.

- 2.
- 2.

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Name three animals that might attack a hive, what would happen if they do, and what you can do about it.

- 1.
- 2.
- 3.

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Name three bugs or parasites that might attack your hive and would happen if they do. How would you cure or prevent each problem?

- 1.
- 2.
- 3.

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Name three diseases that might infect your bee hive. What indicates they have been infested? How would you cure or prevent each problem?

1.

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2.

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3.

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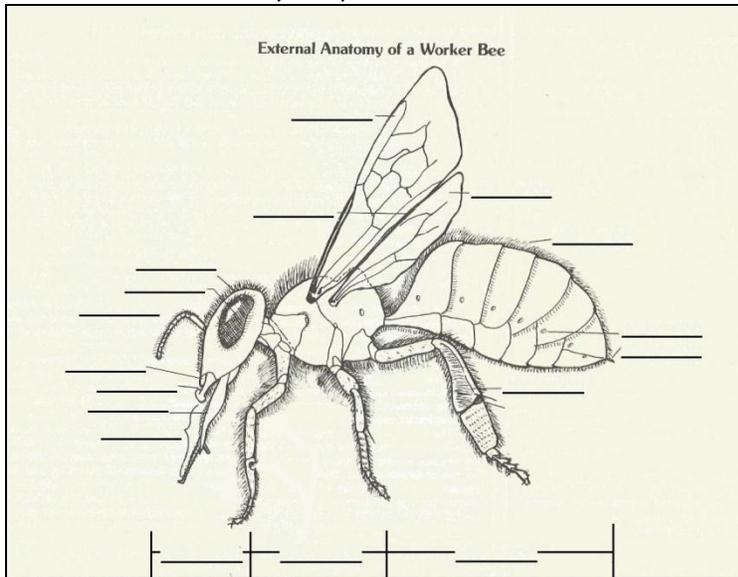
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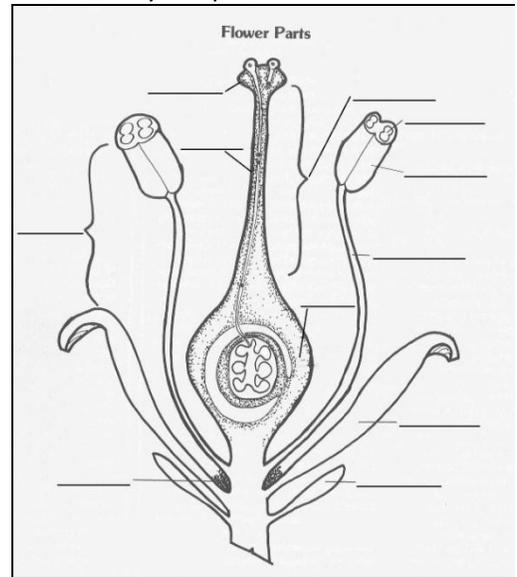
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### Anatomy

Identify the parts of this bee:



Identify the parts of this flower:









## Equipment Log

List all equipment purchased this year. Do not include cost of bees and supplies on this page. Do not total until the end of the year.

When deciding end-of-year value subtract 5 to 10% for normal wear & tear. Subtract more if visible wear or damage is present.

Frames, once drawn, may be valued at \$8 each for a deep and \$6 each for a medium or shallow. Each deep frame where healthy brood is clearly visible and present may be valued at \$10.

Item	Equipment Purchases			End-of-Year Inventory	
	Quantity	Date Acquired	Cost or Value	Quantity	Value
Outer Covers					
Inner Covers					
Honey Supers					
Super Frames					
Brood Chambers					
Brood frames					
Bottom Boards					
Feeders					
Hive Tools					
Smoker					
Extractor					
Total Cost or Value					

### Supplies Log

Include all perishables and consumables. Do not include cost of bees or equipment. Do not total until the end of the year.

Item	Supplies Purchases			End-of-Year Inventory	
	Amount	Date Acquired	Cost or Value	Amount	Value
Sugar					
Pollen Patties					
Pollen Substitute					
Medications					
Jars					
Foundation					
Honey Harvested (Value = \$7 per lb)					
Beeswax Harvested (Value = \$5 per lb of cleaned wax)					
<b>Total Cost or Value</b>					

## End of Year Financial Summary

Before starting this page, check that all other financial pages are complete. This summary will show the loss or profit of your beekeeping operation for this year.

Live bees are valued at their current purchase price, if the hive is healthy. However, deduct \$10 from the value of the bees every following year to account for the queen getting older and eventually needing replacement.

### Credits

Total Value of (Live) Bees at Year's End	\$ _____	
Total Value of Equipment	\$ _____	
Total Value of Supplies on Hand	\$ _____	
Income from honey and wax (consumed or sold)	\$ _____	
Total		\$ _____

### Debits

Total Cost of (Live) Bees (purchased this year)	\$ _____	
Total Cost of Equipment (purchased this year)	\$ _____	
Total Cost of Supplies (purchased this year)	\$ _____	
Total Cost this year	\$ _____	
Total Profit or Loss This Year (Credits Total minus Debits Total)		\$ _____

Keep this page for next year's records.

### Looking Back - What I learned this year

This section is to be completed at the end of the 4-H year. It is meant to help you look back on all that you learned during the past year.

#### My goals completed

Look back on the goals you set for yourself at the beginning of the year. How well did you meet those goals? If you added new goals during the year, add them and explain them below.

My goals for this year	How well did I meet each goal?
1.	
2.	
3.	
<i>Example: I will learn how to give a public presentation</i>	<i>I attended county public presentation workshop. I had to change my topic three times. I should have practiced my presentation more before I gave it at the club meeting. I will start planning and practicing earlier next year.</i>

The three most important things I learned

Think of what was the most important for you. Then, list the three most important things you learned in this project during the past year. For example, "I learned how to groom my cat, I learned that working with senior citizens is challenging but also fun, or I learned to speak in front of my club without being afraid."

1.	
2.	
3.	

Thinking Ahead - My goals for next year

Now is a good time to begin thinking about what you'd like to do or learn in 4-H next year. List some of your goals for next year and what plan you have to accomplish your goals.

1.	
2.	
3.	

