

The West Coast Bird House



ADST Project

Bird Houses are a great ADST project for students in grades 6.

The first thing that you will need to do as a teacher, is get trained in using your school Maker Cart. Once you are Safe and Certified you will need to do an inventory on your ADST Toolbox kits (there are 12 for your school) and your Maker Cart. Each cart and your 12 kits have master lists of what should be in them. If you are not sure or if you will need additional resources, please contact your District Careers Coordinator and they will be able to help you, Dawn.Anderson@sd71.bc.ca or Steve.Claassen@sd71.bc.ca

Jr. ADST (Applied Design Skills and Technology)

ADST courses have been designed so that students can gain hands-on learning experiences and skills through design and creation. The Curricular Competencies within these courses ask students to understand context, define what they need to do, ideate with others and evaluate, prototype, test their ideas, make and share.

With this, these booklets have been designed to support new to experienced users and there are many ways to approach each step.

Feel free to challenge your students to come up with new ways to complete a step in the booklet. Some of the steps are challenging and should be completed with a partner.

Please share if you have a good approach to a step and we can tweak the booklet for all.

For this project you will need the following items:



1. Hammer
2. F Clamp
3. Measuring Tape
4. Safety Glasses for each student
5. Ear Plugs (if wanted)
6. Hand Drill
7. 3/8 Doweling
8. 3/8" drill bit
9. Wood Glue
10. Hand Saw
11. 1 ½ Inch Nails
12. Speed Square
13. 4' piece of 1" x 6"
14. 1 ½" Spade bit

Once you have everything you are ready to start your project. Don't forget to put on your safety glasses.

STEP 1: The first thing that you will need to do is cut all the pieces up for your bird house. For this, students will need to work in partners and share a tool tote. They will need to pull out their bench hook; although, cutting might be better off the end of a table clamped down),



clamp, measuring tape, speed square, and handsaw. Safety glasses on.

Students will measure out all their pieces:

1. 2 x 5 1/2" (bottom and front)
2. 2 x 4 11/16" (sides)
3. 1 x 6 1/2" (top)
4. 1 x 9 1/2" (back)

They will then clamp down their wood and start cutting. Students should cut one piece and then alternate with their toolbox partner. The wood is wide so it will take a while to cut. Students can sand while they wait for their next turn.

STEP 2: Once all the wood is cut, students should slide all their pieces together into their bird house shape so they can visually see where each piece will go. The teacher may want to check.

STEP 3: Students will now work in partners and nail their first pieces together. Students will need their two side pieces and their front piece. They will place them down on their desks like this picture. NOTE: The grain of the wood all needs to go in the same direction (cut ends touching).

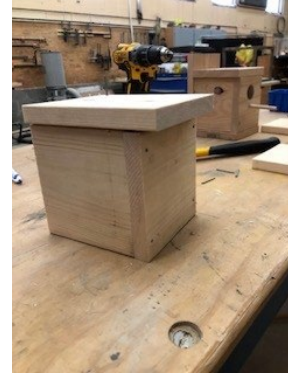


The students' partner will then hold their wood for them while they pre-drill nail holes and then nail their nails in, 4 x 1 1/2" nails.

For the front, students will pre-drill 4 nail holes, one in each corner, 1" in from the end. The partner will hold the entire time, so the holes stay lined up. The person nailing, remember, hold the nail, do three taps, remove your hand and then nail in the nail the rest of the way.



STEP 4: Next we will nail on the top. Set your sides and front down the way they will properly/once complete. Place the top on so that the open back and the top line up. The over hang should be over the front of the bird house. In your partners, pre-drill, and nail on the top. Students should use 4 x 1 ½" nails. 1" up from the bottom and 1" in from where the front and top meet.



STEP 5:

Students will now nail on the bottom. Flip the bird house on it's top. Line up the bottom, it should line up perfectly. Students will pre-drill 4 nail holes, these will need to be further in so they don't hit the other nails already nailed in. 1 ½" in from the ends while their partner holds their piece in place.

