## Chapter 1: Aquatic Habitats See specific lessons for types and numbers of materials noted with an X.

	1:1—Design a	I:2—Food	1:3—Run For	I: <del>4</del> —Water	1:5—Habitat	I:6—From Frozen
	Habitat	Chain Tag	Your Life Cycle	Habitat Site Study	Hideout	to Fascinating
Basic Fishing Equipment		•	•			•
Bucket			2, ice cream-size	2		Clear gallon containers, I per group
First aid kit				×		
Insect repellent				×		
Pop can casters					×	
Sun protection				Sunscreen		
Ice Fishing Equipment						
Hand auger						X or chisel
Craft Supplies	•	•	•		•	•
Construction paper	X	X or cardstock				
Craft items	Pipe cleaners, feathers, felt, glitter, construction paper, modeling clay, and any other art materials you have available				Self-stick velcro or magnets	
Glue	X	X			Х	
Markers/crayons	X and whiteboard markers	Optional, permanent			×	
Newspapers/table covering				Tarps to sit on		
Paint	X (blue)					
Paintbrushes	X					
Paint trays	X					
Paper	Journal		Cardstock	×	Cardstock and regular paper, roll of butcher paper or newsprint	
String		Optional	Optional			
Hardware						
Dowels					3' dowels optional for fishing poles	
Nets				Dip nets		
Rake				X		
Rope		50-100'	500' and four 16' pieces			
Shovel				×		

11:1-2 Materials Master Matrix

#### Chapter 1: Aquatic Habitats

		12 5 1	12 B E	I:4—Water	LE LLIV	
	I:I—Design a Habitat	1:2—Food Chain Tag	1:3—Run For Your Life Cycle	Habitat Site Study	1:5—Habitat Hideout	1:6—From Frozen to Fascinating
Office Supplies		3	,	,		<u> </u>
Вох	I shoebox per student, or use box template		2 shoeboxes			
Clipboards	X			X	Х	Х
Lamination		Х	X		X or top- opening clip-on name badges	
Rubber bands						
Scissors	Х	X			Х	
Stapler	X					
Таре	Clear	Masking			Double sided	
Whiteboard	X					
Natural Materials						
Aquatic material						Bottom sediment
Plant material	Wooden sticks or twigs					
Rocks	Small					
Sand	Dry					
Water				Drinking water	Distilled, well, or tap water or melted snow	
Household Supplies						
Blue plastic wrap	X					
Clothes pins		X			Х	
Clothing				Waterproof shoes, rubber boots, or waders		
Cups		l per student plastic		Plastic		l per group paper
Glass jars				Optional		
Hat						
Lamp						Fluorescent grow lights (optional)
Large eyeglass frames						
Nylon knee-high stockings						X or mosquito netting, I per group
Pans				3 or more white trays with sides		I white tray with sides per group
Paper plates		Optional				
Paper towels/rags				X		

#### Chapter 1: Aquatic Habitats

	I:I—Design a Habitat	1:2—Food Chain Tag	1:3—Run For Your Life Cycle	1:4—Water Habitat Site Study	1:5—Habitat Hideout	1:6—From Frozen to Fascinating
Household Supplies (co		Gridin rug		1 140/440 0/00 004 27	1 20040	
Plastic bags		Optional				
Spoons				×		
Books, Multimedia, Cop	y Sheets, Photos,	etc.				
8.5" x 11" images					Minnesota	
6.5 X II IIIIages					fish	
Copy sheets (provided in lesson)	Field Trip to a Pond Narrative, I copy; Fish Illustrations for Dioramas; Template for a Diorama Box, optional	Aquatic Food Chain Sheet; Aquatic Food Chain Cards; Food Chain Identification Tags	Northern Pike Life Cycle Sheet and Northern Pike Migration Sheet, for projection or to hand out; Northern Pike Life Cycle Cards; King- fisher Name Tags; Playing Field Diagram, optional	Aquatic Insect Life Cycle Sheet and Water Habitat Site Study Check- off Sheet, I per student; Water Habitat Site Study Identification Sheets and Keys, I per group; Water Habitat Bingo Sheet (K-2 Option), I per student	Lake Habitat Sheet, River or Stream Habitat Sheet, and Fish Hab- itat Chart, I per student; Habitat Hideout Fish Identification Cards	Guide to What to Expect in the Mini-ponds, I per 2 students; Predictions and Summary Sheet, I per student; From Frozen to Fasci- nating Data Sheet, 12 per student
Internet access	Х					Х
Minnesota fish books	×			X, various pond life field guides		X pond books
Multimedia	Pond sounds recording			Camera and video on pond life, optional		
Water Habitat Site Study ID Sheets and Keys				×		
Miscellaneous Supplies						
Hula-hoops		2 or more			3	
Poker chips		500	100			
Noise maker		X	Х	X		
Traffic cones		Several, optional	6			
Scientific Tools			ī			
Dechlorinator						X
Disposable pipette						I per group
Globe						X
Magnifying lenses				×		I per group
Microscope						X
Thermometer						I per group
Tweezers				X		

