



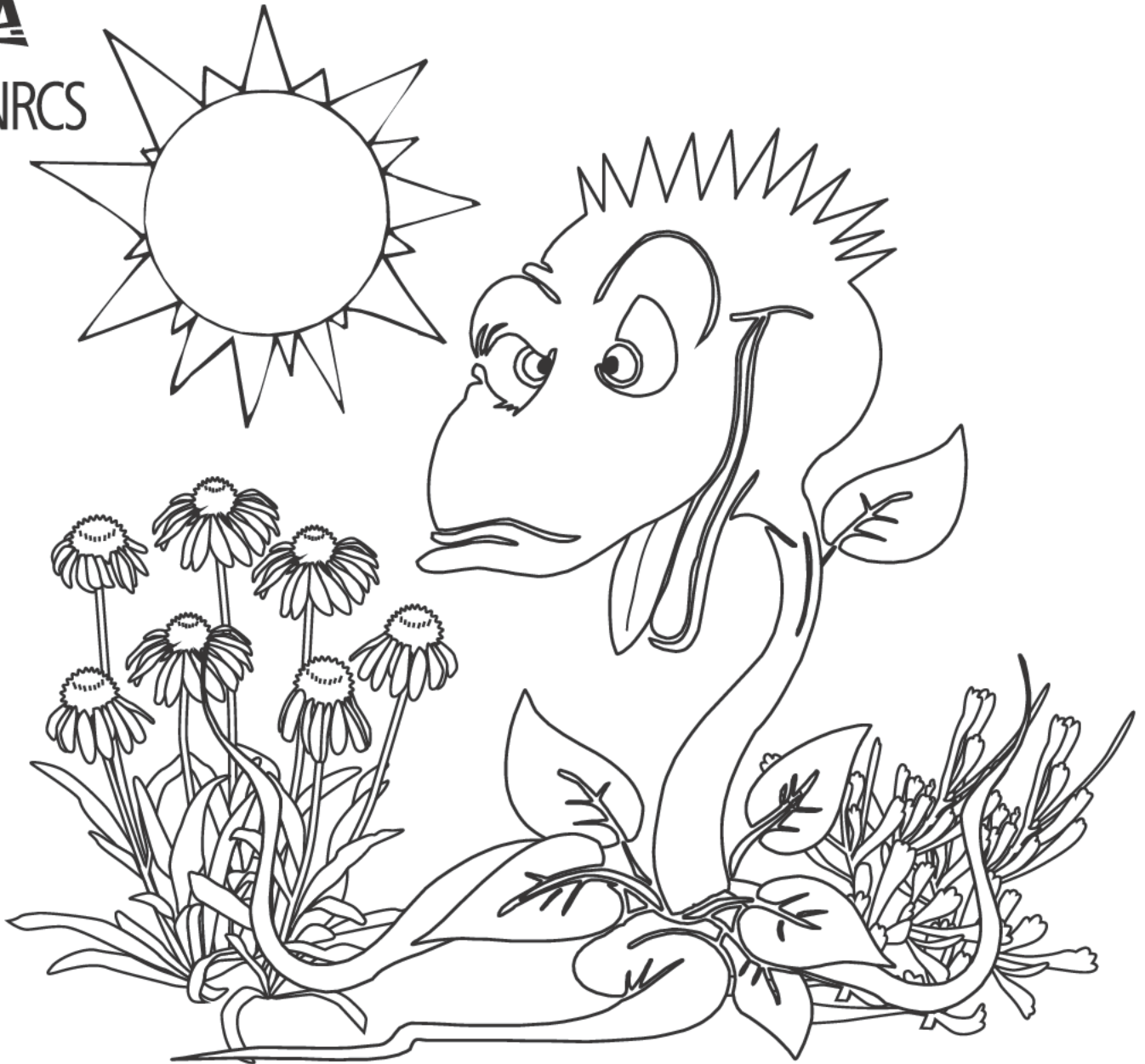
United States
Department of
Agriculture

Farm Service Agency

Natural Resources
Conservation Service

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Watch Out for Weeds!



Helping People Help the Land

What Are Noxious Weeds?

