Rival for Survival Game Instructions ⌐

Materials
Game board
Movable pieces
Game cards
Score paper
Die
Pen or pencil

Number of Players
2–5

Objective
To have the **most points** when all players have reached the "Finish" position, at the Great Lakes.

Directions
1. Each player rolls the die, and the player with the highest number goes first.
2. Player 1 rolls the die and moves the playing piece the number of spaces shown on the die. Player 1 chooses a question card and hands it to the player on the left, who reads the question aloud. Player 1 chooses the best answer.
3. Points received are based on the player's answer and are recorded on the score sheet.
4. When landing on a space that requires the player to move ahead or backward, the player moves the game piece before picking a question card.
5. Some answers will cause a player to lose points. If the player has no points, however, he or she cannot go below zero, even if told to subtract a point.
6. Play continues in a clockwise direction until all players reach the Great Lakes region or the time limit is reached. The player with the **most points** is the winner—not the player who reaches the Great Lakes first. Finishing first may not necessarily be a good thing in this game!

Adapted from: http://www.iisgcp.org/education/rival_lesson.pdf

Rival for Survival

Exotic Species in the Great Lakes

Zebra mussels clogged your path. Go ahead 4 spaces.

Caught an alewife. Jump back 2 spaces.

Spotted purple loosestrife. Go back 1 space.

Fishhook flea competes with native fish for prey. Go back 3 spaces.

Leaping lamprey! Jump ahead 3 spaces.

Free roll

Use the map to identify the five Great Lakes. If you name them correctly, go back 4 spaces.

Encountered Eurasian watermilfoil. Trade spots on the board with the person on your right.

Go back 1 space for not dumping your bait water in the lake.

Exact number required to arrive at the Great Lakes.

FINISH

A sea lamprey hitched a ride on your boat. Take an extra turn.

START

Sea Grant
Great Lakes Network

Q Your aquarium is no longer functioning. You decide to get rid of the fish. You should
a. flush them.
b. find them a new home in another aquarium.
c. drop them in the local pond.

Q To prevent the transfer of exotic species from one lake to another, you should
a. pull your boat quickly from one lake to another.
b. inspect your boat trailer and equipment.
c. wash your boat in cold water.

Q How many of these species are exotic: goldfish, purple loosestrife, sea lamprey, starling?
a. one
b. three
c. four

Q Bringing in natural predators may be the way to handle exotic species such as purple loosestrife. Choose a potential problem with the above idea.
a. Purple loosestrife would decrease.
b. Predators may not die out after plants are gone.
c. Native plants would repopulate area.

Q Some exotic species can be a nuisance. How many of these are nuisance species: carp, alewife, purple loosestrife, zebra mussels, sea lamprey?
a. two
b. three
c. five

Q You find a beautiful plant while on vacation in Mexico. Do you
a. take a picture?
b. dig it up and transplant it in your garden?
c. pick the flowers off of it?

Q The role an organism has in its environment is its niche. Exotic species
a. try to take over the niche of another organism in an ecosystem.
b. have no niche in an ecosystem.
c. are not organisms.

Q Zebra mussels each filter about
a. 0.25 liter of water per day.
b. 0.50 liter of water per day.
c. 1.0 liter of water per day.

Q How could you gain information about exotic species in your area of the country?
a. Contact the Wildlife Service.
b. Complete an Internet search on the topic.
c. Both a and b.

Q The sea lamprey is an exotic species in Lake Erie. Why is it so damaging to other fish?
a. It eats their eggs.
b. It carries a large number of diseases.
c. It sucks out the blood and body tissues of other fish through its suckerlike mouth.

Q In any ecosystem, there is a limited amount of resources. If an exotic does well in a new ecosystem, that usually means native species are
a. getting more resources than before.
b. getting the same amount of resources than before.
c. getting less resources than before.

Q Exotic species are
a. rare organisms.
b. organisms brought into an environment not their own.
c. worth a lot of money.

