



# Caching In

## Introduction

Many birds, including chickadees, crows and jays, will hide food to retrieve and eat at a later time. This behavior is called caching and helps birds survive when the weather or food sources are low. Some birds' brains — actually the hippocampus, the spatial memory part of the brain — grow larger in the fall to help them remember where they've stored food.

Birds who cache can store hundreds of seeds a day! They place seeds in different locations and can remember where each cache is, even a month later. Smart birds! Kids can try their hand at caching and test their own spatial memory.

## Supplies

- Small items that are decomposable, e.g., coffee beans, dried beans, popcorn kernels, etc.

## Get kids thinking ...

**ASK KIDS:** Do you have a hard time keeping track of your belongings? How do you know where to find where you've put something? Do you use landmarks to remember where you put it? Do you have a map inside your head of the location?

## Let's get started!

**STEP 1:** Head to an outdoor space where you can spend a few hours or easily come back that same day. Explain caching behavior in birds and then give each child five small items that are decomposable, e.g., coffee beans, peanuts, other foodstuffs.





## Start with a Book: Bird Buddies Toolkit

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**STEP 2:** Tell kids to “cache” or hide the items by covering them with leaves, grass, or other natural materials. (Make sure they don’t dig any holes.) Ask them to make sure to remember where they hid their items because they will need to find them later.

**STEP 3:** After everything has been cached, you can either stay outdoors and do some reading aloud and birding, or head back and plan to return to the same spot later in the day. You want some time to pass before asking kids to come back and find their caches. Before you have them start their search, discuss the **Clark’s Nutcracker** (shown below).



Remind kids that earlier in the day, they hid bits of food. In doing that they were acting like the birds who do the same thing in the wild — but birds do it on a grander scale. For example, **Clark’s Nutcrackers bury pine seeds in as many as 5,000 caches!** They are able to retrieve many of them, but some seeds are found by others and some they don’t find. The seeds they don’t find may grow into pine trees and keep the forests green.





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**ASK KIDS:** Why do you think we hid those items earlier? What does this activity have to do with bird intelligence? Do you think having a good memory has something to do with how much intelligence you have? The fact that the bird can find most of the 5,000 caches it hides seems to show that the bird has a tremendous intelligence to remember where these seeds are. Talk about some reasons birds might have better spatial memory than people. Do you use your memory a lot? What do you use it for?

The Clark's Nutcracker is clever in other ways too. It knows that other birds may be watching it as it hides seeds. If there's another bird watching, the Nutcracker will pretend to hide the seeds, but it then moves to another location to create the actual cache! That is clearly a sign of intelligence. Being aware of what others are thinking and acting on that awareness is a high level of intelligence.

**ASK KIDS:** Have you ever done anything similar to this strategy of Clark's Nutcracker?

### **STEP 4: Now have kids search for their caches.**

Give everyone plenty of time to look and remind them to only retrieve what they hid. Once the search is over, check in to see if they found all of their hidden items. **ASK:** How did you remember where you left your cache? For items not recovered, discuss what might have happened to them.

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## More memory activities

Some people try to remember things by repeating them over and over. Test kids' memory with this activity. You start with "*I went to the woods and I saw a blue jay.*" Then the next person needs to repeat what you said and add their own bird sighting: "*I went to the woods and I saw a blue jay and a sparrow.*" The game follows around the room with each player recalling the complete list of birds seen in the woods and adding a new one.

### **TEST THE SMARTS OF YOUR BACKYARD JAYS (AUDUBON)**

[audubon.org/news/test-smarts-your-backyard-jays-fun-memory-game](http://audubon.org/news/test-smarts-your-backyard-jays-fun-memory-game)

