

Invader Rangers

Youth Against Invasive Plants

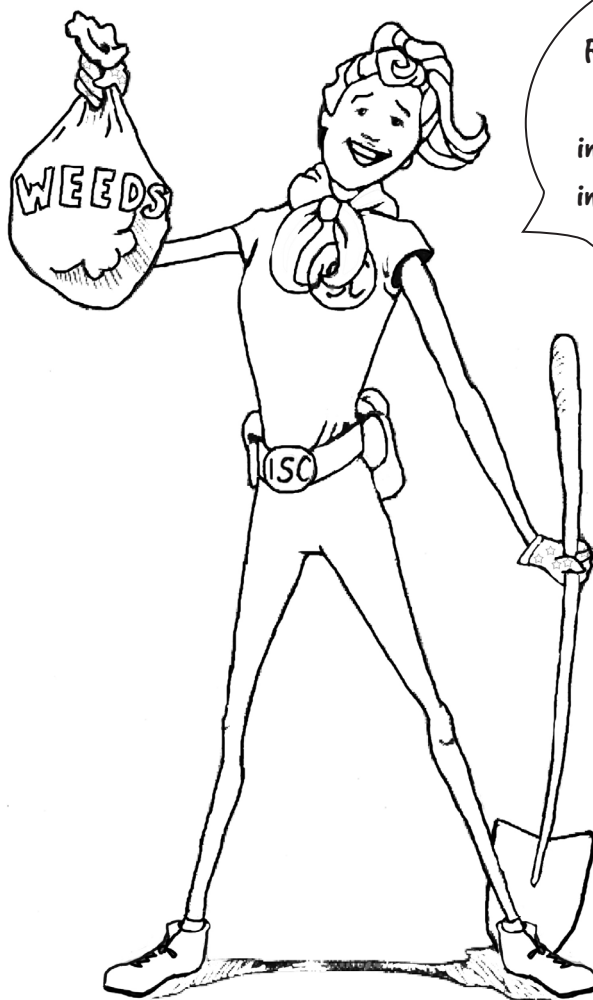
ACTIVITY BOOK



Invader Rangers

are making a stand!

Invasive species are threatening our great outdoors. Also known as **noxious and prohibited noxious weeds**, plant invaders taste bad to animals, and are harmful to the environment.



Join the Invader Rangers and find out how you can help slow the invasion of harmful plants into your favourite places.



www.abinvasives.ca

Acknowledgements

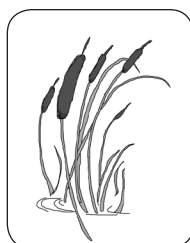
Adapted for use in Alberta by Lisa Guest, Nicole Kimmel, Tony Blake, and Barry Gibbs. Design and Artwork: Julianne Leekie; Cartoon Artwork: Alex Walton. Photos: L. Scott, B. Brown, J. Craig, L. Wilson, B. Stewart, and R. Mueller. Thank you to all volunteer editors and contributors. A special thanks to the Invasive Species Council of BC for developing this Activity Book and sharing it for use in Alberta.

Word Search

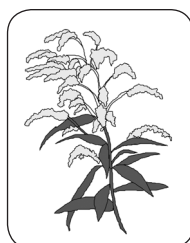
You can learn to spot and recognize these plants. Care for native plants and report the invasive ones!

Native Plant Word Search - Names of some of our home-grown plants can be read from left to right, top to bottom, and diagonally.

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



Cattail



Goldenrod



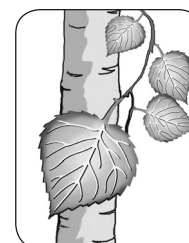
Wild Rose



Saskatoon



Fireweed



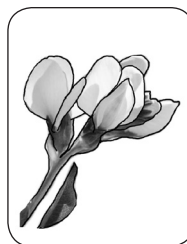
Aspen



Balsamroot



Bunchberry



Buffalo Bean



Prairie Crocus

(Answers on Page 17)

What Plant am I?

Read the descriptions and match the plant names to the pictures.

NATIVE PLANT – Plants whose relatives have grown in nature in this part of the world for a long, long time. They are eaten by local animals, including insects. Many kinds of native plants grow together in one place.

INTRODUCED PLANT – Brought from another part of the world by people. Some are planted on purpose in gardens and farms, but others came here by accident. Not all are invasive.

INVASIVE PLANT – A kind of plant, usually from another part of the world, that grows and spreads in such big numbers that they take over from native plants. They are like bullies!



