Silkworm Life Cycle

Silkworms are an important insect as they create silk which is used for clothing, furniture and art. Like other insects, there are four stages in a silkworm's life cycle.

Silkworms were once native to Africa and Asia, however, they are no longer found in the wild. Silkworms are now only found in silk factories and in homes as pets. Silkworms prefer a warm climate and if it is too cold, the eggs can hibernate until it becomes warmer.

Silkworms start as tiny eggs laid in lines on mulberry leaves. Between three hundred and five hundred eggs can be laid by the female moth. The eggs are a yellowish colour but turn black before hatching. It takes about fourteen days until silkworms begin to hatch.

Silkworms are the larvae (caterpillars) that hatch from the eggs. They are a creamy colour with a head, thorax and abdomen. They have six real legs and six false legs at the end of their body. They eat constantly for twenty to thirty days and will only eat mulberry leaves. The silkworm may start life as a tiny caterpillar, however, they quickly grow longer. As the larvae grow so quickly, they will shed their skin four times over a month.

About a month after they have hatched, they start to spin a cocoon around themselves with one long, thin thread of silk. If unravelled, the thread of silk would measure between 300-900 metres. The silk cocoon can take them two days to make. The larva will then turn into a brown, hard pupa inside the cocoon.

Did You Know?
The pupa is edible and eaten in many countries around the world.

Did You Know?
It takes one hundred and fifty silkworm cocoons to make one silk tie.

After about seven days, the pupa turns into an adult moth. The moth makes a tiny hole in the cocoon and climbs out. The adult moth cannot fly because its body is too heavy for its thin wings. As the moth does not eat, it will only live for five to ten days. The male and female moth will mate and the female will lay her eggs before she dies.

Questions

1. Fill in the length of each stage of the silkworms' life cycle.

Egg	Larva	Pupa	Moth

2. What colour is a silkworm's body?

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3. Name the three parts of a silkworm's body.

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_____

4. How many legs does a silkworm have when it is born?

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5. What happens to the silkworm when it is inside the cocoon?

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6. Why does the adult moth not live for very long?

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7. Draw and label the life cycle of the silkworm.

8. Why do you think people keep silkworms as pets?

Answers

1. Fill in the length of each stage of the silkworms' life cycle.

Egg	Larva	Pupa	Moth
14 days	**20 - 30 days**	**7 days**	**5 - 10 days**

2. What colour is a silkworm's body?
   A silkworm is a creamy colour.
3. Name the three parts of a silkworm's body.
   The three parts of a silkworm's body are the head, the thorax and the abdomen.
4. How many legs does a silkworm have when it is born?
   A silkworm has twelve legs in total when it is born (six real legs and six false legs).
5. What happens to the silkworm when it is inside the cocoon?
   When a silkworm is inside the cocoon, it turns into a brown pupa.
6. Why does the adult moth not live for very long?
   An adult moth does not live for very long as they do not eat.
7. Draw and label the life cycle of the silkworm.
   Students draw the life cycle.
8. Why do you think people keep silkworms as pets?
   Answers will vary.

Silkworm Life Cycle

Silkworms are an important insect as they create silk which is used for clothing, furniture and art. The scientific name for the silkworm is Bombyx mori. Like other insects, there are four stages in a silkworm's life cycle.

Silkworms are native to Africa and Asia, however, they are extinct in the wild and are only found in silk factories and in homes as pets. Silkworms prefer a warm climate and if it is too cold, the eggs can hibernate until it becomes warmer.

Silkworms start as tiny sticky eggs laid on mulberry leaves. Three hundred to five hundred eggs can be laid by the female moth. The eggs are a yellowish colour but turn black before hatching. It takes about fourteen days until silkworms begin to hatch.

Silkworms are the larvae (caterpillars) that hatch from the eggs. They are a creamy colour, and have the three recognisable parts of an insect: a head, thorax and abdomen. Interestingly, these creatures are born with six real legs and six false legs at the end of their body. For a period of around thirty days after hatching, the silkworm continuously eats mulberry leaves. During this time, the silkworm grows rapidly to become around 8cm long. As the larvae grows so quickly, they will shed their skin four times over a month.

