



It's all about The Birds



& The Bees

Community Partners

- Michigan DNR
- Weesies Brothers Garden Center & Landscaping
- Don Lam Bees
- Park Lake Preserve

Skills learned:

- Civic & Community Responsibility
- Teaching younger students
- Transplanting, seed, and cultivating
- Being stewards of our environment
- Developing educational material

Student Learning Outcomes

Students brainstormed about what could be done to utilize the heavily logged areas of school forest and how to increase use by pollinators of the native plantings. Students selected native plants based on the habitat requirements and the benefits for the quail and pollinators.

Students researched, developed, and circulated to classrooms an educational display on the benefits of planting establishing wildlife habitat and promoting an increase in bee populations in west Michigan.

Students design layouts for the flight conditioning pen and the 20 acres of habitat under the power-lines leading to the bike trail. Food and shelter were all aspects students undertook in preparing for both the birds and the bees.

Native plants were purchased to expand pollinator gardens and provide grass cover for upland birds.

All high school students agriscience students participated in some aspect of the project including demonstrations to all elementary classrooms during our animal day. Presentations were made during farmer's market, Muskegon County Earth Expo, and at our cultivate Michigan harvest days.



Montague High School

2015-16 School Year:

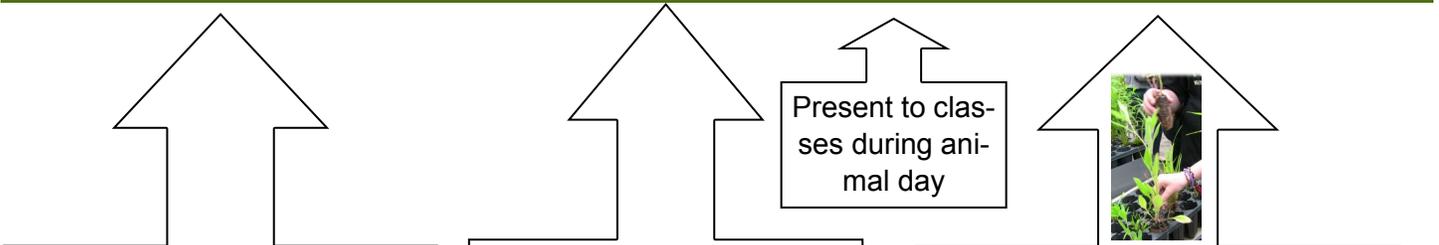
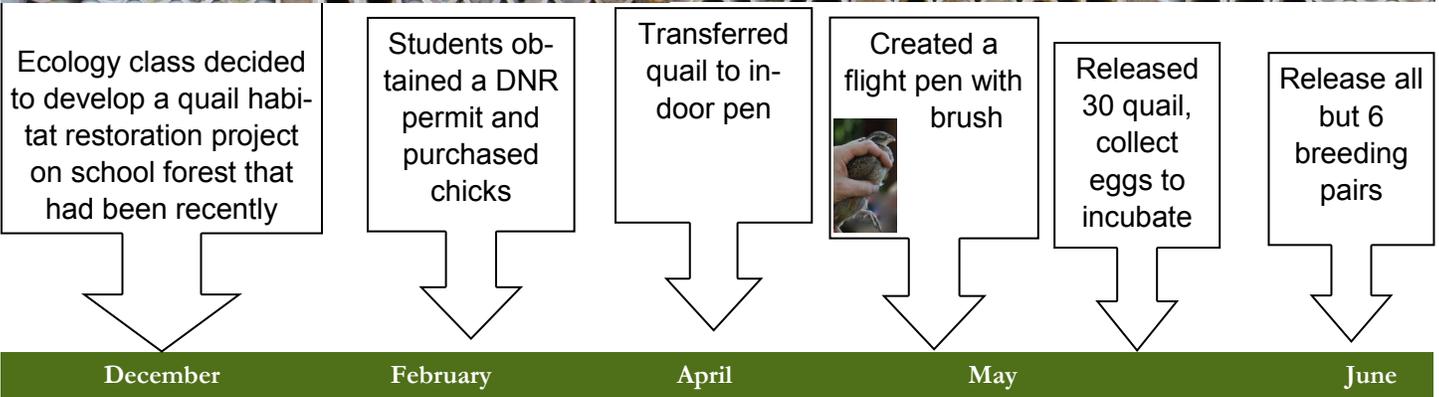
- 880 Students
- 16 Teachers
- 14 Classrooms
- 1 Earth Expo
- 1 State winning demonstration team

Eighty Eight Bobwhite quail were released, 20 eggs incubated, 3 native bee houses built, 16 honeybee colonies placed around the community.





2015-2016 Great Lakes Stewardship Timeline



Students also selected pollinator restorations by expanding honeybee colonies and established native bee habitat to take advantage of the native plantings created in 2014-15.



Mech Tech students built native bee houses and hive boxes. Build educational displays.

1. *Macropis nuda*
2. *Agropostemon ruficeps* US Insect Day
3. *Pezomachus pennsylvanicus* Squash and gourd bees
4. *Bombus impatiens* The Impatiens Bumble Bee
5. *Osmia lignaria* The Blue Orchard Bee
6. *Hylaeus sp.*
7. *Andrena fuscipes* The Southwestern Blueberry Bee
8. *Xylocopa virginica* The Yellow Carpenter Bee
9. *Bombus morio* Morrison's bumble bee
10. *Paratropis ovata*
11. *Xylocopa virginica* Eastern Carpenter Bee
12. *Bombus nevadensis*
13. *Bombus affinis*
14. *Megachile sp.* Leafcutter bees
15. *Andrena corvina* Horned Toad
16. *Andrena fuscipes* Dusky Toad, or antipodite
17. *Xylocopa virginica* The Yellow Carpenter Bee
18. *Aspogochloa panamintalis* Desert bee

Sustainability is ensured for years to come by establishing native plants, splitting hives and hatching quail to be purchased by community members