PLANT



PLANT



PLANT

Word Search

Invasive Plant Word Search – Names of some Plant Invaders can be read from left to right, top to bottom, and diagonally.

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



Yellow Flag Iris



Canada Thistle



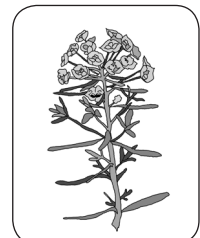
Knapweed



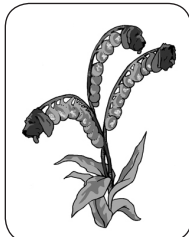
Oxeye Daisy



Toadflax



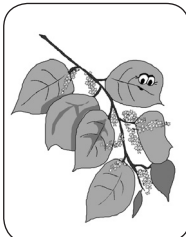
Leafy Spurge



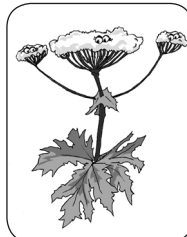
Hounds Tongue



Purple Loosestrife



Knotweed



Giant Hogweed



Common Tansy



Orange Hawkweed

(Answers on Page 17)

Silhouettes

Name each silhouette using the labeled drawings on the Word Search (page 4).



1. _____



2. _____



3. _____



4. _____



5. _____



6. _____

(Answers on Page 17)

Secrets of Invaders' Success

Matching numbers to letters in this key, figure out the secrets to why plant invaders can take over and spread far and wide.

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

1. Tough Guys: Invasive plants grow well where native plants don't, such as beside roads, in

_____ pits and on _____ ground.
(7 18 1 22 5 12) (2 1 18 5)

2. Power in Numbers: Invaders multiply quickly. A single plant can produce _____ of seeds a year.
(20 8 15 21 19 1 14 4 19)

Roots spread underground and send up new shoots. Plant invasions _____ as more and more new
(5 24 16 1 14 4)

_____ grow from roots and new plants
(19 8 15 15 20 19)
grow from _____.
(19 5 5 4 19)

3. No Predators: Many _____ feed on
(9 14 19 5 3 20 19)
only certain kinds of plants. When a plant is moved to another part of the world where animals don't know to eat it, the plant spreads quickly. Invasive plants often taste

_____ or are _____.
(2 1 4) (16 18 9 3 11 12 25)

Get This!

The invasive Purple Loosestrife:

1. Can make 300,000 seeds in one plant in one year.
2. Has more than 120 different kinds of insects that feed on it in Europe where it's from but has next to none here.



(Answers on Page 17)

Phooey For Plant Invaders

Invasive plants create hard times for people, animals and native plants. **Find and circle** all the problems where these bully plants have taken over. Clue: There are **8 problems** to look for.



(Answers on Page 17)

Invader Invitation

Bare ground invites invasive plants to grow and multiply.

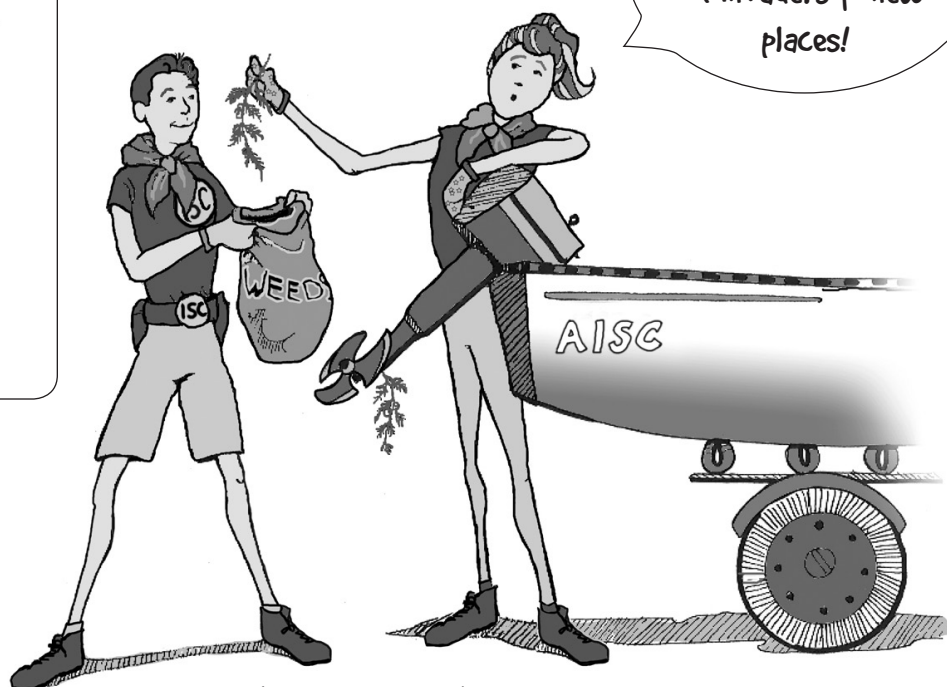
Invaders are good at living in places where other plants have a hard time growing, such as gravel edges of roads or places used a lot by people and vehicles (cars, ATVs, bikes, boats, trains). Some grow along streams and wetlands too, and others live in water.