About a month after they have hatched, they start to spin a cocoon around themselves with one long, thin thread of silk. If unravelled, the thread of silk would measure between 300-900 metres. The silk cocoon will take them two days to make. Once the cocoon has been made, the larva will then turn into a brown, hard pupa.

Silk Facts

- The art of making silk began over 5000 years ago in China. It was kept secret for thousands of years.
- Around 2,500 silkworms are used to make half a kilo of silk.
- It takes around 150 silkworm cocoons to make one single tie.
- The cocoons are boiled in water to extract the silk.

After about seven days, the pupa becomes an adult moth. The moth makes a tiny hole in the cocoon and climbs out. The adult moth cannot fly because its body is too heavy for its thin wings. As the moth does not eat, it will only live for a period of five to ten days. Before they die, the male and female moth will mate to continue the silkworm life cycle.

Questions

1. Fill in the length of each stage of the silkworms' life cycle.

Egg	Larva	Pupa	Moth

2. Before they became extinct in the wild, where did the silkworm live?

3. A silkworm is an insect. How do you know?

4. Why does the adult moth not live for very long?

5. Why does the silkworm life cycle continue?

6. How many silkworms would be needed to make a kilo of silk?

7. Draw and label the life cycle of the silkworm.

8. Why do you think people keep silkworms as pets?

Answers

1. Fill in the length of each stage of the silkworms' life cycle.

Egg	Larva	Pupa	Moth
14 days	**20 - 30 days**	**7 days**	**5 - 10 days**

2. Before they became extinct in the wild, where did the silkworm live?
   Before they became extinct in the wild, the silkworm were native to Africa and Asia.
3. A silkworm is an insect. How do you know?
   A silkworm is an insect because it has three body parts: a head, thorax and abdomen.
4. Why does the adult moth not live for very long?
   An adult moth does not live for very long as they do not eat.
5. Why does the silkworm life cycle continue?
   The silkworm life cycle continues because adult moths mate before they die.
6. How many silkworms would be needed to make a kilo of silk?
   5000 silkworms would be needed to make a kilo of silk.
7. Draw and label the life cycle of the silkworm.
   Students draw the life cycle.
8. Why do you think people keep silkworms as pets?
   Answers will vary.

Silkworm Life Cycle

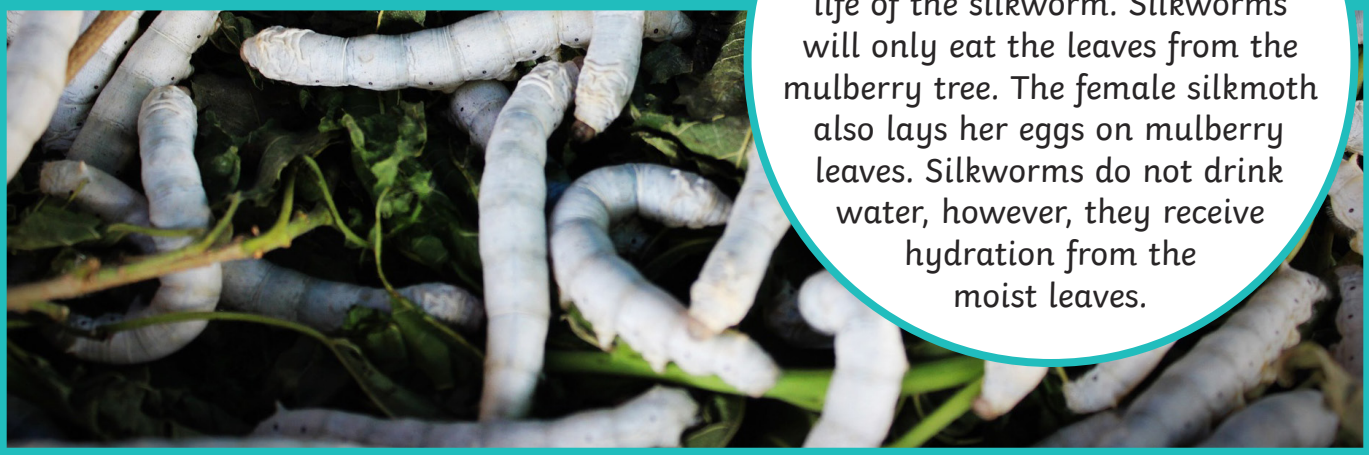
Silkworms are an important insect as they create silk – an important commodity which is used for clothing, art, decorations and furniture coverings such as curtains and bedding. The scientific name for the silkworm is Bombyx mori. Like other insects, there are four stages in a silkworm's life cycle.

