

The Hydrilla Game

Tracking the Journey of an Incredibly Invasive Plant

Developed for the Osceola County Hydrilla and Hygrophila Demonstration Project

For more information:

<http://plants.ifas.ufl.edu/osceola>

ATTENTION TEACHERS:

The following pages contain “scenario” cards for the Hydrilla Game activity.

Pages are to be printed and cards cut out.

Laminating individual cards is recommended.

Scenario cards are color-coded for placement at each of the eight habitat stations.

Code in **UPPER LEFT** corner indicates the station where the cards are to be placed at the beginning of the game (for setup).

Code in **UPPER RIGHT** corner of each card indicates the station the student is to visit next.

HS = Home Station

NS = Next Station

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A = aquarium = blue (BI)

C = creek = yellow (Y)

DD = drainage ditch = red (R)

H = hydrosol = black (Bk)

L = lake = green (G)

RP = retention pond = purple (P)

Ri = river = brown (B)

S = spring = white (W)



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For a copy of the Hydrilla Game Teacher Guide or to obtain a game kit:

Florida Invasive Plant Education Initiative ~ <http://plants.ifas.ufl.edu/education>

caip-education@ufl.edu

HS=A=BI

NS=L=G

A boy decides to release his pet sunfish into the neighborhood lake. You go into the lake along with the sunfish.

HS=A=BI

NS=DD=R

An employee at a local pet store needs to clean out the fish tanks. She empties the plants into the drainage ditch behind the store. She thinks the hydrilla plants will just decay and fade away.

HS=A=BI

NS=C=Y

After her pet turtle dies, Molly empties her aquarium into the creek behind her house. You were enjoying the excess nutrients in the aquarium but it looks like the creek has plenty, too.

HS=A=BI

NS=L=G

Billy empties his aquarium into the lake behind his house, where you grow quickly in the nutrient-rich waters. (He's hoping no one saw him empty the tank because the Lake Association is now asking everyone to pay \$2200 to control your growth.)

Scenario card for: *The Hydrilla Game -- Tracking the Journey of an Incredibly Invasive Plant*



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HS=A=BI

NS=A=BI

The fish in the aquarium enjoy hiding among your whorled leaves and you're happy to stay as long as you can.

HS=A=BI

NS=RP=P

A student finished with his science fair project empties his aquarium into the retention pond at the apartment complex. There's plenty of water in the pond, so you are happy.

HS=A=BI

NS=A=BI

The girl who put you in the aquarium forgets about you. Soon, the tank is full of plants. The air pump breaks and you use more oxygen than you produce. Her pet fish dies when oxygen levels sink below 4 parts per million.

HS=A=BI

NS=L=G

The owner of Marty's Pet Shop decides to close the business. Instead of putting aquarium plants in the dumpster, she tosses you into a nearby lake. You grow over the eel grass on the bottom and shade out other native plants at the surface.

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HS=C=Y

NS=S=W

A fisherman doesn't notice you attached to the lure on his fishing rod. He accidentally transports you to his next fishing spot, the spring.

HS=C=Y

NS=L=G

A careless boater forgets to clean off his boat propeller. You are transported to a local lake where you enjoy lots of nutrients and growing room.

HS=C=Y

NS=C=Y

You have grown so much, there is no room in the creek for the water pouring in from a nearby parking lot. The street and neighborhood begins to flood. You like it here and want to stay.

HS=C=Y

NS=DD=R

A summer rain storm washed you into the drainage ditch, where you soak up extra nutrients and grow even faster, now that it's full of water.

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HS=C=Y

NS=RP=P

A sprig of hydrilla is wrapped around the leg of a great blue heron feeding in the creek. His next hunting ground is the shore of the retention pond down the street, where you fall off.

HS=C=Y

NS=H=Bk

As a small clump of hydrilla, you provide excellent habitat for juvenile fish. You put tubers down in the hydrosol because you want to stay awhile.

HS=C=Y

NS=RP=P

It's raining hard and water is rushing off the surface of a parking lot nearby. The creek at the bottom of the hill is so full of your plants, there is no place for the water to go. It floods and you catch a free ride to the retention pond nearby.

HS=C=Y

NS=C=Y

You completely fill the creek with your plants and keep sunlight from shining into the water. It's been hot and cloudy for days. Fish begin to die because they don't have enough oxygen (from photosynthesis). You stay for a while.

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HS=DD=R

NS=DD=R

It rained recently so there is plenty of water
in the ditch: lots of sunlight too.
You stay and grow as fast as you can.