Put a (✓) beside the places you would expect to find plant invaders growing and an (✗) where you would not.

a) on top of a mountain		f) in space	
b) a boat launch		g) building construction site	
c) gravel pit		h) the wilderness	
d) road edge		i) along a railway line	
e) a stream bank in a popular park		j) where bikes and ATVs went off-trail and stirred up the soil	

Did you Know?





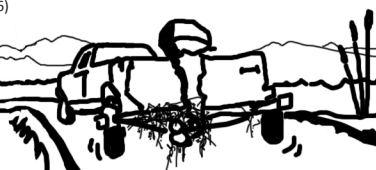

Small patches of invaders are the easiest to control. Take action – pull or report plant invaders when you find them so they don't spread further!



(Answers on Page 17)

Getting Around

How do seeds and plant parts travel? Put a (✓) in the column(s) you think best describes how the invaders in each picture spread to new places.

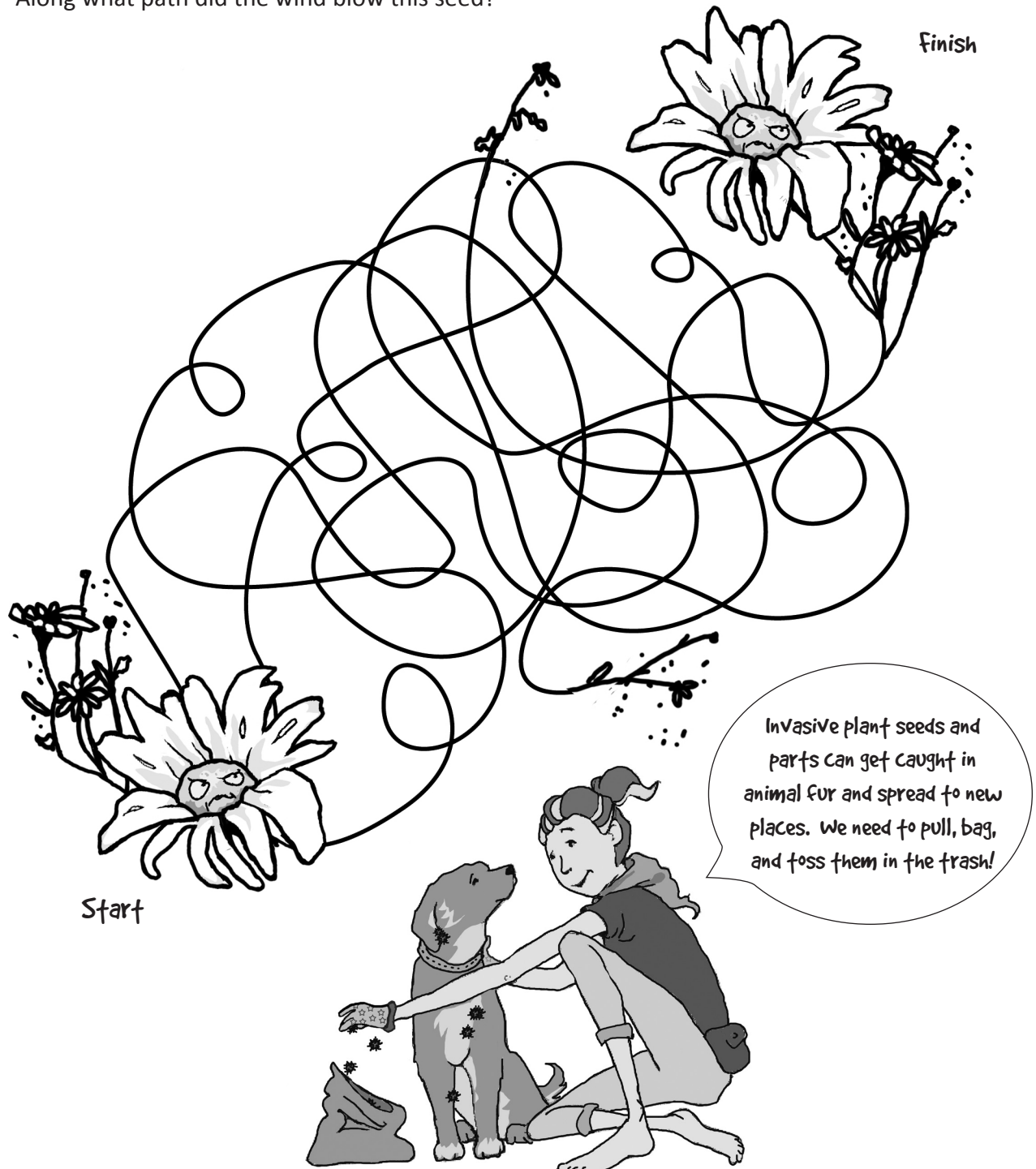
	Tumbleweed (a)	Free Ride (b)	Blowin' in the Wind (c)	Scattering (d)	Garden Escape (e)
(1) 					
(2) 					
(3) 					
(4) 					
(5) 					
(6) 					
(7) 					