Silkworms are indigenous to Africa and Asia, however, they are extinct in the wild and are only found in silk factories and in homes as pets. Silkworms prefer a warm climate of between 18°C to 25°C and, if it is too cold, the eggs can hibernate until a preferable temperature is reached. Breeders can refrigerate eggs to allow them to choose when they want their silkworms to hatch.

Silkworms start as tiny, sticky eggs laid in lines on mulberry leaves. Three hundred and five hundred eggs can be laid by the female moth. The eggs are a yellowish colour but turn black before hatching. After fourteen days, the silkworms will begin to hatch. Silkworms are the cream-coloured larvae, which hatch from the eggs and that have the three distinctive features of an insect: a head, thorax and abdomen. Each silkworm has six real legs and six false legs, pseudopods, at the end of its body. For a period of twenty to thirty days after hatching, they continuously eat mulberry leaves – in fact, this is the only organism they eat!

Did You Know?

The mulberry tree is extremely important to the life of the silkworm. Silkworms will only eat the leaves from the mulberry tree. The female silkmoth also lays her eggs on mulberry leaves. Silkworms do not drink water, however, they receive hydration from the moist leaves.



The silkworm may start life as a very tiny caterpillar, however, they experience a period of rapid growth, when they can reach 8cm in length. As the larvae grow so quickly, their skin moults four times over a month. On the final occasion that their skin moults, their body becomes tighter in preparation for the pupa stage.

About a month after they have hatched, the larvae will stop eating and begin to turn a clear, yellowish colour. They start to spin a cocoon around themselves with one long, thin thread of silk. If unravelled, the thread of silk would unravel to a total length ranging from 300m to 900m. The silk cocoon is made over a two-day period. After the cocoon has been constructed, the larva will then turn into a brown, hard-shelled pupa.

Silk Facts

- The practice of making silk began over 5000 years ago in China. It was kept secret for thousands of years.
- Around 2,500 silkworms are used to make half a kilo of silk.
- It takes around 150 silkworm cocoons to make one single tie.
- The cocoons are boiled in water to extract the silk.
- Silk is one of the strongest natural fibres in the world.

After a seven-day period, the pupa turns into an adult moth. The moth makes a tiny hole in the cocoon and climbs out. The adult moth cannot fly because its body is too heavy for its paper-like wings. As the moth does not eat, they will only survive for a maximum of ten days. Before they die, the male and female moth will mate so that the life cycle can continue.

Questions

1. Why is silk such an important commodity?

2. How long is the life of a silkworm?

3. What type of climate is optimal for silkworms to hatch?

4. A silkworm is an insect. How do you know?

5. Why does the adult moth not live for very long?

6. Why are mulberry trees essential to the life of the silkworm?

7. Why does the silkworm life cycle continue?

8. How does a silkworm drink?

9. Draw and label the life cycle of the silkworm.

10. Why do you think people keep silkworms as pets?

Answers

1. Why is silk such an important commodity?
   It is an important commodity because it is used for clothing, art, decorations and furniture coverings such as curtains and bedding.

2. How long is the life of a silkworm?
   Answers will vary but would range from about 40-63 days.

3. What type of climate is optimal for silkworms to hatch?
   A warm climate is optimal for silkworms to hatch.

4. A silkworm is an insect. How do you know?
   A silkworm is an insect because it has three body parts: a head, thorax and abdomen.

5. Why does the adult moth not live for very long?
   An adult moth does not live for very long as they do not eat.

6. Why are mulberry trees essential to the life of the silkworm?
   Mulberry trees are essential to silkworms as they exclusively eat mulberry leaves and the adult moths lay their eggs on their leaves.

7. Why does the silkworm continue?
   The silkworm life cycle continues because adult moths mate before they die.

8. How does a silkworm drink?
   Silkworms do not drink water, however, they receive hydration from the moist leaves of the mulberry tree.

9. Draw and label the life cycle of the silkworm.
   Students draw the life cycle.

10. Why do you think people keep silkworms as pets?
    Answers will vary.