Not all plants growing at our homes or even in the wild are good plants. Noxious weeds are invaders. They move into places where they should not grow. Noxious weeds are plants that some livestock animals will not graze on, and some wildlife cannot eat. Noxious weeds take away water and nutrients from good plants that we want. Sometimes noxious weeds can make the animals that eat them sick.

Types of Invaders:

Noxious weeds are grouped into priority categories. We can tell how big a problem a weed is to Montana by its priority, and also how we should manage them.



Priority 1A

These weeds are not in Montana. Our biggest priority is to keep them out!

Priority 1B

There is a small amount of these weeds in Montana. We want to, and can get rid of them.

Priority 2A

These weeds are common in a few areas in Montana. We want to keep them from spreading.

Priority 2B

These weeds are very common in most of Montana. We want to make them less of a problem.

Priority 3

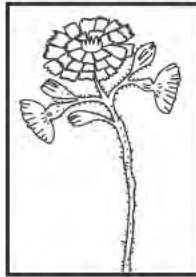
These weeds are problems in some places, but not everywhere. We want to keep them out of where they are considered a problem.



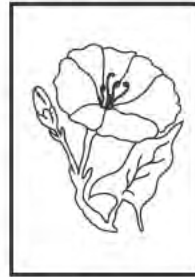
Yellow Starthistle is an example of a Priority 1A weed. Its flowers are yellow.



Purple Loosestrife is an example of a Priority 1B weed. Its flowers are purple.



Orange Hawkweed is an example of a Priority 2A weed. Its flowers are orange.

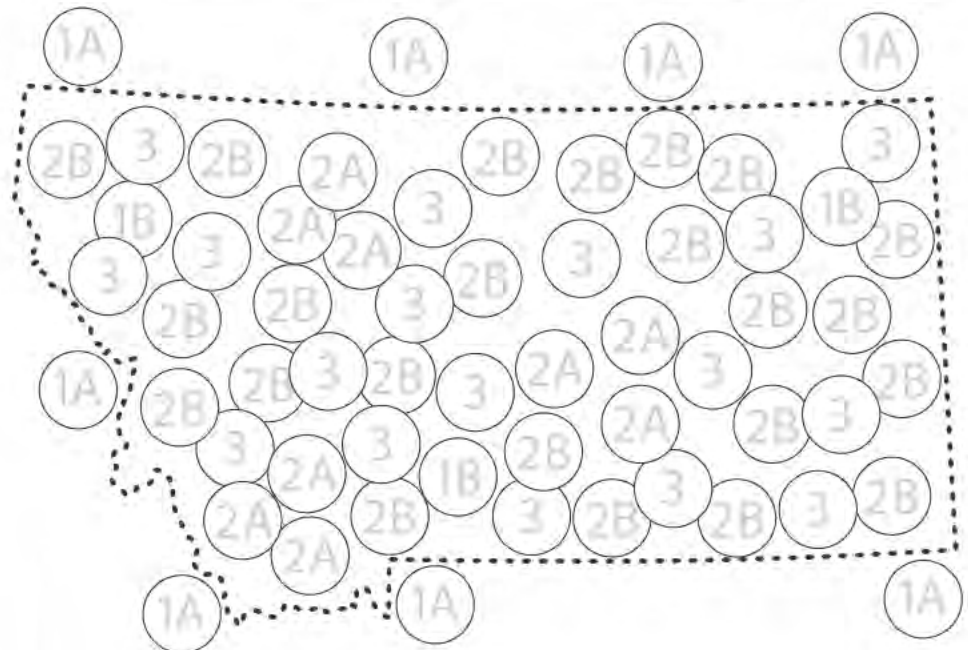


Field Bindweed is an example of a Priority 2B weed. Its flowers are light pink or white.