11:1-4 Materials Master Matrix

## Chapter 2: Minnesota Fish See specific lessons for types and numbers of materials noted with an X.

Sense   Form & Families   Famil	, ,,		2.2 5:		1 0 4 11	2.5				2.0
Sense   Function   Families   for Fish ID   Diversity   Habitat   false   in vivincer   Bowl			2:2—Fins: Form &	2:3—Fish	2:4—Us- ing a Key	2:5— Diving Into	2:6—Adapt-			2:9— Fish
Sucket S-gallon S-gal		Sense		Families	for Fish ID			Tales	in Winter	
Separation	Basic Fishing Equipmer	nt					•	•		
Pony spools Craft Supplies Confetti Construction paper Construction pa	Bucket									
Craft Supplies Confetti	Pony spools	_ · •					Х			
Confetti	Craft Supplies						,			
Construction paper Craft items  Assorted buttons and keys  Assorted buttons and keys  X  Silue  X  Y  Hot glue gun  I per group  Markers/crayons  Markers/crayons  Markers/crayons  Assorted buttons and keys  X  X  X  X  X  White-board markers  Newspapers/table covering  Paint X tempra  Assorted buttons and keys  X  X  X, and colored pencils  X  White-board markers  Newspapers/table  Covering  X  Paint trays  X  Note-book  Paper  X  Note-book  Paper  X  Note-book  A  Drawing paper and butcher paper and butcher paper and unlined art paper  String  6.1 per group  6.1 per group  12" lengths of elastic string  Wilk crate or sturdy box  Nets  Small fish net  Cffice Supplies  Cffice Supplies  Cffice Supplies  Cffice Supplies  Cffice Supplies  Note-cards  X  X  X  X  X  X  X  X  X  X  X  X  X	Confetti						Х			
Craft items  Assorted buttons X Glue X X X X Ashard colored pencils  Newspapers/table covering Paint X X Paint trays X Note-book book X Note-book Bring Assorted buttons X X X X X X X White-board markers  Newspapers/table X Paint X tempra X Paint trays X Paper X Note-book Bring Assorted buttons X X White-board markers  X X X X X Paint trays X X Paper X Note-book Bring Assorted buttons X X White-board markers  X X X Paper Paper X Note-board markers  X X Paper X X Paper X Note-book X X X X X X X X X X X X X X X X X X	Construction paper									
Glue X X X X X X X X X X X X X X X X X X X	Craft items					buttons	×			
Hot glue gun	Fabric paint	Х								
Markers/crayons   White-board markers   X   X, and colored pencils   X   White-board markers   X   X   X   X   X   X   X   X   X	Glue			Х			Х			
Markers/crayons   board markers   X   A, and colored pencils   X   board markers   Newspapers/table   X   X	Hot glue gun									
Paint X tempra	Markers/crayons		board		×				×	
Paint trays X X X X X X X X X X X X X X X X X X X	Newspapers/table covering	×					×			
Paper X Note-book X Drawing paper and butcher paper and graph	Paint	X tempra					Х			
Paper X Note-book X paper and butcher paper and unlined art paper and graph paper and string	Paintbrushes	Х					Х			
Paper X Note-book X paper and butcher paper and unlined art paper and graph paper art paper art paper and graph paper art pape	Paint trays	Х					Х			
String group of elastic string	Paper	X			×		paper and butcher	book and unlined	paper and graph	
Milk crate or sturdy box  Nets  Small fish net  Office Supplies  Clipboards  Lamination  Note cards  Pencils  X  X  X  X  X  X  X  X  X  X  X  X  X	String		-				of elastic			
Sturdy box  Nets  Small fish net  Office Supplies  Clipboards  X  Lamination  Note cards  Pencils  X  X  X  X  X  X  X  X  X  X  X  X  X	Hardware									
Nets	Milk crate or sturdy box						Х			
Clipboards         X           Lamination         X           Note cards         I0 per group           Pencils         X         X         X         X         X           Rubber bands         X         X         X         X         X	Nets									
Lamination         X           Note cards         I0 per group           Pencils         X         X         X         X         X         X           Rubber bands         Scissors         X         X         X         X         X	Office Supplies									
Note cards	Clipboards			X						
	Lamination			X						
Rubber bands Scissors X X X X	Note cards									
Scissors X X X	Pencils		Х	Х	Х		Х	Х		Х
	Rubber bands									
Office Supplies (continued)	Scissors		Х	Х			Х			
·	Office Supplies (contin	nued)								

