



Interdependent Me

Age range: 8-12 years

Time: 60 minutes

Subjects: Science, Geography

Resources: Handouts: *Interdependent Me* (one copy, cut ahead of time) and *Forest Resources* (class set), class set of scissors and glue

Learning Outcomes

Students will understand our dependence on forests and our economic interdependence on each other relating to forest resources by participating in a class game and a cut-and-paste summary activity.

Hook: The Life of the Lowly Pencil

Have students point out all examples of wood products in the classroom and record them on the chalkboard. (These include paper, rulers, desks, pencils, particle board wall displays or countertops, etc.).

Ask students to consider their pencils for a moment. As you explain that wood (or timber) is the forest raw material in this case, and that they are the end-users of the product made from this forest resource, write the words 'Forest resource – wood - 1' at one end of the chalkboard and 'End-users – students - 4' at the other end. Then ask the class to list as many people (jobs) as possible involved in getting a pencil from forest to end-user while you fill in the chalkboard as follows:

Forest resource – wood - 1	Gatherers-extractors of the resource - 2	Processors and sellers of resource - 3	End-users – students - 4
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Under the 'Gatherer-extractors' heading, students may list foresters, technicians, tree planters, heavy equipment operators, or loggers. Under the 'Processors-sellers' heading, students may list all processing jobs related to making a pencil (drivers to transport the logs, factory workers to run the machinery to make the pencils, fill them with graphite and put on the finishing touches, transporters to bring the pencils to a warehouse or store, store owners or clerks to sell the pencils.)

Then, discuss our interdependence upon one another to be able to access forest resources and related products – as end-users, extractors, processors and sellers. Ask students if they are surprised at the number of people (jobs) involved in the creation and delivery of a pencil.

Tell students they are about to discover other interesting products made out of wood and many other forest resources, as well as who gathers, processes, sells and uses these resources and products.

Note that some students may not be aware of the term "wood grain" (the pattern exposed in cut wood) and the fact that wood grain and colour make some woods more attractive than others.

Procedure

- 1 Give each pair of student (or group of three, depending on class size) four randomly selected squares Handout: *Interdependent Me*, **one from each column**, cut out ahead of time.
- 2 Students should read each of their four squares, but focus on their 'Forest Resource' square (these are labelled with a '1'). Note that each group keeps its "Forest Resource" square. Explain to students that the object of the game is to gather the three squares (similar to what the class just put on the chalkboard relating to pencils) relating to their 'Forest Resource' square. Each group will move around the room and approach other groups in order to find and collect the three other squares (each numbered 2, 3 and 4) that contain appropriate clues and match up with their 'Forest Resource' square. In other words, they must find the squares that best describe the gatherer/extractor of their resource (labelled with a 2), the processor/seller of the resource (labelled with a 3) and the end-user (labelled with a 4). The key is to look for matching clues and keywords on each square that match those on their 'Forest Resource' square.
- 3 **In turn, each group will give up** their squares numbered 2, 3 and 4 to those groups with the 'Forest Resource' square that best matches. Groups are to help each other.
- 4 **Students then complete the cut-and-paste summary activity** as explained on the handout *Forest Resources*. (The answer is found on handout *Interdependent Me*.)

Extensions

Students bring in forest resource products from home and create a display for the whole school to view (maple syrup bottles or cans, wild fruit jam jars, wood products such as pencils, paper, pieces of lumber, house trim, particle board, plywood, heating pellets for pellet stoves, peat moss, dried edible wild mushrooms, wood-related crafts and carvings etc.). They could also take pictures for the display of canoes, paddles and other items that are too large to bring in.

Students 12-16 will enjoy "Boreal Medicine and More" found in Teaching Kit Volume 7.