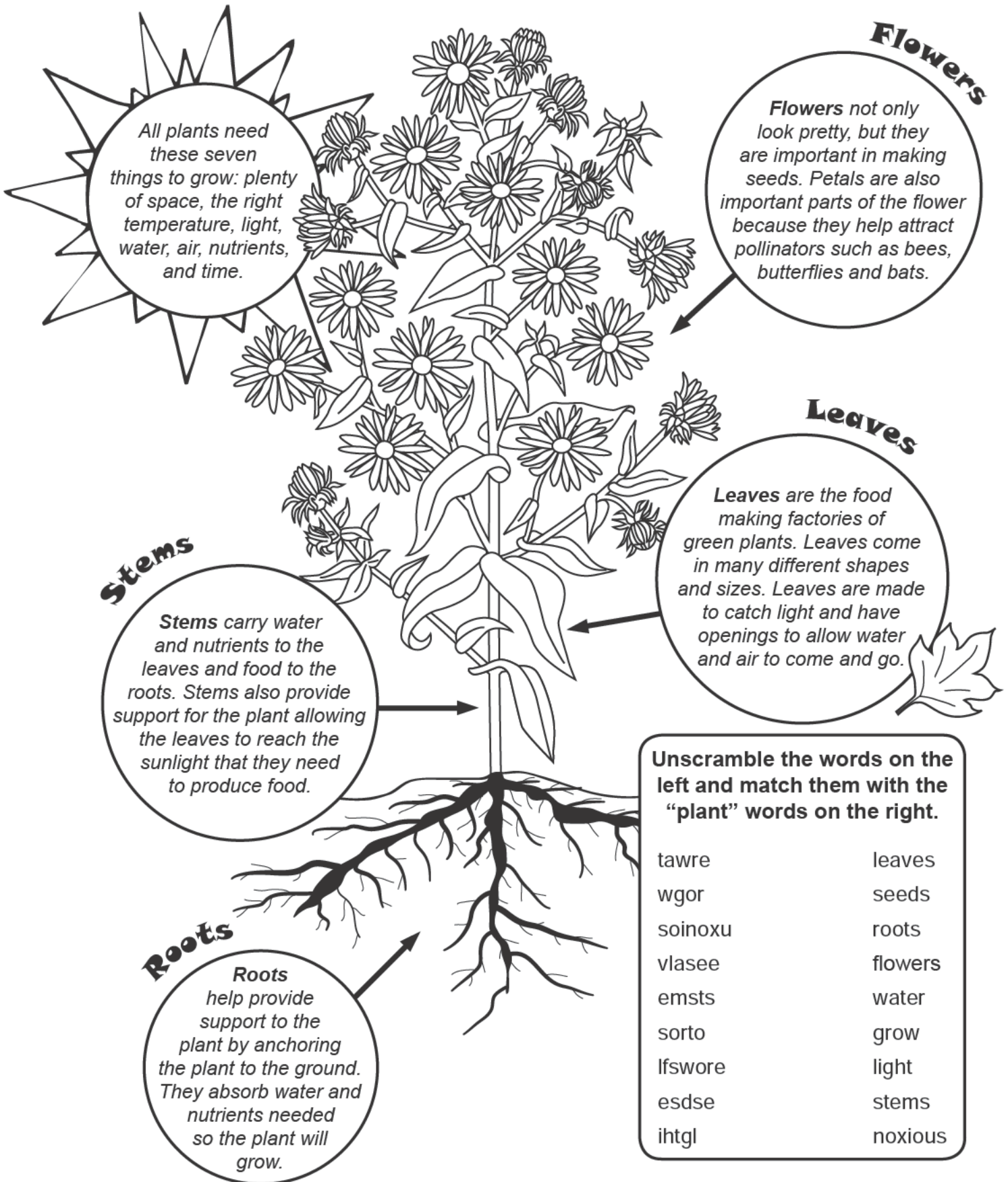


Cheatgrass is an example of a Priority 3 weed. Cheatgrass is green to gold in color.

Color in the Priority dots to show the spread of noxious weeds on the map of Montana. Color 1A dots yellow, 1B dots purple, 2A dots orange, 2B dots pink and 3 dots green.



Look at the illustration on this page to find out more about the different parts of a plant.



All plants need these seven things to grow: plenty of space, the right temperature, light, water, air, nutrients, and time.

Flowers
Flowers not only look pretty, but they are important in making seeds. Petals are also important parts of the flower because they help attract pollinators such as bees, butterflies and bats.

Leaves
Leaves are the food making factories of green plants. Leaves come in many different shapes and sizes. Leaves are made to catch light and have openings to allow water and air to come and go.