#### Chapter 2: Minnesota Fish

	2:1—Fish Sense	2:2—Fins: Form & Function	2:3—Fish Families	2:4—Us- ing a Key for Fish ID	2:5— Diving Into Diversity	2:6—Adapt- ed for Habitat	2:7—Fish Tales	2:8—Fish in Winter	2:9— Fish Bowl
Stapler						Х			
Таре		Duct tape I per group		l roll masking		×			×
Whiteboard		X						X	X
Natural Materials									
Plant material					Assortment of leaves		Talking stick		
Real fish	15-30 dead; live gold- fish in bowl or aquarium, optional	Aquarium with fish							
Rocks		Х							
Sand		Х							
Water		Pool, tub, small pond, optional							
Household Supplies									
Backpack						2			
Bowl						Small			
Clothes line	X								
Clothes pins	X								
Clothing	T-shirts					Colorful, striped shirt & drab shirt			
Common objects of various shapes		Х							
Earmuffs						Attach paper eyes			
Flashlight							X		
Food	Fish food, optional								
Glass jars		6-8 oz., I per group							
Hat						Large	Large		
Lamp							X		
Household Supplies (c	ontinued)								

11:1-6 Materials Master Matrix

#### Chapter 2: Minnesota Fish

Large eyeglass frames Paper plates Paper towels/rags Plastic bags Plastic bottles with	2:1—Fish Sense	2:2—Fins: Form & Function  I round with cap per student;	2:3—Fish Families	2:4—Using a Key for Fish ID	2:5— Diving Into Diversity	2:6—Adapted for Habitat  Lenses popped out	2:7—Fish Tales	2:8—Fish in Winter	2:9— Fish Bowl
Caps	~	one flat- sided per student							
Vegetable scrubber  Books, Multimedia, Co	X Dy Sheets P	hotos etc							
8.5" x 11" images  Books, Multimedia, Co	Fish Anatomy illustra- tion	Minne- sota fish illustra- tions	Minne- sota fish optional		Minnesota fish, op- tional				
books, Fiditiffedia, Co	py officers, i	10:03, etc. (	Contanued)						
Copy sheets (provided in lesson)	Fish Senses Sheets	Fish Fins Sheet; Fins: Form and Func- tion sheet, I per student; Fins: Form and Function Answer Sheet	Fish Family Cards; Fish Characteristics Sheet, and Fish Families Sheet, I per group; Fish Families Answer Sheet	Dichoto- mous Key Warm-up Sheet; Definitions of the Parts of a Fish Sheet; Caudal Fin Shapes Sheet; Mouth Positions Sheet; Minnesota Fishes Dichoto- mous Key; Fish Identifica- tion Cards; Fish Iden- tification Cards An- swer Sheet	Fish Classifica- tion Part I Sheet; Fish Classifica- tion Part 2 Sheet; Fish Identifica- tion Cards, I per group	Fish ID Cards from Lesson 2:5-Diving into Diver- sity; Fish Adaptations and Advan- tages Sheet; Future Fish of the Year 4000 Sheet, I per student; Fish Adaptation Sheet, I per group	Tall Tales Research Sheet, 3 per group; Review- ing a Tall Tale Sheet 2 per student	Playing Area Diagram, optional	Sample Ques- tion Cards