(Answers on Page 17)

Seed Maze

Some plants make use of the wind to spread their seeds. This allows plant seeds to go far.

Along what path did the wind blow this seed?



Slow the Spread

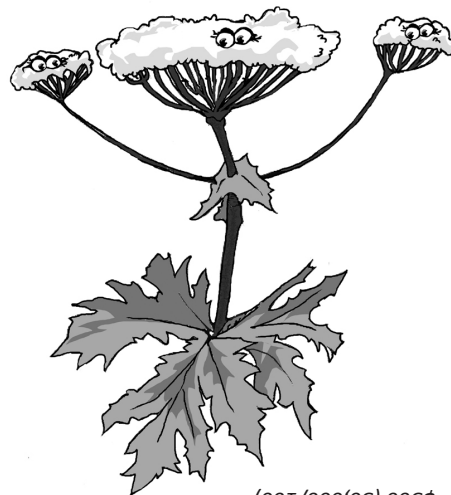
We can make a difference! Unscramble the tips on how to slow the spread by using the clues.

1. EGGARAB GAB Plants with seeds should be thrown in one of these to prevent seed spread. _____
2. STRALI Biking on existing "_____" prevents spread of seeds and plant parts. _____
3. AHY What goes in, comes out! Feed your horse weed-free "_____." _____
4. NOGRECIZE By learning to do this, you can spot and report invasive species. _____
5. LUPL Do this, roots and all. _____
6. NEVERPTION This is the best way to deal with invasive plants. _____
7. RUBR Pull these off your shoe laces or dog's fur and throw into the garbage. _____
8. ERPROT Do this to your local weed inspector if you find invasive plants. _____
9. SLOVEG Wear these to protect your hands when pulling out invaders from the soil. _____
10. SMEIL! Do this when you are happy about making a difference by helping nature. _____

Number Crunching

One giant hogweed plant can produce 50,000 seeds per year! These seeds can still grow even after sitting around for 15 years!

Question: If each seed was worth a penny, and there are 100 pennies in a dollar, how many dollar's worth would you have with one plant?



Answer - \$500 (50,000/100)

(Answers on Page 17)