Stems
Stems carry water and nutrients to the leaves and food to the roots. Stems also provide support for the plant allowing the leaves to reach the sunlight that they need to produce food.

Roots
Roots help provide support to the plant by anchoring the plant to the ground. They absorb water and nutrients needed so the plant will grow.

Unscramble the words on the left and match them with the "plant" words on the right.

tawre	leaves
wgor	seeds
soinoxu	roots
vlasee	flowers
emsts	water
sorto	grow
lfsware	light
esdse	stems
ihgtl	noxious

Canada Thistle - Priority 2B

Scientific name: *Cirsium arvense*

Canada thistle can grow 4 feet high and can grow roots as deep as 22 feet. Its leaves have spurs, and its branches are thorny. The flowers are pink to purple and are either male or female. Each male flower makes pollen, and each female flower produces a seed that is carried away by the wind. One female plant is capable of producing more than 3,000 seeds every year.



Canada thistle is found in open areas but does not like to grow in wet soils or in shade. It can be found in empty fields, gravel pits and pastures, on roadsides, by railroads, in lawns, gardens and agricultural fields, and near stream banks and irrigation ditches.

Interesting Fact

Canada thistle did not come from Canada. It was introduced in the 1600s from Europe.

Spotted Knapweed - Priority 2B

Scientific name: *Centaurea stoebe*

Spotted knapweed can grow from 2 inches up to 4 feet tall. Its leaves are covered with fine hairs. Stems and leaves are a blue-green color, but the hair on the leaves give the plant a silver-gray color. One pink to purple flower will grow on each stem. Spotted knapweed flowers are surrounded by oval bracts, which are the leaf-like parts at the base of the flower. The bracts have black tips, which look like spots. One plant can make up to 140,000 seeds.



Spotted knapweed can be found in moist or dry conditions, and in shade or sunny areas. It prefers well drained or gravel/sandy soils.

Interesting Fact

Spotted knapweed flowers are actually made up of many little flowers. If you count all the little flowers, you will know exactly how many seeds that whole flower will make.

Search and find the noxious weeds on the farm. Look on pages two, four, five and eight to see examples of these weeds: Yellow Star Thistle, Purple Loosestrife, Orange Hawkweed, Field Bindweed, Cheatgrass, Canada Thistle, Spotted Knapweed, Leafy Spurge, and Houndstongue.



Leafy Spurge - Priority 2B

Scientific name: *Euphorbia esula*



Leafy spurge has roots that can grow as deep as 30 feet, and the stems can grow up to 3 feet high. Seedlings (young plants) resemble small pine trees. All parts of the plant, when broken off, leak a milky sap. Leaves and stems are bluish-green. The flowers are yellow-green color and arranged in clusters with heart shaped yellow bracts, leaf-like parts at the base, surrounding the flower. Seeds form in capsules that explode when ripe, launching seeds up to 15 feet away.

Leafy spurge tolerates extremely dry to extremely wet soil. It can be found along waterways and irrigation ditches, but is also found in draws and sagebrush.

Interesting Fact

Leafy spurge is toxic to cattle and horses, but grazing with sheep has been very good at controlling it. Insects can also be used to control it.

Houndstongue - Priority 2B

Scientific name: *Cynoglossum officinale*

Houndstongue leaves resemble a dog's tongue in shape. They are soft and velvety to touch. Houndstongue plants can grow up to 4 feet tall and their flowers are reddish-purple in color. The flowers produce small rounded seeds that are often called burrs. The seeds attach to animals, vehicles, and humans like Velcro. Houndstongue plants usually die after making seeds. Each plant can produce up to 2,000 seeds.

Houndstongue plants like all types of soil. They can also be found in forests, grasslands, pastures, meadows, and along roadsides.

Interesting Fact

Houndstongue carries a poison that can kill livestock, but animals won't normally graze on it. Some people think the flowers smell like popcorn.



S.T.O.P. the Invaders

So how can we prevent these nasty invaders?

Just remember: **See, Trace, Observe, Prevent. S.T.O.P.**

See: When you are outside, keep a lookout for noxious weeds. You can usually identify them by their flower, but you should also look at their leaves, stems and roots. Just don't touch them - some spread their seeds by latching on to people's clothes or animal's fur, some have thorns, and some might even make you sick.

