



TEACHER VERSION

GYPSY MOTH LIFE CYCLE



OBJECTIVE: A student will be able to describe the life cycle, physical characteristics, and food sources of the gypsy moth.

EXERCISE ANSWERS

- * **egg mass** - 500 to 1,000 eggs are laid at one time in velvety, buff colored hair from the moth's body
 - * **larva** - wormlike form of an insect, molts take place during this phase.
 - * **pupa** - insect (moth) when it is in a case or cocoon.
 - * **moth** - adult stage of the insect
- Larvae grow in stages called instars which is the phases between molts.
 - Ballooning is when a caterpillar climbs a tree to the ends of branches, spin a thread, and then sails on the wind currents supported by the spun silk.
 - Egg mass are eggs laid at one time in velvety, buff colored hair.
- The students can have various answers for this question but they should revolve around:
 - destroying trees, shrubs, and vines
 - people having allergic reactions to the moth
 - the rapid spread of the moth
 - economic impact to Wisconsin businesses as well as northeastern United States
 - future concerns
- January - April** Over wintering egg mass

May Mid-May eggs hatch
Larvae grow in stages called instars which is the phase between molts.
Newly hatched larvae (caterpillars) disperse naturally by “ballooning” on their long silken spun webbing carried by the wind.

June Larval development continues. Usually caterpillars grow at the rate of 1 instar per week. Larvae continue to increase in size for six weeks.

July Larval Stage - Instar 5/6 reached.
Larvae reach maturity and enter pupa stage.
Pupa changes into adult.

Late July / Early August Mating occurs and the females lay eggs. Both adults gypsy moths die.

August Eggs are laid in buff colored masses.

September - December Over wintering egg masses.

5. **egg mass-** 500 to 1,000 eggs are laid at one time in velvety, buff colored egg masses covered with hair from the moth's body.
larva- the small the larva is mostly black with five pairs of blue spots and six pairs of red spots on its back.
pupa- The outer skin is dark reddish brown and may be attached by several silk threads to tree trunks, rocks, or boards.
moth- Male- The wings are brown with black, wavy markings, the antennae are yellow and the body is 1 inch.
Female-The body is 1.5 inches and has brown, wavy marks. The wings are white, and the moth can not fly.
6. The students should be able to come up with many answers to this question. Example answers are as follows.
- birds
 - automobiles, trailers etc.
 - nursery stock
 - mammals
 - firewood
- 7.
- alder
 - aspen
 - birch
 - white birch
 - oaks
 - apple
 - basswood
 - hawthorn
 - tamarack
 - witch hazel
8. Trees growing on these sites are often crooked, low in vigor, and with deep fissures in the bark, all of which provide prime gypsy moth habitat.

TEST ANSWERS

1. True
2. True
3. A: **egg mass** - description- 500 to 1,000 eggs are laid at one time in velvety, buff colored hair from the moth's body.

- B: larva** - Also known as caterpillars, they are a wormlike form of an insect.
description- Molts take place during this phase.
The small larva is mostly black with five pairs of blue spots and six pairs of red spots appear on its back.
- C: pupa** - insect (moth) when it is in a case or cocoon.
description- The outer skin is reddish brown and may be attached by several silk threads to tree trunks, rocks, or boards.
- D: moth** - adult stage of the insect
description- Male- The wings are brown with black, wavy markings, the antennae are tan and featherlike and the body is 1 inch.
Female-The body is 1.5 inches and has brown, wavy marks.
The wings are white.
4. The topics the students should describe include:
 - human health
 - destruction of tree, shrubs, and vines
 - economic concerns to businesses in Wisconsin as well as northeastern United States
 - rapid spread of the moth
 - future concerns and destruction
 5. A: male- The wings are brown with black, wavy markings, the antennae are tan and featherlike and the body is 1 inch.
female-The body is 1.5 inches and has brown, wavy marks. The wings are white.
B: The female moth can not fly.
 6. The pupa attaches itself by several silk threads to tree trunks, rocks, or boards.
 7. 500 to 1,000 eggs in one mass
 8.
 - alder
 - aspen
 - birch
 - white birch
 - oaks
 - apple
 - basswood
 - hawthorn
 - tamarack
 - witch hazel
 9. Ridgetops, steep, south and west facing slopes and dry, sand outwash plains are sites favored by gypsy moth.

REFERENCES

Contacts

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Material

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Wisconsin Agricultural Education Standards for the activity:

Gypsy Moth Life Cycle - By the end of grade 12 (agricultural) students will:
(Agriscience/Production) D. 9-12.1 "Engage in applied learning opportunities emphasizing agriscience and production principles."
(Ecology/Environmental) E. 9-12.1 "Engage in applied learning opportunities emphasizing ecological and environmental principles."

