



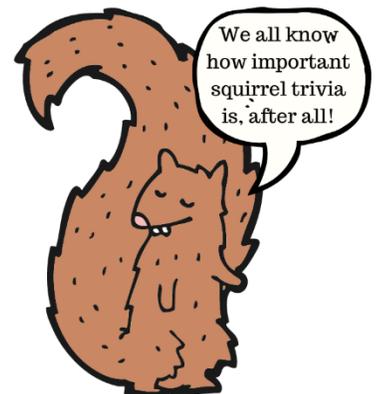
## Finally Fall: The Hair-raising Truth about Squirrels

*There are many stories about these cute, furry animals we see scurrying around in late fall, looking for places to bury their nuts. Although they appear almost everywhere in forests, parks, cities, even busy roads, what do we really know about squirrels?*



Take this simple true/false test to judge how much you really know or don't know, then check your answers on the next page.

1. The squirrel's favorite nut is the acorn.
2. Rabbits and squirrels are rodents.
3. Squirrels nest in trees.
4. In winter, squirrels find only about 50% of the nuts they bury.
5. Squirrels often steal nuts from other squirrels.
6. Squirrels cause great damage to the environment.
7. Squirrels are most active at night.
8. Squirrels can communicate danger to other squirrels with their tails.
9. Squirrels are often seen chewing on things to wear down their incisors (front teeth).
10. Squirrels make excellent pets.
11. Flying Squirrels really do fly.
12. November 21<sup>st</sup> is Squirrel Appreciation Day.





## Squirrelly Answers

1. **True.** The squirrel's favorite nut is the acorn, but it is a not picky eater (omnivore). In addition to other nuts, they will eat fruits, vegetables, and sometimes insects.
2. **False.** Squirrels are members of small Rodentia called Sciuridae. Rabbits have an extra pair of incisors (front teeth) and belong to the Lagomorpha family of mammals.
3. **False.** Squirrels nest underground in dens though they spend most of their time in trees and on the ground.
4. **False.** Squirrels usually are able to find close to 95% of the nuts they bury. They use their memory and sense of smell to find their nuts.
5. **True.** Squirrels often observe and steal buried nuts from other squirrels. A squirrel, if he feels he is being observed, often fakes burying his nuts before finally placing his treasure in, he hopes, is a secure place.
6. **False.** Squirrels are beneficial to the environment. Scattering their nuts encourages growth of forests and other ground cover.
7. **False.** Squirrels are not nocturnal (active at night). They are crepuscular. They are most active during daytime hours and spend the evenings in their den.
8. **True.** Squirrels can communicate danger to other squirrels by flicking their tails in addition to high-pitched squeals.
9. **True.** Squirrels are often seen gnawing on many things including tree trunks (can cause damage to the tree) in order to file down their incisors that otherwise would continue to grow.
10. **False.** Squirrels would make terrible pets. They are extremely active and can bite if feel they are in danger.
11. **False.** Flying squirrels have flaps of skin between their front and back legs that enables them to 'glide' from tree to tree.
12. **True!** So, let's celebrate the squirrel on this day.

Keep reading for more fun squirrel learning!