Trace: Once you've seen one noxious weed, there will probably be more around. Try to trace the plant you found to the biggest group of noxious weeds you can find. Noxious weeds invade an area by spreading either underground or by seeds. Plants that spread underground are called rhizomatous plants.

Observe: Look around at the area, and try to make sure you know some landmarks. If you remember where the noxious weeds are, you will be able to find them when someone comes to control them.

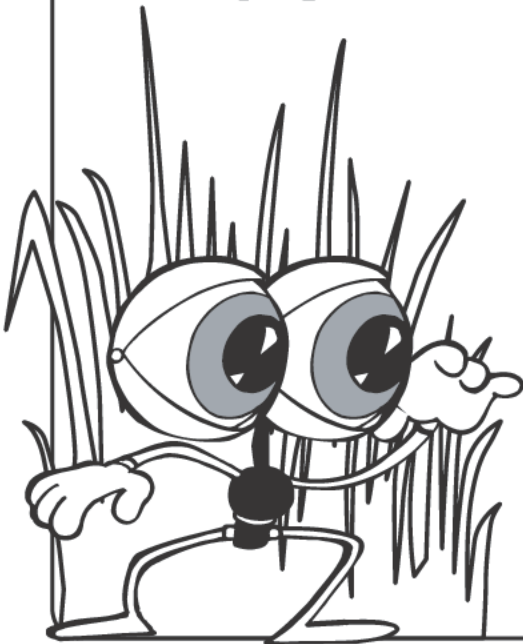
Prevent: To prevent the spread of noxious weeds, you need to report them to the right person. The county weed coordinator, extension agent, or conservation district is always willing to offer help in stopping the spread of noxious weeds.

All of these words have something to do with noxious weeds. Find and circle them in the word search puzzle.

PRIORITY
ROOT
SEED
STEM
THISTLE
WIND
LEAF

HOUNDSTONGUE
FLOWER
GROW
HERBICIDE
KNAPWEED

PETAL
NOXIOUS
PLANT



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

Let's take a look at some different ways to S.T.O.P. the invaders.

- **Biological controls** are things like insects that feed on the roots, stems, leaves, flowers, or seeds of noxious weeds. These types of controls help keep noxious weeds from spreading, becoming more invasive and more competitive.

- **Herbicides** are toxic chemicals, which are applied to the invasive weeds by weed managers.