HS=DD=R

NS=C=Y

A summer thunderstorm flushes you
from the drainage ditch into the creek,
where the water level is more dependable.

HS=DD=R

NS=L=G

A raccoon feeding near the drainage ditch
picks up a sprig of hydrilla in its thick fur.
You fall off into a lake, a little while later, when
the raccoon digs under a log for a juicy crawfish.

HS=DD=R

NS=RP=P

A thunderstorm washes you from the drainage ditch
into the retention pond. This is even better for you;
the water level is more stable and nutrients
provide plenty of food. With a little luck,
you'll grow three inches a day!

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HS=DD=R

NS=Ri=B

An ibis is hunting for insects along the road and accidentally picks you up in its beak. You enjoy a quick flight to its next stop, the river.

HS=DD=R

NS=RP=P

The public works department mows vegetation around the drainage ditch. They mow all the way down the road, to the retention pond nearby. You hitch a ride on the mower blades.

HS=DD=R

NS=H=Bk

Streets are flooding, even with very little rainfall. City workers discover you are clogging drainage pipes. Before they can clean you out, you've already put down tubers into the hydrosol.

HS=DD=R

NS=DD=R

Road crews were so busy, they didn't clean hydrilla plants from the drainage ditch. You stay and continue to grow several inches per day. (Workers are in trouble a week later, when the ditch overflows during a rain storm and several homes are flooded.)

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HS=H=Bk

NS=DD=R

Muck (organic sediment) is dredged from a lake. Hundreds of hydrilla tubers are exposed in the thick black hydrosol. Piles of this material are left to dry along the road. A few of your tubers wash into a nearby drainage ditch, during a hard rain.

HS=H=Bk

NS=L=G

Hurricane Lisa blew through recently and uncovered some of your tubers. You suddenly find yourself in the lake. Now that you have access to sunlight, you begin to grow. You grow, and grow, and grow!!

HS=H=Bk

NS=L=G

Manatees feeding on submerged grasses dislodge you from the bottom. You float into the surface waters of the lake, where you sprout stems and whorled leaves.

HS=H=Bk

NS=C=Y

High winds and rain from a hurricane stir up the hydrosol at the bottom of the lake. Many of your tubers are exposed. You are blown into a connecting creek, along with lots of other debris.

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HS=H=Bk

NS=Ri=B

Children playing along the shoreline
dig deep into the hydrosil and find tubers.
They leave these new treasures on the sand until
the tubers wash into the river, where they sprout.

HS=H=Bk

NS=H=Bk

An herbicide treatment is performed on the lake.
It kills your leaves and stem, but your tubers remain
healthy in the hydrosil. You stay here for a while.

HS=H=Bk

NS=H=Bk

The hydrosil is full of nutrients
and you are happy here.
You stay and wait for the next move.

HS=H=Bk

NS=H=Bk

Recent storms stir up the hydrosil.
This gives you new nutrients as a food source.
You like living here and continue to stay and grow.

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HS=L=G

NS=H=Bk

You put down tubers while reproducing
and sink into the hydrosol where
you'll soak up lots of nutrients.

HS=L=G

NS=DD=R

A water skier cleans off his boat and equipment.
You are washed down the driveway and road
to a nearby drainage ditch.

HS=L=G

NS=Ri=B

A careless boater hauls you away on his trailer
to his next fishing area... the river,
where you'll sink into the water.

HS=L=G

NS=S=W

A seaplane lands and then takes off for DeLeon Springs.
You travel to the spring, caught in a crack between
the wing and body of the plane.

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HS=L=G

NS=C=Y

You have grown so much, people can no longer run a boat across the lake. After a tropical storm, you stick to heavy equipment used to clean up the shoreline. You're introduced to a nearby creek, where you find nutrient-rich soil.

HS=L=G

NS=L=G

You find a nice home in the lake. However, waterskiers get tangled in your stems. This results in several injuries. Stay and keep growing.

HS=L=G

NS=L=G

You have grown so much, you cover the lake surface. Sunlight can no longer get through your canopy. Dissolved oxygen levels are low. This morning, hundreds of dead fish float to the surface. Stay and keep growing.

HS=L=G

NS=A=BI

Tommy has a lake in his back yard. He likes to put plants from the lake into his fish tank, so you are transported to his aquarium.

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HS=RP=P

NS=L=G

A summer thunderstorm brings three inches of rain and causes the retention pond to overflow. You travel with the runoff to the lake nearby.

