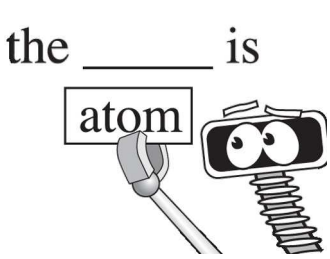


CLOZE-ing in on Science!

5.10C: Metamorphosis
Organisms and Environments

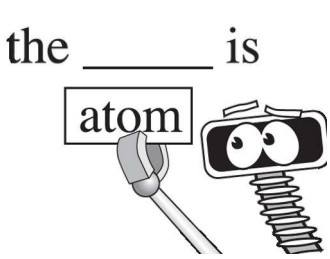
Name: _____ Date: _____

Key Concept 1: Complete metamorphosis in insects involves four distinct differences in life stages, including egg, larva, pupa, and adult.

Passage

Some of the most familiar insects undergo complete metamorphosis. Once the _____ is laid in this type of metamorphosis, an insect will develop in the egg and then _____, or emerge, as a larva. During the larval stage the insect often looks worm-like, such as caterpillars of butterflies, grubs of beetles, or maggots of flies! Each of these insects also undergoes a change where they cover themselves with a special case and undergo their transformation into adults. Here, they each _____ in different ways but each _____, or comes out, as an adult!

Illustration



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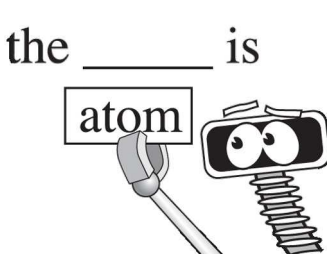
5.10C: Metamorphosis
Organisms and Environments

Key Concept 2: Incomplete metamorphosis in insects involves three life stages including egg, nymph, and adult.

Passage

Incomplete metamorphosis is slightly different than what we observe in complete metamorphosis. Once again, the _____ is laid, and the insect develops until _____, or coming out, as a _____. At this stage, they look very _____ to the adult, but might be smaller and without wings. As they grow, they only change their outer coverings such as cockroaches do. The _____ stages can be many, as the insects are gradually increasing in _____ and many eventually will grow a set of _____ as in adult cockroaches.

Illustration



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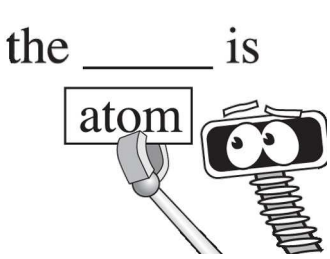
5.10C: Metamorphosis
Organisms and Environments

Key Concept 3: Butterflies and beetles undergo complete metamorphosis (four stages), while grasshoppers and walking sticks undergo incomplete metamorphosis (three stages).

Passage

Some insects undergo _____ stages of development including dragonflies. Other insects undergo only _____ different stages such as silverfish or walking sticks. Remember, the nymph stage is only seen in _____ metamorphosis, and although there may be 7-8 molts, this is the same nymph stage. The pupa stage is only seen in _____ metamorphosis, and is a time where the insect changes a whole lot. Think about ladybugs, moths, or bees – their larval and pupal stages are very very _____than, or distinct from, their adult stage.

Illustration



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5.10C: Metamorphosis

Organisms and Environments

Answer Key

Some of the most familiar insects undergo complete metamorphosis. Once the egg is laid in this type of metamorphosis, an insect will develop in the egg and then hatch, or emerge, as a larva. During the larval stage the insect often looks worm-like, such as caterpillars of butterflies, grubs of beetles, or maggots of flies! Each of these insects also undergoes a change where they cover themselves with a special case and undergo their transformation into adults. Here, they each develop in different ways but each emerges, or comes out, as an adult!

Incomplete metamorphosis is slightly different than what we observe in complete metamorphosis. Once again, the egg is laid, and the insect develops until hatching, or coming out, as a nymph. At this stage, they look very similar to the adult, but might be smaller and without wings. As they grow, they only change their outer coverings such as cockroaches do. The nymph stages can be many, as the insects are gradually increasing in size and many eventually will grow a set of wings as in adult cockroaches.

Some insects undergo four stages of development including dragonflies. Other insects undergo only three different stages such as silverfish or walking sticks. Remember, the nymph stage is only seen in incomplete metamorphosis, and although there may be 7-8 molts, this is the same nymph stage. The pupa stage is only seen in complete metamorphosis, and is a time where the insect changes a whole lot. Think about ladybugs, moths, or bees – their larval and pupal stages are very very different than, or distinct from, their adult stage.