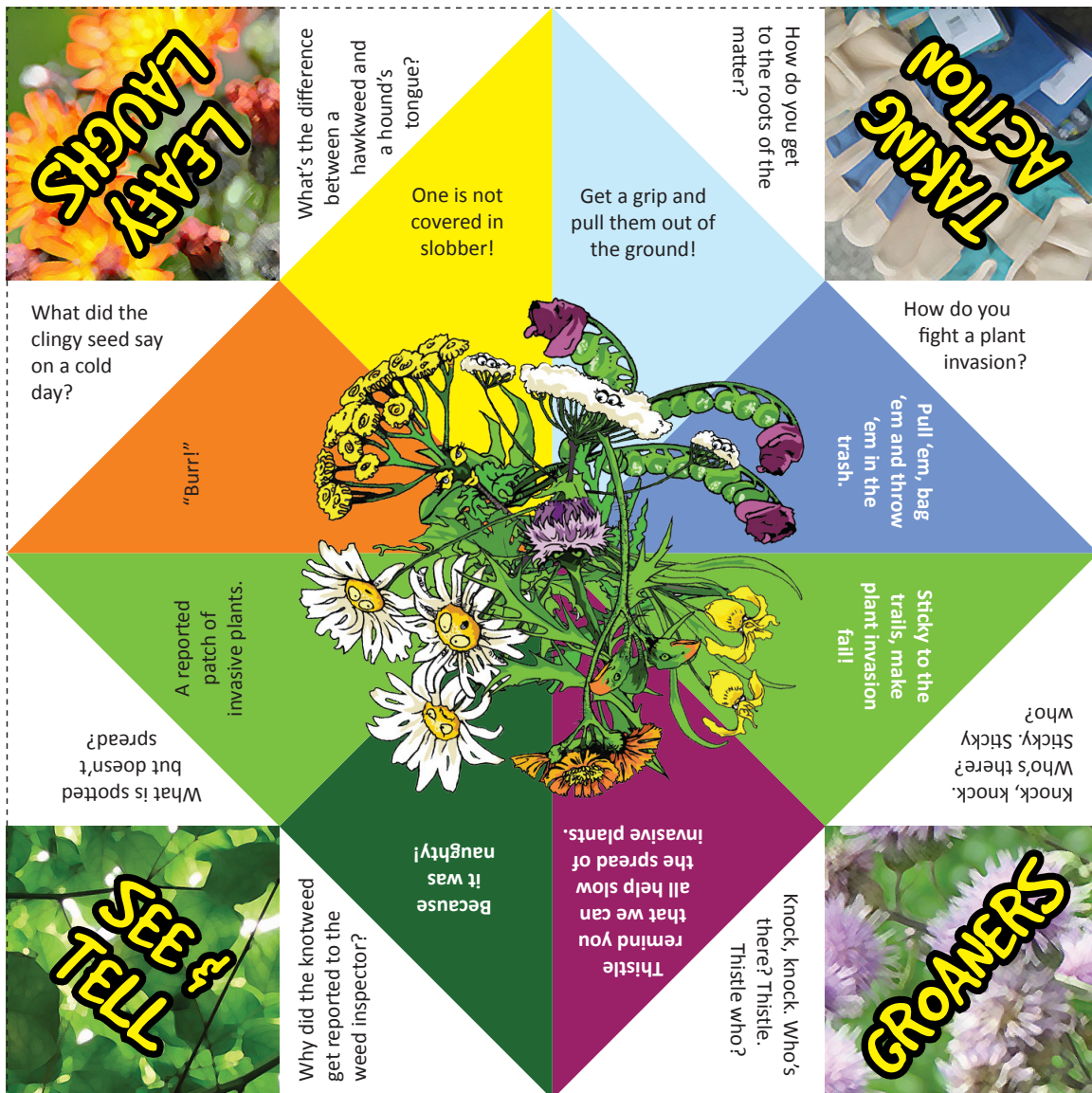
Weedy Widget

Folding Instructions:

1. Cut along the dotted line.
2. Place Weedy Widget this side down (side with most writing).
3. Now, fold each corner to the centre so that you have a smaller square.
4. Turn the folded square over and fold each corner to the centre again.
5. Fold this square in half to crease it. Undo that fold and fold in half the other way.
6. Using both hands, place your thumbs and index fingers under the flaps.

How to Play:

- This game is for 2 players. Ask the other player to pick a topic, like "Leafy Laughs."
- Open and close the Weedy Widget in an alternating direction for each letter of the phrase **LEAFY LAUGHS** (11 times).
- Ask the question under the chosen topic and let the other player answer. Lift the flap to find the answer.
- Now pass the Weedy Widget to the other player. Alternate asking and answering until all the questions are answered.

