THINGS WITH WINGS

Grades K-3: Week 3, Day 1

EXPLORE INSECT WINGS

WELCOME

(5 min)

Introduction: Welcome your students. Be friendly.

GAME TIME

(30 min)

Materials:

- Ball
- Two bases

GRAB AND DASH

Say: **To observe insects you need to be quick on your feet. Sometimes, scientists need to catch insects to see them close up. Today, we will play a fast, fun game called "Insect Grab and Dash." The ball is your insect and the base is your basecamp. You will race another player to grab the ball and bring it back to your camp.**

1. Divide the players into two teams. Set up a base for each team about 40 feet apart. Place the ball in the center of the play area between the two bases.
2. Teams line up at their base, facing the center where the ball is placed.
3. When the teacher says "Go!" a player from each team runs to grab the ball in the center.
4. The player who grabs the ball must sprint back to their base. The other player will chase them, trying to tag them before they reach base.
5. If the player with the ball makes it back to their base without being tagged, their team gets a point. If the player is tagged before reaching their base, the other team gets a point.
6. Play to five points or until everyone has a turn.

READ AND DISCOVER

(30 min)

READ ABOUT LUCY EVELYN CHEESMAN

Read: Play this video of the amazing world of insects as you read.
https://www.youtube.com/watch?v=uTwy7wZyiaM

Read the profile of the British entomologist and traveler Lucy Evelyn Cheesman to your students. Use the guiding questions to lead a class discussion or you can think of your own prompts.

READ AND DISCOVER

(Continued)

Discussion questions: (Continued)

1. What made Lucy special when she looked at bugs? (What did she notice or do that others didn't?)
2. How did Lucy find and study bugs in creative ways?
3. How did Lucy stay curious and keep learning about insects, even when she couldn't go to school?
4. Why do you think Lucy invited kids to help her collect bugs? Would you want to go on a bug hunt too?
5. If you could talk to Lucy, what would you ask her? Or what insect would you like to learn more about—like she did with glow-worms?

MEDIA

(10 min)

CURIOUS GEORGE GOES ON A BUG ADVENTURE

Say: It's fun to imagine what a bug's world might be like. Let's watch this curious monkey shrink down to bug size and explore.

Big Bugs, Tiny George | CURIOUS GEORGE
https://www.youtube.com/watch?v=bpQRZTD-LUk

STEM CRAFT

(30 - 40 min)

Materials:

- Wildflower seeds
- Clay
- Dirt

CRAFT A WILDFLOWER SEED PELLET!

Say: **You are going to make clay seed pellets to plant wildflowers. You will mold seeds into clay pellets which will protect the flower seed from birds, pests, and extreme weather. The clay will also keep the seed moist when it is watered.**

What you'll do:

1. Mix a tiny bit of dirt with your clay, and mush it all together. Make a lump of clay about the size of a gummy bear.
2. Add about four wildflower seeds to your lump of clay.
3. Craft your lump of clay into the shape of a gummy bear or any other interesting shape you like.
4. Have your teacher write all of your names on a piece of paper. Leave your wildflower seed pellet by your name to dry out.
5. To plant the pellet, bury it half way in the dirt.

LEARN TO TALLY

(20 min)

LEARN OR REVIEW TALLY MARKS

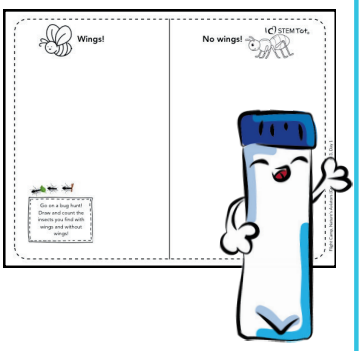
Read the story 'Bug Hunt' to your students and help them learn to tally as they count. Encourage students to find the hidden creatures in the illustrations and count them. Use the rhyme: "One-two-three-four... Number five shuts the door!" to help students remember that tally marks are made in groups of five.

STEM TIME

(60 min)

Materials:

- Bug Hunt worksheet
- Test tubes, clear plastic bags, or other collecting containers
- Optional: (Magnifying glasses, microscopes, phone camera)



MUSEUM WALK

(20 min)

Materials:

- Folded scrap paper

GO ON A BUG HUNT

Students will go outside to look for bugs. They will catch them and bring them back for observation. Can they find any with wings.

Say: **Explorers, get ready to search for insects, just like Lucy! We will look high and low, in trees and under bushes and rocks. Entomologists need to look very carefully and take time to make observations. If you catch a bug, observe it up close, then carefully let it go.**

Prep beforehand:

Gather collecting containers, magnifying glasses or microscopes if available.

What you'll do:

1. Take students outside and let them search the school ground for bugs. Tell them to run to you whenever they have spotted a bug. When they hear you call out “Bug Alert!” everyone needs to stop what they’re doing and run towards you to gather together and make the tally mark on their sheet.
2. Allow students to take time to explore! Encourage them to look under rocks, in the grass, and in bushes.
3. If they catch a bug, they may observe it in their container. They can take an even closer look if you have magnifying glasses, a microscope or your phone’s zoom camera.
3. Allow students 15 minutes or so to draw the things they noticed during their exploration.
4. Release the bugs outside and clean up/put away your tools.