#### Chapter 2: Minnesota Fish

	2:1—Fish Sense	2:2—Fins: Form & Function	2:3—Fish Families	2:4—Us- ing a Key for Fish ID	2:5— Diving Into Diversity	2:6—Adapt- ed for Habitat	2:7—Fish Tales	2:8—Fish in Winter	2:9— Fish Bowl		
Books, Multimedia, Copy Sheets, Photos, etc. (continued)											
Minnesota fish books				Variety of fish ID books and keys, and one book of anything							
Multimedia		Video: Bigmouth or Big- mouth Forever									
Pictures		Illustra- tions of animal and plant parts	Vari- ous fish pictures from maga- zines								
Miscellaneous Supplies											
Bean bags						3					
Coin									Х		
Rubber fish	Optional										
Noise maker								X	Х		
Scientific Tools								,			
Funnels						Paper or plastic: 2					

11:1-8 Materials Master Matrix

## Chapter 3: Stewardship See specific lessons for types and numbers of materials noted with an X.

	3:1—The Incredible Journey	3:2—Func- tion of Aquatic Plants	3:3— Wonderful Watersheds	3:4—Would You Drink This Water?	3:5— The Lake Game	3:6—Macroin- vertebrate Mayhem	3:7— Mussel Mania
Basic Fishing Equipmen	t						
Bait					Rubber worms		
Bucket		×	X or sink access	One-gallon	Two buck- ets		
Maps					Of local lake and surrounding area		
Craft Supplies							
Craft items	Art foam, non-toxic ink pads						
Felt			l Light col- ored square per group				
Glue	Х	Х					
Hot glue gun	Х						
Markers/crayons	×	X or colored pencils		Permanent		Whiteboard or regular markers	
Newspapers/ table covering			Х				
Paint			X water color				
Paintbrushes			Х				
Paper	Notebook or paper for each student	II" x I7" poster board or larger & colored paper	Notebook		Crumpled paper, candy wrappers, toilet paper, napkins	Chart paper per graph pa- per	100 + tightly crumpled paper balls
Hardware							•
Dowels					One 3/4" diameter dowel with string at- tached and paper clip hook or magnet		
Liquid fertilizer		Х					
Rope							50-100 '
Spray bottle			At least 6				
Wood blocks	2" square						

#### Chapter 3: Stewardship

	3:1—The Incredible Journey	3:2—Func- tion of Aquatic Plants	3:3— Wonderful Watersheds	3:4—Would You Drink This Water?	3:5— The Lake Game	3:6—Macroin- vertebrate Mayhem	3:7— Mussel Mania
Office Supplies							
Вох	9 6" Card- board cubes		Plastic, foil roasting pans, or cardboard with plastic lining I per student		Clear plas- tic box		
Clipboards	X	Х					
Lamination					Contact paper		
Note cards					Х		
Pencils	X	Х	Х	Х		X	
Scissors		Х	Х		Х		
Таре	X	Х					Х
Whiteboard						X	
Natural Materials							
Aquatic material		Aquatic plants, pond/ lake/stream water, submerged pond plant, and algae				Aquatic insects	
Plant material			Leaves, grass clippings I tbs.				
Rocks			Various sizes, small enough to fit multiples in a shoe box				
Sand			I tbs.		Or dirt		
Household Supplies						,	
Cups		Plastic & paper		Paper or plastic, dixie cup size & I clear 2-c measuring cup	One clear plastic cup		
Foil			Aluminum, 3' sheets, 1 per group				
Household Supplies (co	ontinued)						