A a = 0 pts. No! You might transfer species from one body of water to another.
   b = 3 pts. Good decision! You ensure there are no organisms transported on your boat.
   c = 1 pt. You're trying to remove all organisms—use 140°F water.

A a = 0 pts. Not a good choice!
   b = 3 pts. This is the best thing to do.
   c = –1 pt. Take a point away. You could be introducing a new species to the pond and upsetting the ecosystem!

A a = 0 pts. This is what we would want to happen!
   b = 3 pts. Could be a very real problem. You'd just be trading one exotic species for another.
   c = 0 pts. This is a positive effect of introducing a natural predator; the question asked for negative effect.

A a = 1 pt.
   b = 2 pts.   All four are exotic!
   c = 3 pts.

A a = 3 pts. Correct! You can enjoy the plant without damaging it or carrying it into an ecosystem not its own.
   b = –1 pt. Take a point away. You risk creating an invader species that could damage the ecosystem back home.
   c = 0 pts. This could damage the plant.

A a = 1 pt. True, but not the best food answer.
   b = 2 pts. You are getting closer.
   c = 3 pts. This is right! All are nuisances!

A a = 0 pts. Not right!
   b = 0 pts. Closer, but still not right.
   c = 3 pts. You got the right answer!

A a = 3 pts. They try to do this.
   b = 0 pts. No.
   c = 0 pts. All living things are organisms.

A a = 0 pts. Not true.
   b = 0 pts. Not the problem.
   c = 3 pts. Gross, but true.

A a = 1 pt. Good choice, but not the best!
   b = 1 pt. Good choice, but not the best!
   c = 3 pts. This is the best choice!

A a = 0 pts.
   b = 3 pts. This is the correct answer.
   c = 0 pts. b is a much better choice.

A a = 0 pts. Have new competition for and usually get less.
   b = 0 pts. No! If there are more organisms trying to eat the same food, they won't get as much.
   c = 3 pts. Correct, because there are more species competing for the resources.

Q You find some zebra mussels on a beach. You should
a. leave them where they are.
b. take them home.
c. put them in a pond near your home.

Q Exotic species are
a. plants.
b. animals.
c. both.

Q Zebra mussels are believed to have entered the Great Lakes
a. by traveling in the ballast water of commercial freighters.
b. by attaching to large fish.
c. because people brought them here to increase the mussel population.

Q Purple loosestrife was brought into the United States to
a. beautify wetlands.
b. be used in landscaping.
c. feed large herbivores.

Q While traveling through another part of the country, you encounter a small tortoise. Do you
a. put it in your aquarium?
b. sell it to a pet store?
c. leave it alone?

Q Purple loosestrife is an exotic species that is invading North American
a. deserts.
b. forests.
c. wetlands.

Q Indigenous plants and animals are those
a. that are naturally found in an ecosystem.
b. are imported into an ecosystem.
c. make you sick if you eat them.

Q Exotic species
a. are good for the environment they enter.
b. are bad for the environment they enter.
c. can be either good or bad, and some have no effect.

Q The effect zebra mussels have on water intake pipes is to
a. help rebuild them.
b. clog them.
c. clean them.

Q Round gobies can eat up to
a. five sea lampreys per day.
b. 1 pound of purple loosestrife per day.
c. 78 zebra mussels per day.

Q How are yellow perch affected by aquatic invaders?
a. The round goby eats yellow perch eggs.
b. The fishhook flea competes for the same food as the yellow perch.
c. The yellow perch swallows zebra mussels that get stuck in its digestive system.

Q The fishhook flea keeps from being eaten because
a. its long tail, shaped like a fishhook, makes it difficult for larger fish to swallow.
b. it latches on to fishhooks and escapes when fishermen pull their poles out of the water.
c. it stays away from fishhooks and thus is not eaten by fish.

A a = 1 pt. True, but not the best choice.
b = 1 pt. Also true, but not the best choice.
c = 3 pts. Exotic species can be plants or
animals.

A a = 3 pts. This is the best choice.
b = 0 pts. You risk spreading them to new
locations.
c = –1 pt. Take 1 point away. This is a very
poor choice because you may infest the
pond.