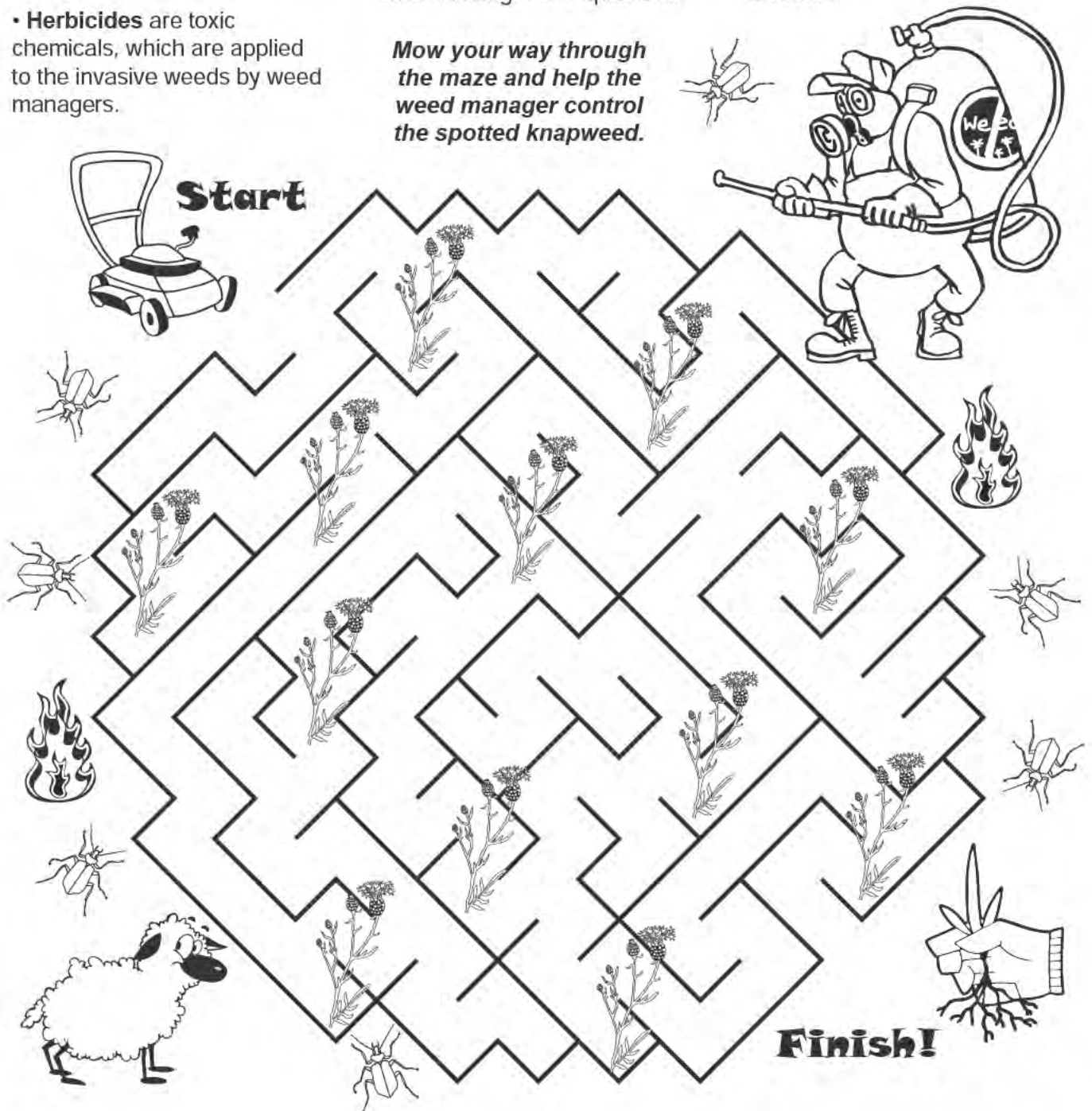
- **Manual control** is when you pull or mow the weeds.

- **Burning** is a type of control where the area with the weeds is burned. This should only be done for certain types of weeds, and should be prescribed by a weed management specialist.

- **Targeted Grazing** is when you let animals, usually sheep or goats, eat all the noxious weeds.

- But the most important way to control those pesky invaders is **education**. You now have all the tools you need to **S.T.O.P.** the invaders.

Mow your way through the maze and help the weed manager control the spotted knapweed.



ACROSS:

3. Which weed launches its seeds up to 15 feet away? (two words)

4. Which weed is able to produce 140,000 seeds? (two words)

5. We can tell how big of a problem a weed is to Montana, by its _____.

8. Which weed has very soft leaves?

DOWN:

1. Which weed is able to produce 3,000 seeds? (two words)

2. Sheep and goats are used to target _____ on weeds.

6. The _____ of a plant carries water and nutrients to the leaves of a plant.

7. What is another name for a houndstongue seed?

The crossword puzzle grid is partially filled with illustrations of various weeds. The words are labeled as follows:

- 1** (Down): Cheatgrass
- 2** (Down): Field Bindweed
- 3** (Across): Houndstongue
- 4** (Across): Field Bindweed
- 5** (Across): Spotted Knapweed
- 6** (Down): Stem
- 7** (Down): Leafy Spurge
- 8** (Across): Purple Loosestrife

A crossword puzzle grid with some words filled in:

- Across: SPOTTED Knapweed, LEAFY Spurge
- Down: HOUNDSTONGUE, PRIORITY, SPOTTED Knapweed, LEAFY Spurge

page 8

A square maze puzzle with a 'Start' point at the bottom center and a 'Finish' point at the top center.

page 7

A word search puzzle grid containing various words related to weeds and agriculture.

page 6



pages 4 & 5

A word matching puzzle with two columns of words. Lines connect the words in the left column to the words in the right column.

- Left column: light, stems, light, grow, water, flowers, roots, seeds, leaves
- Right column: light, esds, lsware, soto, emsts, lasee, soinox, mgor, laree

page 3