GO ON A VIRTUAL MUSEUM TOUR

Say: **When scientists like Lucy discover something special—like an insect or a feather—they save it in a museum. That way, it can teach people about science for many years to come. Today, we’re heading to London’s Natural History Museum, one of the most famous museums in the world! It holds millions of real specimens collected by explorers, including insects and birds that inspired flight.**

What you’ll do:

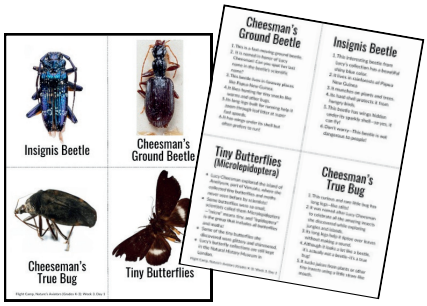
1.Get students excited about doing a museum walk. Say: **Museums hold some of the world’s most important treasures, so we walk carefully and respectfully—just like real scientists and explorers.**

MUSEUM VISIT
(Continued)

2. Students practice how to do a museum walk:
   - Walk in a line or small group (Take a short walk).
   - Keep your hands behind your back so you don't accidentally touch anything.
   - Use your eyes like magnifying glasses—notice colors, shapes, and tiny details.
   - If you have a question, whisper it to a friend or jot it down to save for discussion time. Students fold a small piece of paper and keep it in their pocket or hand.
3. Open this link to take a virtual museum walk with your students:
The Natural History Museum, London, United Kingdom
https://shorturl.at/mpDTv
4. The STEM Coach uses the arrow and tilt features to navigate through the museum. You can click on the photos at the bottom to switch rooms. Challenge students to write or draw one thing they liked and thought was cool during the walk.
5. Navigate through different parts of the museum with your students. Call on student volunteers to share what they notice!

MINI-FLYER PLAY!
(20 - 30 min)

MINI-FLYER BUG CATCHING



Teacher prep:
Cut out the four insect cards. Find a way to attach one to your mini-flier drone with tape or string and a paperclip. Practice before the activity.

What you'll do:

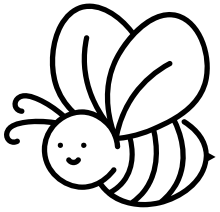
Say: **Insects are always on the move. That's what made Lucy's job so tricky! She had to be quick to catch bugs to study. Today, our mini-flier is one of Lucy's bugs. I'll attach a paper bug to the mini-flier and let it go. If you catch the bug, read one fact from the back of the card for everyone to hear, then release the bug back into the air for someone else to catch!**

After all the facts are read, have students say one interesting thing they notice about the bug. Repeat for all four bugs.

STEM GAME
(10 min)

JUMP AND COUNT

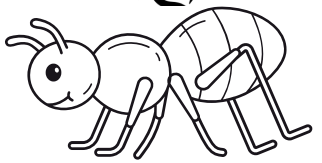
Say: We are going count insects, just like Lucy. Play this video:
https://www.youtube.com/watch?v=xup3YCi1HfM
As they watch the video, every time students see a new insect, they jump and count!



Wings!

Go on a bug hunt! Draw and count the insects you find with wings and without wings!

No wings!



Insignis Beetle

Cheesman's Ground Beetle

Cheeseman's True Bug

Tiny Butterflies

Cheesman's Ground Beetle

1. This is a fast-moving ground beetle.
2. It is named in honor of Lucy Cheesman! Can you spot her last name in the beetle's scientific name?
3. This beetle lives in faraway places like Papua New Guinea.
4. It likes hunting for tiny snacks like worms and other bugs.
5. Its long legs built for running help it zoom through leaf litter at super fast speeds.
6. It has wings under its shell but often prefers to run!

Insignis Beetle

1. This interesting beetle from Lucy's collection has a beautiful shiny blue color.
2. It lives in rainforests of Papua New Guinea
3. It munches on plants and trees.
4. Its hard shell protects it from hungry birds.
5. This beetle has wings hidden under its sparkly shell—so yes, it can fly!
6. Don't worry—This beetle is not dangerous to people!

Tiny Butterflies (Microlepidoptera)

- Lucy Cheesman explored the island of Aneityum, part of Vanuatu, where she collected tiny butterflies and moths never seen before by scientists!
- Some butterflies were so small, scientists called them Microlepidoptera —"micro" means tiny, and "lepidoptera" is the group that includes all butterflies and moths!
- Some of the tiny butterflies she discovered were glittery and shimmered.
- Lucy's butterfly collections are still kept in the Natural History Museum in London.

Cheesman's True Bug

1. This curious and rare little bug has long legs—like stilts!
2. It was named after Lucy Cheesman to celebrate all the amazing insects she discovered while exploring jungles and islands.
3. Its long legs help it tiptoe over leaves without making a sound.
4. Although it looks a lot like a beetle, it's actually not a beetle–it's a true bug!
5. It sucks juices from plants or other tiny insects using a little straw-like mouth.