HS=RP=P

NS=C=Y

You've grown so thick, you clog the stormwater outfall of the local retention pond. It overflows during a tropical storm. The excess water carries you into a creek downstream. Some of it floods into several homes nearby.

HS=RP=P

NS=RP=P

City workers forgot to treat the pond for hydrilla. You cover the surface now. Photosynthesis slows from lack of sunlight. Oxygen levels drop. Dozens of fish die and the odor is terrible. Stay and keep growing.

HS=RP=P

NS=RP=P

Kids used to fish for bluegill in the retention pond. You grew so much, they can't get their baited hooks to sink into the water. The kids are sad but you are happy to stay and grow more.

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HS=RP=P

NS=RP=P

You found your way to a retention pond in a housing development. You thrive on the constant fertilizers flushed into the pond from surrounding lawns. You stay and grow.

HS=RP=P

NS=A=BI

Natalie has an indoor goldfish tank. She decides to collect live plants from the retention pond behind her house. You end up in her aquarium with an annoying goldfish nibbling at you.

HS=RP=P

NS=RP=P

You are constantly maintained by city workers. For now, you are stuck in the retention pond and you are shrinking.

HS=RP=P

NS=H=Bk

The retention pond receives lots of sunlight and is full of nutrients, thanks to the nutrient-rich soils. You think this is a nice place to hang out. When it is time to reproduce, you put down tubers in the hydrosol.

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HS=Ri=B

NS=RP=P

An osprey catches a fish (and also a clump of hydrilla) with its talons. You end up in the osprey nest but several sprigs fall into the retention pond below.

HS=Ri=B

NS=C=Y

A barge delivers goods to towns along the river. When the barge pumps out its bilge water, hydrilla is accidentally introduced into a pristine creek that feeds into the river.

HS=Ri=B

NS=Ri=B

You thrive on the nutrients in the river, thanks to all of the folks who over-fertilize their lawns. As a result, you successfully outcompete the native plants. Stay where you are.

HS=Ri=B

NS=A=BI

George collects river water and plants for his new pet fish. You end up in his aquarium, where you grow an inch a day.

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HS=Ri=B

NS=S=W

An eagle spots a big mullet in the river.
It scoops up the fish with its talons,
along with some hydrilla. It devours the mullet
from the top of a tall tree. The clump of hydrilla
falls into the spring below.

HS=Ri=B

NS=Ri=B

Sometimes it's difficult for hydrilla to grow in fast-moving
waters. You find a cove, along the river, where the water
is calm. You stay. Soon, you've grown so much,
boaters cannot move their boats away from the dock.

HS=Ri=B

NS=L=G

A boater leaving the river does not clean his propeller
or trailer. You travel with him to the lake.

HS=Ri=B

NS=Ri=B

Manatees WERE enjoying lazy days in the sun, on the river.
But now, you have grown so thick they are
having difficulty swimming.
You stay, but the manatees leave.

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HS=S=W

NS=L=G

A scuba diver emerges from the spring with a sprig of hydrilla attached to his scuba tanks. You travel to his house, where he cleans off his tanks in the back yard. You are washed into the lake behind his house during a heavy rain that afternoon.

HS=S=W

NS=S=W

You are enjoying the undisturbed spring waters and the sunlight shining through the clear water. You stay and take advantage of the nutrients and sunlight.

HS=S=W

NS=C=Y

A kayaker paddling the spring picks you up and transports you miles downstream to a creek. You fall into the water when the kayaker accidentally flips.

HS=S=W

NS=S=W

Many swimmers enjoy the spring in the summertime. However, you are growing so thick that it's hard to swim-- and it's dangerous. The park is closed and swimmers have nowhere else to go. Stay and continue growing.

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HS=S=W

NS=L=G

Swimmers dislodge you from the sandy bottom.
You travel downstream where you wrap around
a boat propeller. You end up in a lake the next day,
when the boater launches his boat to water ski.

HS=S=W

NS=DD=R

A volunteer at the spring wants to help by removing hydrilla.
She picks you up and tosses you into
the drainage ditch behind the property.

HS=S=W

NS=A=BI

An aquarium-store owner decides to save money
by collecting plants from the local spring.
He picks up a big clump of hydrilla to put in his aquariums.

HS=S=W

NS=S=W

The spring used to be a place where scuba divers could enjoy
seeing wildlife underwater. You have grown so thick,
it is now difficult for them to swim safely.
They quit coming to the spring and the local economy
is impacted. Stay and keep growing.

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