



Our Planet
Our Future

Migration Frustration – Monarch Butterflies

Monarch butterflies are one of the world's most amazing creatures. Since Monarchs can't survive our long winters, every fall they undertake an amazing journey to reach their wintering habitat in California and Mexico. Traveling about 3,000 kilometres every year, the Monarch butterfly travels further than any other butterfly!

In this role-play game, students will become Monarch butterflies. Their task is to migrate safely between their winter and summer habitats. Not only will they encounter dangers such as predators and unfavourable weather conditions during their long journey, but they also face loss or degradation of habitat.

Monarch Facts:

- Monarchs spend the summer in Canada and northern United States.
- In the fall, Monarchs migrate to their wintering habitats in California and Mexico.
- Monarchs that migrate usually only survive long enough to make one round trip migration journey in their lifetime. On their return journey, they lay their eggs then die. It is their children and grandchildren that return in the summer.
- Monarch larvae survive on the Milkweed plant which contains compounds that make the butterfly distasteful to potential predators. After a bird eats a Monarch larva or butterfly, it will spit it out and never eat one again!
- During the winter months in Mexico, sleepy Monarchs cling to the branches and trunks of Oyamel fir trees.

Learning Objectives:

- Learn about the factors affecting populations of migrating Monarch butterflies
- Discuss the effects of both human and natural impacts on Monarch butterflies
- Recognize the importance of conserving wildlife habitat
- Identify actions we can take that will help conserve Monarch butterfly habitat

Materials:

- Wintering habitat circles* (One for every 2 students)
- Summer habitat circles* (One for every 2 students)
- Migration path circles*

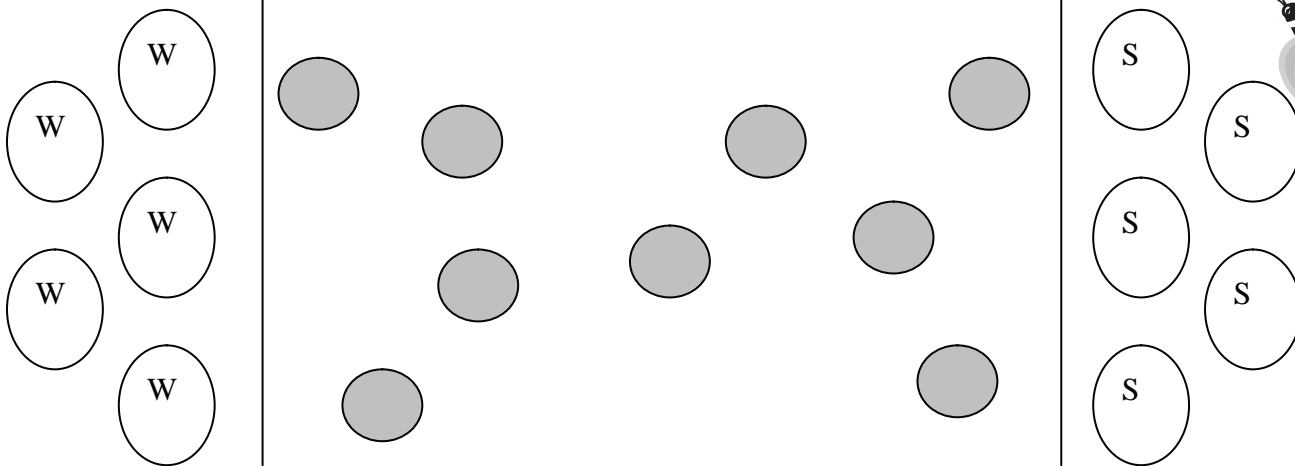
* Cut out small cloth or paper circles about the size of a dinner plate and label them according to the appropriate habitat type.



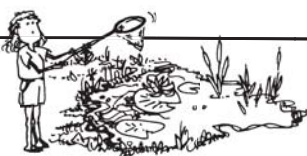


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1. In a spacious classroom, gym or outdoor area, set up 2 habitat areas approximately 15 feet apart. Lay the winter habitat circles at one end of your playing area and the summer habitat circles at the other end. In the corridor between the two areas, place the migration path circles.



2. Students begin in their summer habitat. Instruct each student to place a foot on a habitat circle. Only two Monarchs may occupy one habitat circle at a time.
3. Explain that the Monarchs have spent the summer laying eggs and gathering energy for their journey. It's fall and the weather is getting colder; it's time to migrate south!
4. As they move from their summer to winter habitat, explain that they must follow the migratory path by stepping onto the migration path circles. When they get to their winter habitat, remind them that only two students can occupy one habitat circle at a time. Encourage students to flap their "wings" like real butterflies as they make their journey south.
5. Round One - The first round should go smoothly as there has been no habitat destruction and all "butterflies" should have successfully migrated to suitable winter habitat.
6. Round Two - Before the Monarchs migrate back to their summer habitat, read scenario #1 and take away the corresponding number of summer habitat circles. Instruct the Monarchs to begin migrating. Since some winter habitat has been lost, some Monarchs will "die" and must move to the sidelines.
7. Round Three – Some Monarchs have died because of loss of habitat (the "dead" Monarchs will have a chance to return to the game). Before the Monarchs migrate to their winter habitat, read scenario #2 and take away the corresponding number of winter habitat circles.