STEP 6: The last piece to go one in the back. Make sure it lines up with the bottom so that there is extra wood on the top. This extra wood is what you use to connect the bird house to a tree or post. Line the bottom up, pre-drill 4 x 1 ½" holes. 1 ½" down and up from where the body of the house connects to the back board. When holding, you will want to hold the top lip over the edge of a table, so it sits flat.



STEP 7: Students will now need to drill their entrance hole. Using a 1" or 1 ½" spade bit, have the teacher help you drill your entrance hole. The students will hold, and the teacher will drill. The students will need to mark a dot 1 ½" down from the under part of the overhang. Place the point of the spade bit on the mark and drill the hole.



STEP 8: Students will now measure down 3" from the under part of the front overhang. They will use the 3/8 spade bit to drill a small hole, NOT the entire way through the wood, ½- ¾ of the way through if able.

STEP 9: Students will now cut a 1 ½" piece of dowel. They will then put some wood glue on the end of this and place it into the 3/8 drilled hole. This will be a small sitting space for the birds.



The bird house should now be complete. These could be nailed or screwed to a shop, deck or fence post.

Congratulations 😊



Resources

Curriculum

Subject	Big Idea
English Language Art	Exploring stories and other texts helps us understand ourselves and make connections to others and the world.
Mathematics	Properties of objects and shapes can be described, measured, and compared using volume, area, perimeter, and angles.
ADST	Complex tasks require the acquisition of additional skills.

Websites

- You can select your Province and area (it will show an American Map-ignore) but it will tell you information about local birds, where to place the bird house based on wind direction etc.
<https://nestwatch.org/>

Videos

- Things to consider when trying to attract birds, water, food, area in yard, etc. (13min) The first part of the video is great for showing yard considerations, the second half gives info on bird types and houses of interest. Your house is 5 ½" x 5 ½" with a 1 ¾" entrance hole. As well, your house is easy to clean when birds are gone as they like a clean home.
<https://www.youtube.com/watch?v=3AA4xpYxe-U>
- This video is great for getting you to think about where to put your house, how high, how far from another bird house etc. <https://www.youtube.com/watch?v=k3W1yL2OLt4> (4 min)

The 15 Most Common Garden Birds

<http://www.vancouverbirdweek.ca/common-garden-birds/>

Trees, shrubs and flowers attract birds to gardens and a bird bath and bird feeder will make your yard even more popular. Here are some of the common birds you might encounter. To learn more about the birds in Greater Vancouver, check out the [Bird Week events](#) happening May 2-9, 2020.



BLACK-CAPPED CHICKADEE

You will probably hear 'chick-a-dee-dee-dee' before you see a Black-capped Chickadee. In spring, you might also hear its 'fee-bee' song. One of the most common and perennial favourite garden birds, the chickadee was the City Bird for Vancouver in 2015. The Black-capped Chickadee frequents gardens and woodlands throughout the year in Vancouver. Insects, seeds and nuts make up its food. Chickadees nest in holes in trees they excavate and will use nest boxes.



HOUSE SPARROW

Listen for on going chirps in urban areas and you will likely see House Sparrows. It is an introduced species that has taken to gardens and city streets of Vancouver. House sparrows feed mostly on the ground around the garden and streets. The male house sparrow has a grey crown, black bib, white cheeks and chestnut nape. House sparrows are year round residents in Vancouver. Nests are built in cavities in building and nest boxes.



EUROPEAN STARLING

Squeals, chirps and mimicked bird calls coming from a tree will usually reveal a European Starling. It is an introduced species that lives year round in Vancouver. Flocks will sometimes descend into gardens to feed at bird feeders and on insects on the ground. Starlings eat insects and fruits. Nests are built in cavities and spaces in trees, buildings, and street lights. Starlings form large flocks in winter that gather at roosts under bridges and wood lots.



