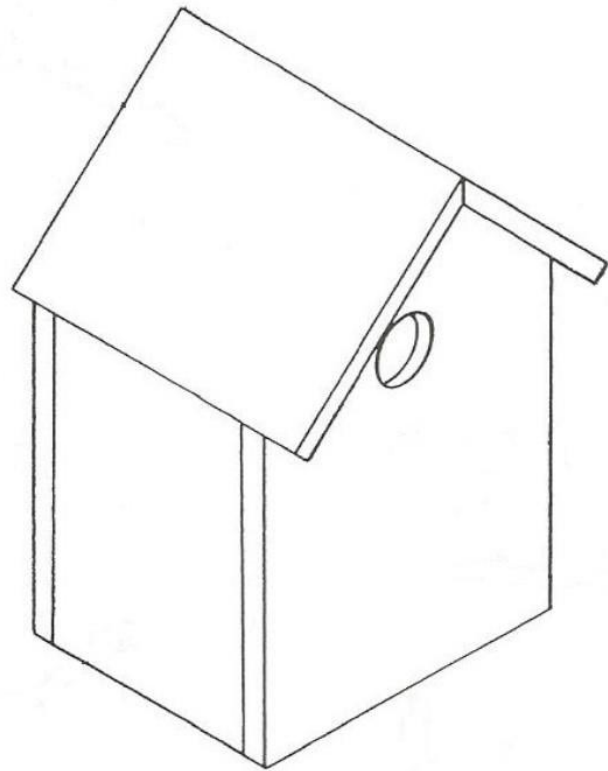


The Elementary Woodshop

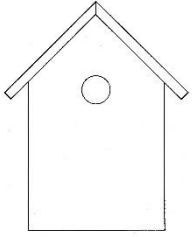
Applied Design, Skills and Technologies

Reference Guide for Teachers

BIRD HOUSE



Recommended Reading Prior to Beginning Workbook and Assembly



Bird House Reference Guide for Teachers

For a successful experience in your classroom it is recommended that you work through the accompanying Workbook and this Reference Guide prior to presenting the project to students.

As you work through the Workbook, it would be beneficial to assemble the woodwork project so you are better equipped to teach the assembly to your students. You may temporarily hold the wood pieces together using masking tape rather than glue, nails and screws which are required for permanent assembly with this woodwork project. The recommended drying time for wood glue is a minimum of 30 minutes.

A hammer and a #1 Robertson screwdriver are required for this project. It is recommended that students work together to build their bird houses; one holding the parts while the other uses the hammer or screwdriver. As wood may splinter it is advisable to handle wood with care and have tweezers available in case of slivers.



Bird House Reference Guide for Teachers

Section 1 Bird Habitat

Page 2 Word Search

BIRDS OF WESTERN CANADA WORD SEARCH

H	R	N	E	R	W	R	T	Q	O	P	B
U	F	X	R	O	C	U	H	W	P	U	U
M	I	I	B	W	D	W	R	P	H	R	T
M	N	B	E	I	O	P	U	Y	M	P	T
I	C	R	K	C	N	L	S	V	M	L	E
N	H	M	R	A	H	F	H	D	I	E	S
G	W	O	R	R	A	P	S	A	F	M	U
B	P	L	I	P	P	X	E	C	E	A	O
I	E	A	S	I	M	D	S	T	K	R	R
R	C	H	I	C	K	A	D	E	E	T	G
D	D	Y	S	J	E	K	A	L	L	I	Y
Y	A	J	R	E	L	L	E	T	S	N	S

Section 2 Design

Page 5

Optional Design Challenge Lesson Enhancement - to be undertaken only after assembly of Bird House (see page 8 of Teacher's Reference Guide).

Section 3 Math

Page 10

2. Triangle, Rectangle



Bird House Reference Guide for Teachers

Section 3 Math

Page 11

3. Angle A = **90°**
Angle B = **45°**
Angle C = **90°**

Page 12

6. **28**

Measuring

Page 13

1. **28 mm**

PART	NAME	LENGTH	WIDTH	THICKNESS
A	Roof	146 mm	120 mm	9 mm
B	Front	191 mm	125 mm	12 mm
C	Bottom	102 mm	102 mm	12 mm
D	Side	127 mm	102 mm	12 mm
E	Back	191 mm	125 mm	12 mm

Section 4 Materials Technology

Manufactured Boards

Page 14

2. Plywood: **layered, sandwiched, stacked together, striped**
Particle Board: **chunks of wood glued together, patchwork, compressed**
Fibre Board: **sawdust glued together, smooth, same texture**