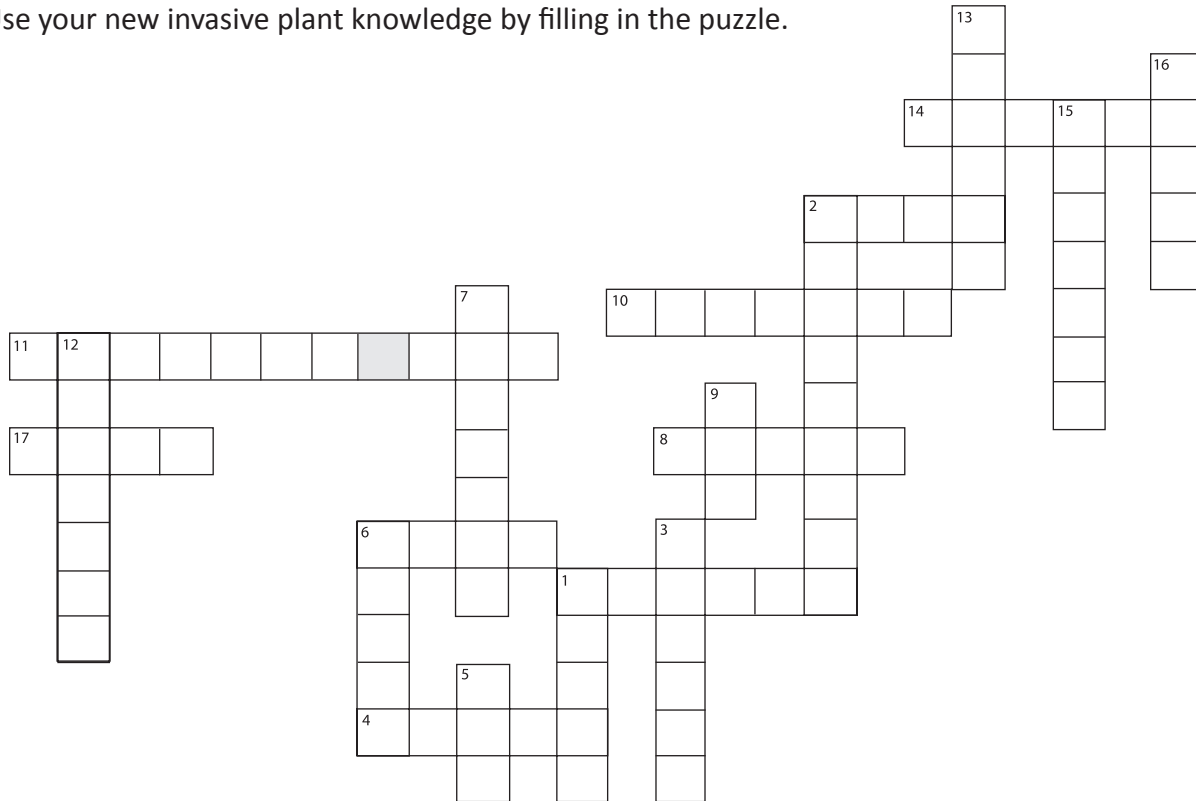


Weedy Widget



Crossword

Use your new invasive plant knowledge by filling in the puzzle.



Across:

1. Seeds can get a free ride to somewhere new on bike and vehicle _____.
2. If you find an invasive plant, do this, roots and all.
4. _____ patches of invasive plants are easier to control than large ones.
6. Invasive plants grow well on _____ ground.
8. Many plants spread from these underground plant parts.
10. Places where we grow plants and where some can escape from.
11. Throw burrs picked off your pets and laces into one of these (2 words).
14. Name for kinds of plants that have been growing in an area for a very long time.
17. Fluffy seeds are blown by this.

Down:

1. Invasive plants come from other parts of the _____.
2. Invasive plants grow so well because there are few of these to eat and kill them.
3. _____ invasive plants to weed inspector.
5. Fed to horses. Can contain invasive plants.
6. Propellers and trailers for these can move invasive aquatic plants.
7. People who grow food.
9. _____ can make a difference!
12. Plant invaders force wild _____ to go farther to look for food.
13. Slow the spread by not riding bikes and ATVs off of these.
15. Animals with six legs. Can be plant predators.
16. Invasive plants often each produce thousands of these.

(Answers on Page 17)