NORTHWESTERN CROW

The 'caw' of the crow rings out in every neighbourhood. The Northwestern Crow is a native resident bird found throughout the city. Nests are made from twigs and built in trees. Food includes insects, fruit, and scraps. Following breeding, most crows from Vancouver fly to an evening roost near Still Creek in Burnaby.



AMERICAN ROBIN

From a treetop the 'cheer-up cheerily cheer-up' song of the American Robin rings out every spring morning in gardens and parks in Vancouver. The red breast of singing makes the American robin one of the most conspicuous birds in the city. Robins build nests of grass and mud in shrubs and trees. Their food is mostly insects, earthworms and fruit.



SONG SPARROW

Song sparrows live up to their name with a loud regular song in spring and summer. Shrubs and forest edges are its haunt and it readily visits bird feeders. Nests are small compact grass lined cups hidden from sight in shrubs. Song sparrows are common to gardens and parks.



NORTHERN FLICKER

The flicker gets its name from its 'flicka-flicka-flicka' call. In spring, it drums on roof flashing, hard wood or any other surface that resonates loudly. Northern Flickers are woodpeckers identified by their orange under wing and tail. They are widespread year-round denizens of the city where they inhabit gardens, suburban streets and forests. Flickers eat ants that they hunt along the ground and insect larvae found in snags. Their nest is built in holes in trees that they excavate using their bills.



VIOLET-GREEN SWALLOW

The Violet-green Swallow is one of the first birds to arrive in spring and first to depart in summer. The swallow is mostly found in residential areas where it perches on telephone wires or flies overhead. Nests are built in cavities in buildings and in nest boxes placed in open areas high above the ground. Swallows eat flying insects.



HOUSE FINCH

Melodious is probably a word to describe the song of the House Finch. It is a year round and widespread resident in Vancouver gardens and parks. The male is either red or orange on the head and breast while the female is streaked with brown feathers. Nests are small cups of twigs and grasses built in shrubs. Finches are mostly seed eaters and take readily to bird feeders in gardens.



BUSHTIT

The Bushtit frequents gardens and forest edges throughout the year in Vancouver. They build a distinctive nest of moss, lichen and spider webs suspended from the ends of branches. After breeding, flocks of bushtits roam neighbourhoods in search of insect larvae and bird feeders, especially those with suet feeders.



ANNA'S HUMMINGBIRD

The Anna's Hummingbird is a recent and increasingly common backyard bird in Vancouver. Nests are built on the ends of branches between mid winter until late summer. Hummingbirds take readily to hummingbird feeders and flowers such as Oregon grape, fuschia, and crocossmia.



STELLER'S JAY

The harsh 'jay jay jay' call of the Steller's Jay is heard year-round in Vancouver especially in autumn and winter when jays are most numerous. The blue back, wings and sides and black head with a crest is unmistakable. Jays build twig nests hidden away in shrubs and trees. They eat insects and nuts, take other birds eggs, and readily come to feeders supplied with peanuts or sunflower seeds.



SPOTTED TOWHEE

The Spotted Towhee is a widespread and year-round resident in Vancouver. Towhees spend most of their time on the ground and in shrubs searching for insect prey and seeds. They are one of the most frequent visitors to bird feeders. Nests are concealed in shrubs low to the ground and difficult to find.



DOWNY WOODPECKER

The Downy woodpecker is our smallest woodpecker. It visits gardens and resides in forested areas throughout Vancouver. Downy woodpeckers use their stubby bills to excavate insect larvae for food and to build Nests in trees and stumps. They regularly visit gardens with suet bird feeders.



DARK-EYED JUNCO

Dark-eyed Juncos are present year round in Vancouver but are most abundant in fall and winter. Juncos are sparrow-sized birds with conspicuous white outer tail feathers that are visible when the birds fly. The diet is mostly seeds that they eat on the ground.