11:1-10 Materials Master Matrix

#### Chapter 3: Stewardship

	3:1—The Incredible Journey	3:2—Func- tion of Aquatic Plants	3:3— Wonderful Watersheds	3:4—Would You Drink This Water?	3:5— The Lake Game	3:6—Macroin- vertebrate Mayhem	3:7— Mussel Mania
Food		Fresh celery with leaves, salt	I Tbsp. vegetable oil; I Tbsp. sugar; 3 different brightly- colored powdered drink mixes and cocoa or iced tea powder, I Tbsp. each	Salt, ice tea & coffee creamer, onion extract	Molasses		
Food coloring			×	Green	Red and green		
Glass jars		Х					
Paper towels/rags			Х		Rags		
Pillow cases/burlap sacks						×	
Plastic bags			Small				
Plastic bottles with caps				6, small sized			
Small toys			Х				
Sponge			Cellulose, light colored, cut into I per 2 inch thick strips				
Spoons				Plastic spoons for mixing			
Books, Multimedia, Co	py Sheets, Photo	s, etc.					
8.5" x 11" images	Water Cycle	Emergent, submerged, and floating- leaf plants					
Copy sheets (provided in lesson)	Water Cycle Table; Incredible Journey Labels for Dice; Incredible Journey Station Sign; Pattern for a Cube	Nutrient Soup Report Sheet, I per student	Watershed Model Sheet	Would You Drink This Water? Data Sheet and Would You Drink This Water? Question Sheet, I per group	Roleplaying Cards; Discussion Cards	Macroinverte- brate Pollution Tolerance Level Chart; Macroin- vertebrate Iden- tification Tags; Macroinverte- brate Mayhem Data Table	"Zebra Mussels Crash on Missis- sippi River" Sheet; Plankton Sheet, I per student; Mussel Mania Play- ing Field Set-up (optional)

#### Chapter 3: Stewardship

	3:1—The Incredible Journey	3:2—Function of Aquatic Plants	3:3— Wonderful Watersheds	3:4—Would You Drink This Water?	3:5— The Lake Game	3:6—Macroin- vertebrate Mayhem	3:7— Mussel Mania
Handouts							Zebra Mussel ID Cards
Minnesota fish books						Fish and aquatic insect field guides	Field guide to fresh wa- ter mus- sels
Books, Multimedia, Cop	y Sheets, Photo	s, etc. (continue	ed)				
Multimedia		CD programs: Restore your Shore or Save our Shorelines					
Pictures		Wildlife & plant pic- tures			Loon and other wild-life		
Poster							Mussels of Minne- sota
Miscellaneous Supplies							
Blindfolds				2 per group			
hula-hoops							2
Shaker					Х		
Small fish					10 assorted small fish, as place hold- ers		
Noise maker	X						
Sponge fish					At least 3 different colored fish silhouettes		
Scientific Tools							
Disposable pipette				X			
Globe				X			
Mounts/replicas							Legally collected mussel shell
Prism							
Secchi disk					Х		

11:1-12 Materials Master Matrix

## Chapter 4: Fish Management See specific lessons for types and numbers of materials noted with an X.

	4:1—Fishing Regulations & Sportsmanship	4:2—Fish Surveys	4:3—Aquatic Plant Power	4:4—Town Meeting	4:5—Fisheries Management & You
Basic Fishing Equipmen	t				
Bucket			One-gallon buckets, I per group, clear plastic container about shoebox size		
Current fish regs.	X	X			
Ruler					12-inch, I per group
Craft Supplies					
Craft items			I/2-cup glass beads or ball bearings per group		
Markers/crayons				Whiteboard markers; crayons, I box per group	
Paper		4" wide post-it notes, I package per 2 students	Graph paper	Butcher paper: I sheet per group & blank paper	
Hardware					
Nets		Small aquarium nets			
Office Supplies					
Вох		Fish aquarium colored blue			
Pencils			X	Х	
Whiteboard				X	
Natural Materials					
Plant material			4-6 leafy houseplants that cover the small pans		
Rocks			I/2-gallon large gravel mixture, I per group		
Sand			I cup silt, mud, or very fine sand per group		
Water			2 gallons cool tap water		
Household Supplies					
Bowl		Fish bowl & plastic container I for every 2 students			
Calculator		I per 2 students			
Cups			2 cups per group		
Food		300 beans per 2 students, white and brown; I large box of fish crackers			