A a = 0 pts. Not true.
b = 3 pts. This was why people brought purple
loosestrife into the United States.
c = 0 pts. Purple loosestrife has no natural
enemies in the United States.

A a = 3 pts. True. Ballast water is used by
freighters to keep the ship evenly weighted.
b = 0 pts. Sea lampreys attach to fish; zebra
mussels do not.
c = 0 pts. Not true.

A a = 0 pts. Wrong.
b = 0 pts. Wrong.
c = 3 pts. Purple loosestrife is a wetland plant.

A a = 0 pts. While this wouldn't hurt the environ-
ment, it could be an endangered species
and should be left alone.
b = 0 pts. Same reason as choice a.
c = 3 pts. Best choice. Allows the animal to
remain in its ecosystem; wouldn't
negatively affect another ecosystem.

A a = 1 pt. Might be true, but unlikely.
b = 1 pt. True often, but not always.
c = 3 pts. This is the best choice.

A a = 3 pts. This is the correct definition of indig-
enous.
b = 0 pts. This is the definition of nonindigenous.
c = 1 pt. Some may make you sick, others may
not. Not the best choice.

A a = 0 pts. This would be helpful, but it is
not true.
b = 0 pts. This is also incorrect.
c = 3 pts. This is correct.

A a = 0 pts. No, zebra mussels do not help rebuild
pipes.
b = 3 pts. Yes! Zebra mussels cause problems
because they clog water intake pipes.
c = 0 pts. This is also incorrect. They clog
pipes, not clean them.

A a = 3 pts. Exactly! This is why it is called the
fishhook flea.
b = 0 pts. Sorry, this is incorrect.
c = 0 pts. This is also a wrong answer.

A a = 3 pts. Good answer!
b = 3 pts. This is also a correct answer!
c = 0 pts. The yellow perch do not eat zebra
mussels.

Q Boaters or anglers can prevent the spread of zebra mussels by
a. wearing gloves while they are fishing.
b. emptying their bait buckets on land only.
c. washing their boat, tackle, trailer, and other equipment in 104° F water.

Q An Asian carp can grow
a. up to 10 pounds.
b. up to 20 pounds.
c. up to 40 pounds.

Q The fishhook flea most likely traveled to the United States
a. attached to other fish migrating toward the United States.
b. because it got lost.
c. in the ballast water of freighters.

Q How might a native brown trout be killed by an aquatic invader?
a. Round gobies could eat eggs of the brown trout.
b. A sea lamprey could carve a hole in the side of the brown trout and suck out its bodily fluids.
c. The brown trout could try to swallow a fishhook flea and get it stuck in its digestive system.

Q A female zebra mussel can produce up to
a. 10,000 eggs a year.
b. 100,000 eggs a year.
c. 1 million eggs a year.

Q What do round gobies do to make fishermen angry?
a. They eat all the eggs of the native fish, leaving no more fish to catch.
b. They tease them that they can't catch fish.
c. They aggressively take bait from hooks used by fishermen.

A a = 0 pts. Asian carp can get bigger than
    that!
b = 0 pts. Asian carp can get bigger than

    that.
c = 3 pts. That is correct!

A a = 0 pts. Unfortunately, wearing gloves has
    nothing to do with it.
b = 3 pts. Good job! This will help prevent the
    spread of zebra mussels.
c = 3 pts. This too will aid in the prevention of
    zebra mussel infestation.

A a = 2 pts. This is close. Round gobies eat the
    eggs of the lake trout.
b = 3 pts. Exactly, this is why the sea lamprey
    is so dangerous!
c = 1 pt. This might be possible.

A a = 0 pts. No, it is the sea lamprey that attaches
    to fish.
b = 0 pts. This is incorrect.
c = 3 pts. You got it!

A a = 1 pt. This is a possibility.
b = 0 pts. This is unlikely.
c = 3 pts. That's right!

A a = 0 pts. This isn't even close.
b = 1 pt. This is getting closer.
c = 3 pts. Yes, this is correct.