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8. Round Four – More Monarchs have died due to loss of habitat. Read scenario #3 before instructing the Monarchs to migrate and replace the corresponding number of summer habitat. Instruct the “dead” Monarchs to rejoin the game.
9. Repeat the migration journey a few more times to illustrate how Monarch populations fluctuate

Scenarios (you may adjust the number of habitat circles you are adding and taking away based on the number of students playing):

1. Summer habitat: Construction of a freeway has caused the clearing of large fields where native wild flowers and Milkweed used to grow. Remove 2 habitat circles.
2. Winter habitat: Illegal logging of the Oyamel fir forest occurs. Remove 3 habitat circles.
3. Summer habitat: EcoKids clubs across Canada have been planting native butterfly gardens. Reintroduce 2 habitat circles.
4. Winter habitat: Unseasonably hot temperatures due to climate change cause drought and the decline of many forests and plants. Remove 3 habitat circles.
5. Summer habitat: A community group has spent several years restoring and naturalizing an old agricultural field. Re-introduce 2 habitat circles.
6. Winter habitat: The government declares the creation of a national Monarch butterfly preserve where habitat is protected. Re-introduce 3 habitat circles.
7. Summer habitat: Increased pesticide use. Remove 3 habitat circles.

Discussion:

Make sure to discuss the impacts of each scenario after each round. Can students identify how humans are impacting Monarch habitat and populations? What are some activities or actions students can take to help prevent the decline of Monarch populations? How do you think climate change will impact migration patterns?

For more information on Monarch Butterflies, check out these great links:

- Monarch Watch - www.monarchwatch.org
- Parks Canada: Point Pelee National Park - http://www.pc.gc.ca/pn-np/on/pelee/natcul/natcul5_e.asp
- PBS online - <http://www.pbs.org/wnet/nature/alienempire/voyagers.html>

For more habitat and migration activities, check out ecokids.ca!

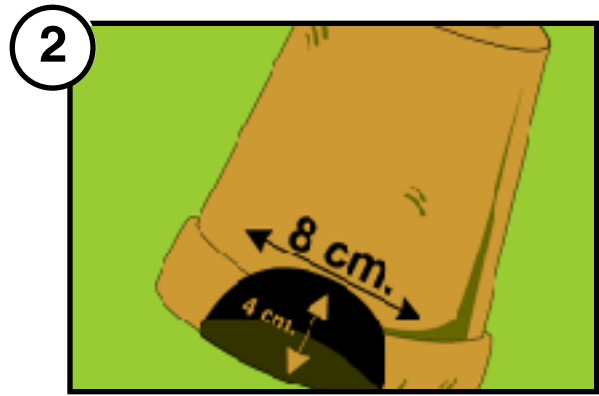


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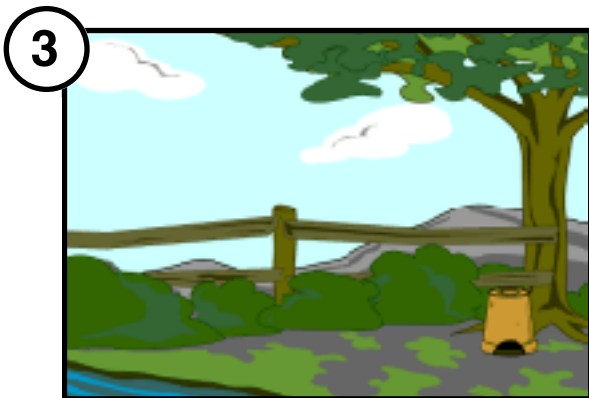
How to Make a Toad Home



1 Get an old clay pot. The opening at the top of the pot should be about 20 cm wide.



2 Make a door by very carefully knocking a small section out of the top of the pot. Have an adult help you out. Safety always comes first. The part you knock out should be in the shape of a half-circle. It should be about 8 cm wide and 4 cm down from the edge of the pot.



3 Find a shady spot in your backyard where you can put the pot. Put the pot upside down in the shady spot you have picked. You need to make sure there is water near by. If there isn't any water near-by go on to steps 4 and 5.



4 1. Get a small plastic bucket.

2. Dig a hole in the ground that the bucket will fit into. Make sure you ask an adult for some help before digging any holes.

3. Make sure the top of the bucket is even with the ground.



5 Put some rocks or a brick in the bucket so that they are about 5 cm away from the top of the bucket. Fill the bucket with water. Make sure you put new water in the bucket every few days.

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