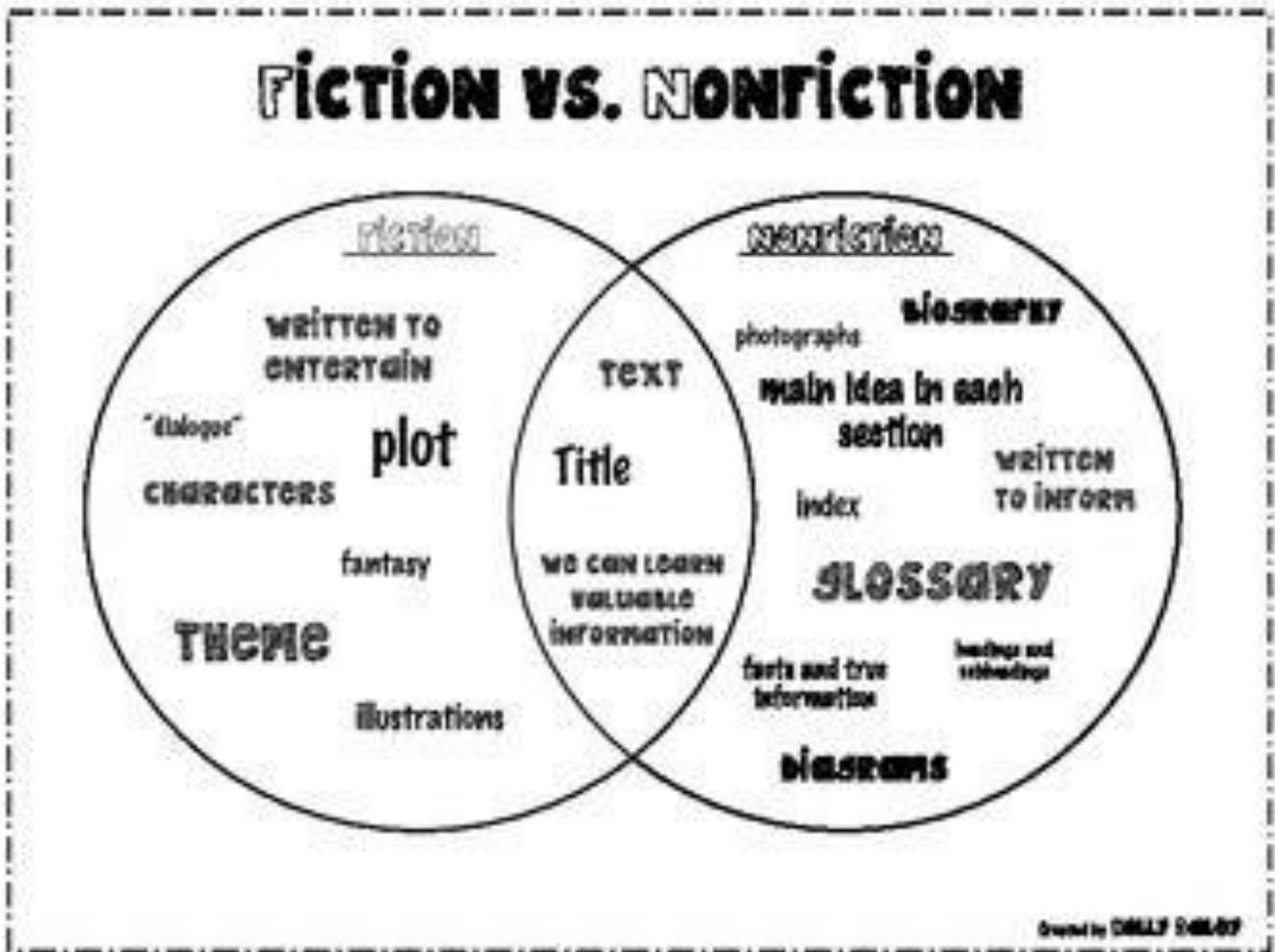
For more investigations about squirrels and ideas for home and classroom discussion, here are few suggestions.

### Language Arts Extensions

Comparing a non-fiction book to a fiction book on the same topic can provide a rich opportunity for readers to determine what is scientifically accurate. Using a Venn Diagram is a simple way that the elements of each source can also be analyzed. Try it with the literary recommendations on the next page!

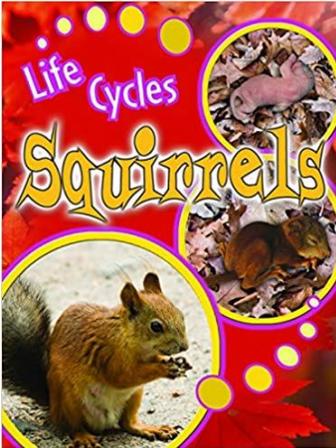
Guiding questions such as:

- Does the non-fiction book have a plot?
- Is there a glossary in the fiction source?
- Does each book have a title?

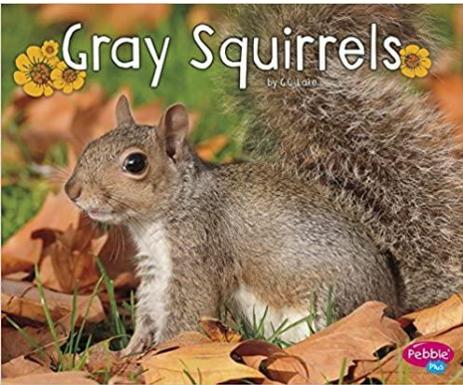
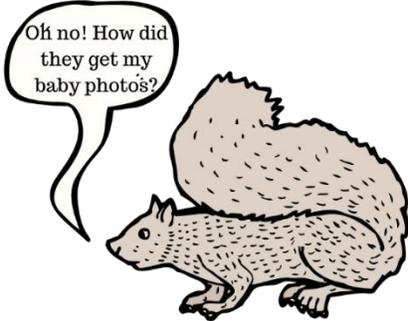