### Chapter 4: Fish Management

	4:1—Fishing Regulations & Sportsmanship	4:2—Fish Surveys	4:3—Aquatic Plant Power	4:4—Town Meeting	4:5—Fisheries Management & You
Household Supplies (co					
Hat	,	Baseball cap			
Lamp			2 with bulbs of same wattage		
Pans			2 8" x 8" dark pans		
Paper towels/rags			Х		
Plastic bags		Sandwich size, I per 2 students			
Spoons			Large spoon		
Books, Multimedia, Co	py Sheets, Photos, e	etc.			
8.5" x 11" images		Walleye			
Copy sheets (provided in lesson)	Sample Scavenger Hunt Questions; Angler Situation Cards I per group; Fishing Regulations Patrol Cards, I per student	Fish Survey Gear Cards; Lake MinnAqua Scenario and Tagging Survey Scenario; Fisheries Biologist Survey Training Sheet, and Lake Survey Data Sheet, I per student	The Next Generation Sheet; Be Cool Sheet, I per student	Concerned Citizen Group Roles Sheet; Concerned Citizen Group Duties Sheet, I per group; Lakeshore Property Sale Map	Fisheries Management & You Gameboard; Roleplaying Cards; Size Limit Fish Cutouts; Weigh Your Fish with a Ruler Chart, I per group
Minnesota fish books		One Fish, Two Fish, Red Fish, Blue Fish by Dr. Seuss			
Miscellaneous Supplies					
Die/dice					l die per game
Place holders					6 per game
Scientific Tools					
Mounts/replicas		I walleye mount			
Thermometer			2		

11:1-14 Materials Master Matrix

## Chapter 5: Fishing Equipment & Skills See specific lessons for types and numbers of materials noted with an X.

	5:1—Freshwater Rods & Reels	5:2—Casting a Closed- face Rod & Reel Combo	5:3—Pop Can Casting	5:4—Tackling Your Tackle Box	5:5—Flashy Fish Catchers	5:6—Fool Fish With Flies	5:7—Making Ice Fishing Jiggle Sticks
Basic Fishing Equipmen	nt						
35 mm film canister				X			
Adult helper	2 or more adult helpers or presenters with fishing and equipment experience	Ratio of 1:5	Ratio of 1:5				Ratio of 1:5
Bait casting rod and reel	Х						
Bobbers		×	l per student	I-inch round, one spring, one slip			×
Bucket							Х
Casting plugs	6	I per group	l per student	X			
Casting targets	6	Х					
Closed-face rod and reel	3	l per student					×
Current fish regs.				X			
Fingernail clipper			5 or 6	X			Х
First aid kit				X			Χ
Fish stringer				X			
Fishing license				Sample			
Fishing pole	X						
Fly rod and reel and reel	×						×
Hook sharpener				X			
Hooks		×	l per student	Sizes 10, 8, 6, 2, and 1, I per student			×
Insect repellent				X			
Knot-tying rope		Х	Х				Х
Maps				Х			
Needlenosed pliers			5 or 6	Х			Х
Open-face rod and reel	3						
Personal flotation device							Throwable PFD
Pony spools			l per student	Х			Х
Pop can casters	X						
Ruler				X			Х
Split shot sinkers		×	l per student	X			×

## Chapter 5: Fishing Equipment & Skills

	5:1—Freshwater Rods & Reels	5:2—Casting a Closed- face Rod & Reel Combo	5:3—Pop Can Casting	5:4—Tackling Your Tackle Box	5:5—Flashy Fish Catchers	5:6—Fool Fish With Flies	5:7—Making Ice Fishing Jiggle Sticks
Basic Fishing Equipmen	nt (continued)						
Sun protection				Sunscreen, sunglasses, hat			
Tackle				Jig, plastic worm, straight- line spinner, spinnerbait, crankbait, surface lure, spoon: one of each type, collect various sizes; snap swivel, leader	variety of lures in different shapes, styles, and colors	Examples of flies especially dry flies and nymphs	Small tackle box with lures
Basic Ice Fishing Equip	ment						
Clip-on depth finder							X
Hand auger							Х
Ice rescue claws							Х
Ice scoop							X
Jiggle stick	X						Variety of types: jiggle stick, jigging rod, spinning combo, tip-up, rattle reel, etc.
Sled							Х
Wool blanket							Х
Craft Supplies							
Construction paper			Х				
Craft items					Pipe cleaners, wiggly eyes, fabric scraps, sequins, self-adhesive mylar, feathers, fabric scraps		
Glue					Tacky glue, quick-drying		
Hot glue gun							
Newspapers/table covering							
Paint							