Interdependent Me – Teacher page to cut out for Procedure Step 1

FOREST RESOURCES (1)	GATHERER OR EXTRACTOR OF RESOURCE (2)	RESOURCE PROCESSOR OR RETAILER (3)	END-USER OF RESOURCE (4)
Many types of softwood such as pine, balsam and spruce 1	Foresters, loggers, heavy equipment operators, tree planters 2	Sawmill operators and construction workers 3	A family purchases a newly built house 4
Wild mushrooms such as chanterelles and morels 1	A collector of mushrooms carefully harvests where it is appropriate 2	A chef makes gourmet mushroom sauces and salads 3	A couple goes to a restaurant for pasta with mushroom sauce 4
The sugary liquid that travels from roots of birch or maple trees in spring 1	Owner of a woodlot with birch and maple trees extracts this liquid 2	Gift shop owner who offers many specialty natural food products 3	A large family gathers at Grandma's for pancakes and French toast 4
Oil and gas deposits 1	Drill operators and gas pipeline installers 2	Salesperson for gas company 3	A family decides to switch to natural gas heating for their house 4
Minerals such as nickel, iron and gold 1	Miners, engineers heavy equipment operators 2	Jewellery designer, jewellery store clerk 3	A child saves up to buy a gold bracelet for mother 4
Large rivers 1	Hydro-electric dam operator 2	Electricity workers who manage power lines 3	Anyone who turns on a light 4
Plants such as Sweet Coltsfoot and Labrador Tea 1	Aboriginal person who collects traditional medicinal plants 2	Aboriginal person who makes teas and medicines from plants 3	People with stomach ailments or problems with asthma can drink a tea made with these 4
Peat moss (a spongy substance that holds water) 1	Person who collects peat moss 2	Worker sterilizes and packages peat moss 3	A person uses materials to keep his or her garden moist 4
Spruce wood, which contain long fibres suitable for paper 1	Foresters, loggers, heavy equipment operators, tree planters 2	Workers in a pulp and paper mill 3	A student prints out research documents to use in an assignment 4
Hardwood trees like ash and hickory 1	Foresters, loggers, heavy equipment operators, tree planters 2	Workers run machines that turn ash and hickory wood into sports equipment 3	Children (and players in the Major Leagues) play baseball using wooden bats 4
Birch bark for making baskets and other crafts 1	Person selectively gathers birch bark to make something 2	Person weaves decorative baskets and crafts out of bark 3	A person buys a basket to hold magazines in her living room 3
Blueberries, raspberries and other berries 1	People who know where to go to pick wild berries 2	Person who makes jams and jellies 3	A person receives delicious home-made jam on a special holiday 4
Many types of trees with attractive grains and colours of wood 1	Foresters, loggers, heavy equipment operators, tree planters 2	A furniture maker selects attractive woods in his/her work 3	A young couple buy a new hand-made wooden coffee table 4
Hardwood species suitable for making charcoal 1	Foresters, loggers, heavy equipment operators, tree planters 2	Workers make charcoal by burning wood under certain conditions 3	A family gathers for a BBQ using charcoal briquettes 4

Name: _____ Date: _____

Forest Resources – who gathers, processes and uses them?

FOREST RESOURCES	GATHERER OF RESOURCE	PROCESSOR OR RETAILER	END-USER OF RESOURCE
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Cut out all the squares below. Then, cut out the heading above as one piece. Glue the heading to a blank piece of paper. Place the squares that go together across the page under the headings and glue when certain.

A couple goes to their favourite restaurant for pasta with mushroom sauce	People with stomach ailments or problems with asthma drink a tea made with these	Many types of trees with attractive grains and colours of wood	Workers run machines that turn ash and hickory wood into sports equipment
Aboriginal person who makes teas and medicines from plants	A family decides on natural gas heating for their house	Foresters, loggers, heavy equipment operators, tree planters	Many types of softwood such as pine, balsam and spruce
A large family gathers at Grandma's for a breakfast of pancakes and French toast	Children (and players in the Major Leagues) play baseball using ash and hickory wooden bats	Birch bark for making baskets and other crafts	The sugary liquid that travels up from the roots in birch or maple trees in spring
Person who makes jams and jellies	Worker sterilizes and packages peat moss	Minerals such as nickel, iron and gold	A collector of mushrooms carefully harvests where appropriate
Salesperson for a gas company	Miners, engineers, heavy equipment operators	Blueberries, raspberries and other berries	People who know where to go to pick wild berries
Workers in a pulp and paper mill	Person receives delicious home-made jam as a gift	Person who collects peat moss	Hardwood trees like ash and hickory
A young couple buy a new hand-made wooden coffee table	A person uses materials to keep his or her garden moist	Wild mushrooms such as chanterelles and morels	Foresters, loggers, heavy equipment operators and tree planters
A furniture maker selects attractive woods in his/her work	Electricity workers who manage power lines	Drill operators and gas pipeline installers	Aboriginal person who collects traditional medicinal plants
A family gathers for a BBQ using charcoal briquettes	A chef makes gourmet mushroom sauces and salads	Large rivers	Foresters, loggers, heavy equipment operators and tree planters
Anyone who turns on a light	Foresters, loggers, heavy equipment operators and tree planters	A family purchases a newly built house	Owner of a woodlot with birch and maple trees uses buckets to extract this
Gift shop owner who offers many specialty natural food products	A person buys a basket to hold magazines in her living room	Hardwood species suitable for charcoal making	Person selectively gathers birch bark to make things
Jewellery designer, jewellery store clerk	A child saves up to buy a gold bracelet for mother	Oil and gas deposits	Hydro-electric dam operator
Sawmill operators and construction workers	Workers make charcoal by burning wood under certain conditions	Peat moss (a spongy substance that holds water)	Plants such as Sweet Coltsfoot and Labrador Tea
Person weaves decorative baskets and crafts out of bark	A student prints out research to use in an assignment	Foresters, loggers, heavy equipment operators, tree planters	Spruce wood, which contain long fibres suitable for paper