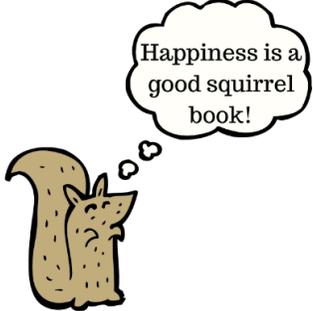
**Nonfiction Books**



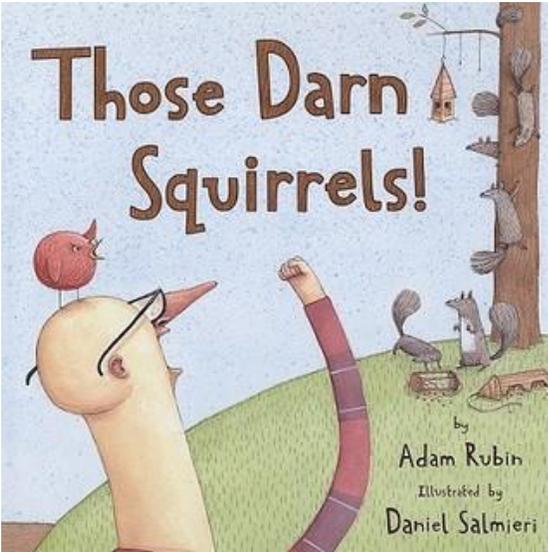
**Life Cycles: Squirrels**, informs the reader about just that! Photos include from birth to maturity.



Included in this nonfiction selection, **Gray Squirrels** has a glossary of vocabulary words including predator, rodent, hollow, fur, and more.



**A Fiction Book**



In **Those Darn Squirrels** by Adam Rubin, the protagonist, Old Man Fookwire, has a plan to build birdfeeders and fill them with yummy seeds and berries. That way, the wild birds he loves so much will stick around for the winter instead of flying south. But there are other hungry creatures in the forest, and they have plans, too. See how the squirrels get into the bird feeders with their skills and clever problem-solving abilities. All ages will enjoy watching the statement of “Those darn squirrels!” that echoes throughout this fiction book eventually turn to joy.

To hear the story read aloud click [here](#).



After reading, use these guiding questions and the photos to do a fun activity.

- Old Man Fookwire’s beloved birds still leave his property. What are some reasons that birds migrate? Do other animals migrate in a similar fashion? Why don’t all birds and animals migrate?
- What are some of the designs for bird feeders that you can see in the book? Even with these models, do the squirrels still get the bird seed? Illustrate one.
- Many companies market bird feeders that are supposed to deter squirrels. It’s interesting to see their names: Squirrel Buster, Squirrel Be Gone, No Squirrel, The Squirrel Proof Feeder.
- Why do you think these designs are considered squirrel resistant? How do they work to deter squirrels from eating the seed?



With what you have learned about squirrels, design a bird feeder that would keep squirrels away from the seed. To help organize your thinking, use the design plan template on the next page.

Remember, **NEVER** use anything that will harm an animal! this includes food that would interrupt their digestive system or materials where they may hurt themselves!



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

**Objective:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**Materials:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Procedure:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Illustration with labeled parts:**



## Squirrel-Friendly Feeders

How about if you WANT to leave some seeds for the squirrels?

Using the planning document, create a feeder that would feed the squirrels. Can you design one that would feed the squirrels and deter the birds? What food would you use in your squirrel feeder?



Source: Plow and Hearth

**Using this lesson in a classroom has a wide range of content applications including science, Language Arts, measurement in mathematics and engineering/STEM. The lesson can be adapted to the NJDOE middle school unit on Forces and Motion:** What does Newton's third law of motion have to do with the bird feeders?

*Students also apply an engineering practice and concept to solve a problem caused when objects collide. The crosscutting concepts of system and system models and stability and change provide a framework for understanding the disciplinary core ideas. Students demonstrate proficiency in asking questions, planning and carrying out investigations, designing solutions, engaging in argument from evidence, developing and using models, and constructing explanations and designing solutions.*

### **In the Grade 3 Unit 2: Force and Motion may also apply**

*In this unit of study, students determine the effects of balanced and unbalanced forces on the motion of an object. The crosscutting concepts of patterns and cause and effect are called out as organizing concepts for these disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in planning and carrying out investigations.*

### **Science and Engineering Practices NJDOE**

*Engineering questions clarify problems to determine criteria for successful solutions and identify constraints to solve problems about the designed world. Both scientists and engineers also ask questions to clarify the ideas of others. Planning and Carrying Out Investigations Scientists and engineers plan and carry out investigations in the field or laboratory, working collaboratively as well as individually. Their investigations are systematic and require clarifying what counts as data and identifying variables or parameters. Engineering investigations identify the effectiveness, efficiency, and durability of designs under different conditions. Analyzing and Interpreting Data.*

**For more ideas, contact Kate Reilly, Manager of Education, Duke Farms at [kreilly@dukefarms.org](mailto:kreilly@dukefarms.org).**