11:1-16 Materials Master Matrix

## Chapter 5: Fishing Equipment & Skills

	5:I—Freshwater	5:2—Casting a Closed-	5:3—Pop	5:4—Tackling Your Tackle	5:5—Flashy Fish	5:6—Fool Fish	5:7—Making Ice Fishing
	Rods & Reels	face Rod & Reel Combo	Can Casting	Box	Catchers	With Flies	Jiggle Sticks
Craft Supplies (continu	ied)						
Paper	Journal paper						
Hardware					•		
Dowels					I/2" diameter, cut into 3" lengths, I per student		3/4" diameter, 18" lengths
Square bend screws							Х
Eye screws			K-2 option		l per student		×
Office Supplies							
Вох				Tackle box			
Pencils	X	Х					
Rubber bands							Х
Scissors			Х		Х		Х
Таре			Masking, 3-4 rolls				
Household Supplies							
Empty pop cans			Х				
Flashlight					Х		
Glass jars					2, one with clear water, one with turbid water		
Lamp					Х		
Plastic bags				Small plastic trash bag			
Books, Multimedia, Co	py Sheets, Photos, e	tc.					
8.5" x 11" images							
Copy sheets (provided in lesson)	Freshwater Rods and Reels Sheet; Freshwater Rods and Reels Crossword Sheet; Fishing Rig Fill-in-the-Blank Sheet, I per student	Parts of a Closed-face Rod and Reel Combo Sheet; Tying an Improved Clinch Knot Sheet; The Perfect Rigging Sheet; Fishing Rod and Reel Maintenance, I per student	Pop Can Rigging Sheet; To Cast Your Line; Tying an Improved Clinch Knot Sheet, I per group	Tackling Tackle Cards and Tackling Tackle Checklist, I per 3 students; Tackling Your Tackle Box Price List, 2 per 3 students; Fish Information Cards and Fish Tackle Cards, I per group	Lure Types Reference Sheet; Under- water Light Quality Sheet, I per student or for projecting	Parts of an Insect Sheet, Aquatic Insect Life Cycles Sheet, and Fly Types Sheet, I per student; Go Fly Fish Cards	Making and Rigging a Jiggle Stick Sheet, Tying an Improved Clinch Knot Sheet, and Setting Bobber Depth Sheet, I per group; Basic Ice Fishing Equipment Cards
Handouts				Knot-tying cards			

## Chapter 5: Fishing Equipment & Skills

	5:1—Freshwater Rods & Reels	5:2—Casting a Closed- face Rod & Reel Combo	5:3—Pop Can Casting	5:4—Tackling Your Tackle Box	5:5—Flashy Fish Catchers	5:6—Fool Fish With Flies	5:7—Making Ice Fishing Jiggle Sticks	
Books, Multimedia, Co	py Sheets, Photos, e	tc. (continued)						
Minnesota fish books					Books on fish and fishing			
Pictures				Mail-order catalog for fishing equipment	Underwater photos			
Miscellaneous Supplies								
Hula-hoops	6	I per group	4 to 6				X	
Noise maker				Whistle				
Play money				Optional				
Scientific Tools	Scientific Tools							
Prism					Χ			

