



Revision Date	April 18, 2020
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Department of Curriculum & Instruction

Second Grade Science

Unit	2-9 Investigating Insect Life Cycles
Time Frame	5/3-6/2
Big Ideas	<ol style="list-style-type: none"> 1. Insects, such as grasshoppers and butterflies, undergo distinct changes during their lives to complete their life cycles. 2. Most insects go through four stages, including egg, larva, pupa, and adult, whereas some insects go through three stages, including egg, nymph, and adult. 3. An insect's behavior and appearance can be very different depending on what stage it is at in its life cycle. For example, pupae are dormant, while larvae typically eat.
Essential Questions	<ol style="list-style-type: none"> 1. What is the life cycle of an insect? 2. What observations can we make about the stages in the life cycle of an insect? 3. What records can we make from our observations of insect behavior

TEKS / Student Expectations	Skills	Concepts
SCI.2.1A Identify, describe, and demonstrate safe practices as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately.	Identify Describe Demonstrate	SAFE PRACTICES Including, but not limited to: <ul style="list-style-type: none"> • Wearing safety goggles or chemical splash goggles, as appropriate • Washing hands • Using materials appropriately • Follow classroom and outdoor safety guidelines, as outlined in Texas Education Agency-approved safety standards • Handle organisms appropriately
SCI.2.2A Ask questions about organisms, objects, and events during observations and investigations.	Ask	QUESTIONS DURING OBSERVATIONS AND INVESTIGATIONS Including, but not limited to: <ul style="list-style-type: none"> • Events
SCI.2.2B Plan and conduct descriptive investigations.	Plan Conduct	INVESTIGATIONS Including, but not limited to: Descriptive
SCI.2.2C Collect data from observations using scientific tools.	Collect	DATA FROM OBSERVATIONS USING SCIENCE TOOLS Including but not limited to: <ul style="list-style-type: none"> • Use tools appropriately



TEKS / Student Expectations	Skills	Concepts
		<ul style="list-style-type: none"> • Possible examples may include <ul style="list-style-type: none"> ○ Hand lenses thermometers
SCI.2.2D Record and organize data using pictures, numbers, and words	Record Organize	DATA Including but not limited to: <ul style="list-style-type: none"> • pictures • graphs <ul style="list-style-type: none"> ○ pictographs ○ bar graphs • numbers words
SCI.2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations.	Communicate Justify	OBSERVATIONS Including, but not limited to: <ul style="list-style-type: none"> • Student-generated data from simple descriptive investigations EXPLANATIONS Including, but not limited to: <ul style="list-style-type: none"> • Making claims from observations • Providing evidence from observations in order to support claims Using reasoning to explain or justify the claims
SCI.2.2F Compare results of investigations with what students and scientists know about the world.	Compare	RESULTS OF INVESTIGATIONS Including but not limited to: What students and scientists know about the world
SCI.2.3B Make predictions based on observable patterns.	Make	PREDICTIONS Including but not limited to: <ul style="list-style-type: none"> • Based on observable patterns <ul style="list-style-type: none"> ○ Patterns in nature <ul style="list-style-type: none"> ▪ Life Cycle ○ Patterns in events
SCI.2.3C Identify what a scientist is and explore what different scientists do.	Identify Explore	WHAT A SCIENTIST IS WHAT DIFFERENT SCIENTISTS DO Including, but not limited to: <ul style="list-style-type: none"> • Specific disciplines scientists study (e.g., botany, zoology, geology, oceanography, meteorology, and ecology) • Scientists to consider exploring at this time:



TEKS / Student Expectations	Skills	Concepts
		<ul style="list-style-type: none"> ○ John Muir (naturalist, conservationist) ○ Eugenie Clark (ecologist; oceanographer- sharks) ○ *Amelia Earhart (pilot) ○ *Robert Fulton (first commercially successful steamboat) <p>*Correlate with Social Studies TEKS 2.4B</p>
<p>SCI.2.4A Collect, record, and compare information using tools, including computers, hand lenses, rulers, plastic beakers, magnets, collecting nets, notebooks, and safety goggles or chemical splash goggles, as appropriate; timing devices; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquariums.</p>	<p>Collect</p> <p>Record</p> <p>Compare</p>	<p>INFORMATION USING TOOLS</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> ● Computers ● Hand lenses ● Plastic beakers ● Notebooks <p>Safety goggles or chemical splash goggles</p>
<p>Supporting SCI.2.10C Investigate and record some of the unique stages that insects such as grasshoppers and butterflies undergo during their life cycle.</p>	<p>Investigate, Record</p>	<p>Investigate, Record</p> <p>SOME OF THE UNIQUE STAGES THAT INSECTS UNDERGO DURING THEIR LIFE CYCLE</p> <p>Including, but not limited to:</p> <ul style="list-style-type: none"> ● Life cycle – sequential stages of growth and development that an organism goes through in its lifetime ● Life cycles of insects <ul style="list-style-type: none"> ○ Grasshoppers <ul style="list-style-type: none"> ● Egg ● Nymph <ul style="list-style-type: none"> ○ Eating and growing stage ○ Molts several times before reaching the adult stage ○ Looks like a smaller version of the adult ● Adult <ul style="list-style-type: none"> ○ May acquire wings that it lacked as a nymph ○ Insect has similar body parts throughout its development ○ Has three body sections, six legs, two antennae, and usually wings



TEKS / Student Expectations	Skills	Concepts
		<ul style="list-style-type: none"> • There is one stage between the egg and the adult ○ Butterflies <ul style="list-style-type: none"> • Egg • Larva (caterpillar) <ul style="list-style-type: none"> ○ Eating and growing stage • Pupa <ul style="list-style-type: none"> ○ Transforming stage • Adult <ul style="list-style-type: none"> ○ Has three body sections, six legs, two antennae and usually wings • There are two stages between the egg and adult ○ Other possible examples may include: <ul style="list-style-type: none"> • Moths • Beetles <p>Bees</p>

Tier I Instructional Strategies – Classroom Instruction for All Students

Misconceptions:

- **Students may think that all animals do not go through a life cycle, or that all animals go through the same life cycle, rather than different organisms having unique stages in their life cycles.**

There are some excellent interactive videos to go through with your students that are a part of your online textbook resources.

To access them simply follow the steps below:

1. Log on to Judson ISD teacher portal





2. Click on your HMH ThinkCentral SAML icon

Resources

Journeys TX 2011

Grade **KG** 1 2 3 4 5

3. Under Resources, select TX Science Fusion and grade



Critical Writing Prompts

All insects go through a life cycle. Pick an insect you have observed. What are the stages of its life cycle? List and describe each stage. How is the life cycle of a butterfly different from the life cycle of a grasshopper?

Vocabulary

Adult
Larva
Life cycle

Metamorphosis
Molt

Nymph
Pupa

Sample STAAR or STAAR-Like Assessment Items

[Assessment Link](#)

Resources

*The suggested resources are one of many ways to address the TEKS student expectation.

- [ThinkCentral](#)
- [Lead4ward Instructional Strategies Playlist](#)
- [Bill Nye Life Cycles](#)
- [Butterfly, Frog, and Insect Life Cycle Interactive Notebook](#)
- [Diary of a Butterfly Writing Activity](#)