Plant Invader Dodecahedron

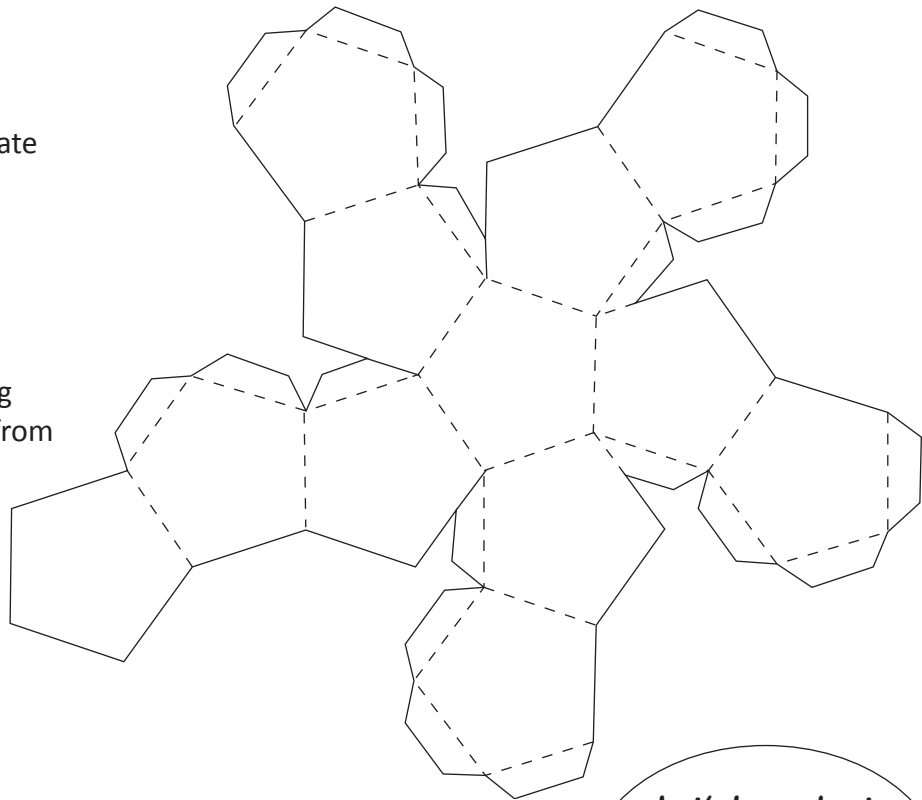
Make a dodecahedron — a twelve-sided “ball”.
Get familiar with 12 invaders!

What You Will Need:

- Dodecahedron template from **back cover**
- Scissors and glue

How to Make one:

1. Carefully cut out along the outer, **solid** lines from the dodecahedron pattern (invasive plant images) on the back cover. Be sure to **NOT** cut the dashed lines!
2. Fold the dodecahedron pattern along the dashed lines so that it makes a twelve-sided “ball”. Glue the tabs to the inside to keep the shape from unfolding.
3. Once it’s made, roll it like dice. Using the fact lists, look up the name and a neat fact about the plant species that is facing up. Play with a friend or on your own. Share your knowledge about invasive plants with other people who pick up your dodecahedron to play with it.



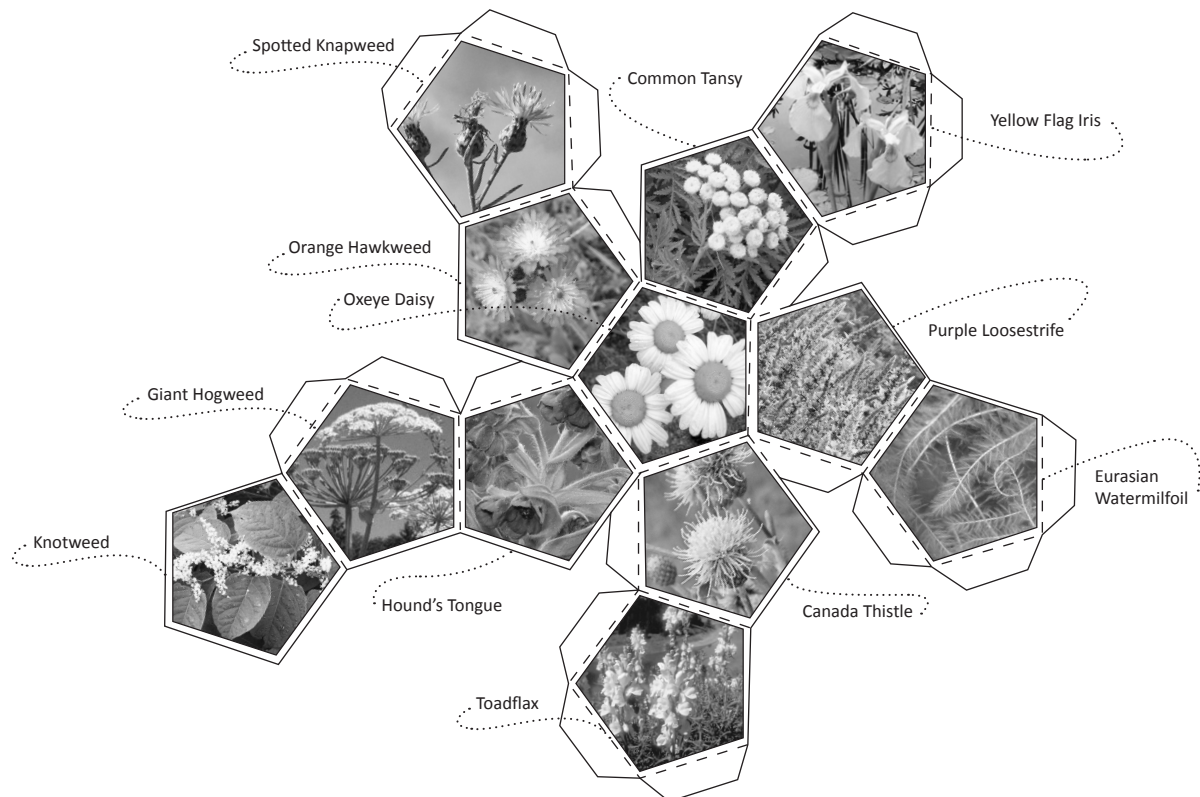
Let's learn about
invasive plants
and make this
dodecahedron!