11:1-18 Materials Master Matrix

# Chapter 6: Safety & the Fishing Trip See specific lessons for types and numbers of materials noted with an X.

	6:1—Safety & Fishing at the Water's Edge	6:2—Ice Fishing & Winter Safety	6:3—Planning a Fishing Trip	6:4—Piscatorial Palate	6:5—Eating Fish
Basic Fishing Equipmen	t				
Adult helper	Ratio of 1:5	Ratio of 1:5		Should have a ratio of 1:5 adults: children while fishing	
Bait	×	Wax worms, minnows, or eurolarva		Whole kernel corn, strawberries or other fruit, cheese or cheese spread, gummy candy products, hot dogs, bacon, marshmallows, potatoes, angleworms or night crawlers; scented bait—optional	
Bobbers	Х				
Bucket		X			
Closed-face rod and reel	One per student				
Current fish regs.	X	X	X		
Fillet knife				X	X
Fingernail clipper	X	X			
First aid kit	X & cell phone	X & cell phone			
Fish stringer	X				
Fishing license	lf over 16 years old	Х			
Hooks	X	X			
Insect repellent	X				
Maps	X				
Needlenosed pliers	X	X			
Personal flotation device	Throwable and wearable	Throwable			
Ruler		Х			
Split shot sinkers	X	Х			
Sun protection	Sunscreen, sunglasses, hat				
Tackle		Basic ice fishing tackle			
Basic Ice Fishing Equipr	ment				
Clip-on depth finder		Х			
Ice hole mock-up		X			
Hand auger		X and power auger			

## Chapter 6: Safety & the Fishing Trip

	6:1—Safety & Fishing at the Water's Edge	6:2—Ice Fishing & Winter Safety	6:3—Planning a Fishing Trip	6:4—Piscatorial Palate	6:5—Eating Fish
Basic Ice Fishing Equipr	ment (continued)				
Ice rescue claws		X			
Ice scoop		X			
Jiggle stick		X			
Sled		Х			
Wool blanket		Х			
Craft Supplies					
Construction paper			X		
Glue			X		
Markers/crayons			Х		Permanent
Newspapers/table covering					Х
Paint			X		
Paintbrushes			X		
Paint trays			X		
Paper			Poster board		
Office Supplies				•	•
Clipboards	X	Х		X	
Pencils	Х	Х		X	
Scissors			X		
Self-stick labels					Name tag
Natural Materials	•			•	
Real fish					For filleting & eating
Water	Drinking water				
Household Supplies					•
Clothing	Long sleeves, long pants, jacket, sturdy shoes	Rubber-soled insulated boots, wool socks, snow pants, winter coat, long underwear, turtle neck, wool sweater, mittens, thin gloves, scarf muffler or neck gaiter, stocking cap			Fabric butcher gloves or filleting gloves
Cups	X	For hot chocolate			
Cutting board					X
Earmuffs		Х			
Foil					X and waxed paper

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11:1-20 Materials Master Matrix

### Chapter 6: Safety & the Fishing Trip

	6:1—Safety & Fishing at the Water's Edge	shing at the Winter Seferty Fighing Trip		6:4—Piscatorial Palate	6:5—Eating Fish
Household Supplies (co	ontinued)				
Food		Hot cocoa			Large bag of popcorn, 2 eggs, I c. bread or cracker crumbs, I/2 c. butter or margarine, crackers
Pans					Cooking pans
Paper towels/rags					X
Plastic bags		Trash bags		Zip-locking style sandwich bags	6 I-gallon sized zip-locking & garbage bags
Books, Multimedia, Co	y Sheets, Photos, etc				
8.5" x 11" images					Fish anatomy
Copy sheets (provided in lesson)	Don't Get Hooked Sheet; MinnAqua Program Water's Edge Safety Overview; The Perfect Rigging Sheet, I per group; Safety and Site Evaluation Form; Safe Angler Certificate and Factoring in SPF Sheet, I per student; Factoring in SPF Answer Sheet	Dressing for Ice Fishing Word Finder Sheet, Ice Safety Sheet and Setting Bobber Depth Sheet, I per student	Planning a Fishing Trip Poster Guide, I for 3 students	Piscatorial Palate Question Sheet, I per student; Piscatorial Palate Data Sheet, I per group	Safe Eating Guide- lines Sheet and Basic Filleting Sheet, I per student; Fish Consumption Report for Sleepy Eye Lake and Fish Recipes Sheet, I per student or group
Internet access			X and a printer		Х
Multimedia		Danger, Thin Ice Video, camera and underwater camera			
Miscellaneous Supplies					
Noise maker	Whistle	Whistle			