***NOTE TO TEACHER** – *Distribute sheet good samples for class to examine.*



Bird House Reference Guide for Teachers

Section 4 Materials Technology

Manufactured Boards

Page 15

4. **Plywood**

Page 18

- 5. Plywood: **flooring in house**
- Particle Board: **roof or wall sheathing on house**
- Fibre Board: **countertops**

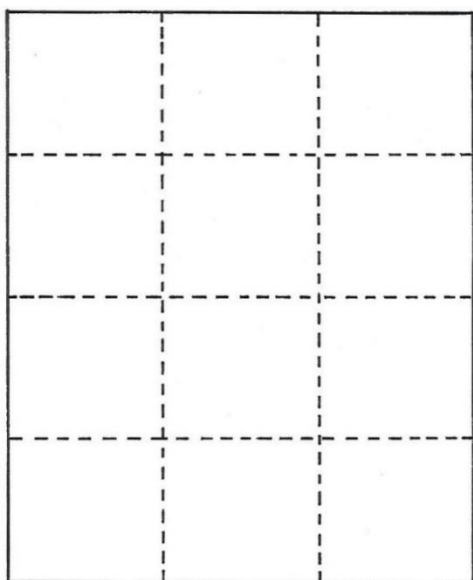
Section 5 Assembly

Page 20

If a hammer were to hit a nail incorrectly the nail may fly into or near the eyes. Dust and wood particles may also enter the eyes.

Page 34

Mark and cut sandpaper as in diagram to fit sanding blocks:



***NOTE TO TEACHER** – Distribute one piece of sandpaper to each student to examine.



Bird House Reference Guide for Teachers

Section 5 Assembly

Page 38

** **NOTE TO TEACHER** – Distribute one sanding block to each student. Have students wrap piece of sandpaper around bottom of block for sanding.*

Page 38

Butt Joint: joins bottom to sides and joins front and back to sides

Miter Joint: joins two roof pieces at centre

Section 6 Drawing and Drafting

Page 47

1. Use graph paper on page 46 in workbook to complete drawing exercise.

** **NOTE TO TEACHER** – Front and Side Elevations may also be drawn using computer assisted drafting program if it is available to your students.*

Section 7 Physics and Engineering

Page 54

1. **Gable Roof**

Page 57

3. **11**

Section 8 Entrepreneurship

Marketing

Page 59

Print Media, Web, Digital, TV, Radio



Bird House Reference Guide for Teachers

Section 8 Entrepreneurship

Branding

Page 60

Coca Cola, Levis, Nike, Ford, Apple, iPhone

Pricing

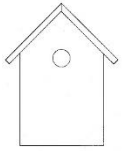
Page 61

A	\$	200
B	\$	800
C	\$	1,000
D	\$	10
E	\$	5
F	\$	15

Section 9 Trades

Page 68

Welding



Bird House Reference Guide for Teachers

Section 9 Trades

Page 69 Word Search

TRADES WORD SEARCH

E	C	T	X	E	R	V	K	C	C
C	I	S	B	H	O	Z	L	S	A
I	N	I	K	O	O	C	U	P	R
T	A	L	O	M	F	R	X	N	P
N	H	Y	J	E	E	E	S	W	E
E	C	T	L	P	R	B	K	K	N
R	E	S	N	I	A	M	A	R	T
P	M	R	I	D	Z	U	C	U	E
P	W	I	D	W	E	L	D	E	R
A	B	A	K	E	R	P	O	N	S
E	W	H	R	E	T	N	I	A	P

Page 70

* **NOTE TO TEACHER** – LINK to WorkBC website “Career Trek” for more detail on all trades: <http://www.careertrekbc.ca/episodes#itTitle=electrician>

This is an excellent website provided by the Province of BC. Students may access information about different trades.

Bird House Reference Guide for Teachers



Optional Lesson Enhancement

Design Challenge

- Referring to the bird house design lesson (Section 2 Page 5) have students build a prototype of their design using materials such as cardboard, wood, Styrofoam, recycled containers, etc.

Aboriginal Perspectives and Knowledge

- Section 5 Page 30-31 discusses traditional Aboriginal perspectives and knowledge of some joinery techniques. This may be an opportunity for your students to research traditional dwellings and the methods used to build them in your local area.

References

Stewart, H. (1984) *Cedar: Tree of Life to the Northwest Coast Indian*
Vancouver/Toronto: Douglas & McIntyre

Wild Bird Watching www.wild-bird-watching.com/House-Wren.html

National Geographic
<http://animals.nationalgeographic.com/animals/birding/house-wren/>

Province of BC WorkBC Career Trek <http://www.careertrekbc.ca/>

Industry Training Authority <http://www.itabc.ca/>

Province of BC Ministry of Education New Curriculum Building Student
Success <https://curriculum.gov.bc.ca/>

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