Plant Invader Dodecahedron

Fact List

What Plant Is It?	Where is it From?	How Did It Get Here?	What Does It Do?
Spotted Knapweed	Europe, Asia	In bags of alfalfa seed, accidental	Chokes out native grasslands
Common Tansy	Europe	As a garden plant, on purpose	Makes livestock and people ill if eaten
Hound's Tongue	Europe, Asia	With grain seeds, accidental	Poisons livestock if it's in hay
Orange Hawkweed	Europe	As a garden plant, on purpose	Spreads by roots, making a solid mat where other plants cannot grow
Oxeye Daisy	Europe, Asia	As a garden plant, on purpose	Overtakes pastures and cows do not eat it
Giant Hogweed	Mountains of South-western Asia	As a garden plant, on purpose, because it's huge (3-5 m high)!	Sap causes skin to blister and hurt
Yellow Flag Iris	Europe	For garden ponds, on purpose	Takes over wetlands and ditches
Purple Loosestrife	Europe, Asia	As a garden plant, on purpose	Dominates wetlands, stream banks and ditches
Canada Thistle	Europe, Asia	With crop seeds, accidental	Spreads from roots, creates dense, prickly patches
Eurasian Water Milfoil	Europe, Asia and North Africa	By accident	A new plant grows from just a broken piece of stem. They are spread from lake to lake on boats and trailers
Yellow Toadflax	Europe	As a garden plant, on purpose	Creeping roots form dense patches, crowding out other vegetation
Knotweed	Asia	As a garden plant, on purpose	Grows and spreads really fast, especially along streams and bare ground



Answer Keys

Native Plant Word Search (p. 2)

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

Invasive Plant Word Search (p. 4)

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

Silhouettes (p. 5)

1. Knapweed; 2. Purple Loosestrife; 3. Yellow Flag Iris; 4. Canada Thistle; 5. Common Tansy; 6. Oxeye Daisy.

Secrets of Invaders' Success (p. 6)

1. Tough Guys: gravel, bare
2. Power in Numbers: thousands, expand, shoots, seeds.
3. No Predators: insects, bad, prickly.

Phooey for Plant Invaders - Clues (p. 7)

- a. Boat tangled in aquatic invasive plants
- b. Burrs on dog fur
- c. Bike with flat tire from prickly plant
- d. Sore thumb from a thistle prickle
- e. Invasive plants escaping from garden
- f. Berry patch invaded by invasive plant
- g. Agricultural field with invasive plants
- h. Livestock searching for grass to eat

Invader Invitation (p. 8) b), c), d), e), g), i), j)

Getting Around (p. 9) 1. d), 2. b) and d), 3. c), 4. b), 5. a), 6. b), 7. e)

Slow the Spread (p. 10) 1. Garbage Bag, 2. Trails, 3. Hay, 4. Recognize, 5. Pull, 6. Prevention, 7. Burr, 8. Report, 9. Gloves, 10. Smile

Invasive Plant Crossword (p. 14)

Across:

1. WHEELS
2. PULL
4. SMALL
6. BARE
8. ROOTS
10. GARDENS
11. GARBAGE BAG
14. NATIVE
17. WIND

Down:

1. WORLD
2. PREDATORS
3. REPORT
5. HAY
6. BOATS
7. FARMERS
9. YOU
12. ANIMALS
13. TRAILS
15. INSECTS
16. SEEDS

Cut out this template for the
Dodecahedron activity on
pages 15-16.



FOR MORE INFORMATION:
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