

Lesson 1 - Fact or Fiction

PRINTED MATERIALS

- Fact or Fiction response cards (per student)
- Student sheet- Fact or Fiction- What Do You Know About Bats? (per student)

Lesson 2 - Anatomy of a Bat

PRINTED MATERIALS

- Diagram of the bat (per student or group)
- Anatomy of a Bat information sheet (per student or group)
- Structure and Function Card Sort (per group)

Lesson 3 - Studying Bats

PRINTED MATERIALS

- 5 bat wing patterns weighted with pennies
- Power point and script for: Studying Bats: The How and Why
- Bat Survey Data Table (per student)
- Bat Information cards (per group)

REUSABLE

- 5 triple beam balances
- 5 metric rulers

Lesson 4 - Experimenting with Flight

PRINTED MATERIALS

- Bat Glider template (per student)
- Experimenting with Flight Lab Sheet (per student)

REUSABLE

- Scissors
- Stopwatch
- Paper clips
- Measuring tape or meter stick

CONSUMABLE

- Different types of paper (copy, index, newspaper, construction, etc....)
- Tape

Lesson 5 - Engineering a Bat Wing

PRINTED MATERIALS

- Engineering Design Process diagram displayed

CONSUMABLE

- Construction paper, straws, thin string, scotch tape, scissors, toothpicks, popsicle sticks, coffee filters, copy paper, wax paper, pipe cleaners, and paper towel rolls and/or any consumable items available.

Lesson 6 - Echolocation

REUSABLE

- Blindfold, eye mask, or safety goggle filled in with soft cloth/felt

Lesson 7 - Biomimicry

PRINTED MATERIALS

- Engineering Design Process diagram displayed

CONSUMABLE

- Construction paper, straws, thin string, scotch tape, scissors, toothpicks, popsicle sticks, coffee filters, copy paper, wax paper, pipe cleaners, and paper towel rolls and/or any consumable items available

Lesson 8 - Hibernation

PRINTED MATERIALS

- Bat Hibernation & Body Temperature Student Response sheet (per student)
- Bat Hibernation Power Point

Lesson 9 - Migration

PRINTED MATERIALS

- Bat Migration Map Student Response Sheet (per student)
- Migration Map (per student or group)

Lesson 10 - Migration Game

PRINTED MATERIALS

- 1 Bat Migration Gameboard (per group)
- 1 set of game cards (per group)
- 1 Student Response Sheet for Migration Game worksheet (per student)

REUSABLE

- 1 die (per group)
- 1 movable game piece (per student)



Lesson 11 - Classifying Bats

PRINTED MATERIALS

- 10 informational bat cards (per group)
- Dichotomous Key for Texas Bats (per student)

Lesson 12 - Energy Pyramid

PRINTED MATERIALS

- Partial Food Web of Mexican free-tailed bat diagram (per student/group)
- The article -The 10% Rule and Energy Pyramid document (per student/group)

REUSABLE

- a beaker or graduated cylinder labeled "Energy Available" with 500 mL of water
- a beaker or graduated cylinder labeled with "Metabolic Processes and Heat Given Off"

Lesson 13 - Bats: Pollinators, Seed Dispersers, and Pest Controllers

PRINTED MATERIALS

- Student Response sheet (per student)
- Student Instructions page (per student)

CONSUMABLE

- index stock paper, construction paper, pipe cleaners, wooden craft sticks, toothpicks, masking tape, glue sticks, aluminum foil, wax paper, cotton balls, string, straws, paper plates, cups and/or any consumable items available.

Lesson 14 - Threats to Bats

PRINTED MATERIALS

- Threats to Bats & Human Impact (per student)
- Power point on Threats to Bats and Human Impact

Lesson 15 - Engineering a Bat Garden

PRINTED MATERIALS

- Engineering Design Process diagram displayed
- Optional: Garden Budget sheet (per student/group)
- Optional: Copy Student Planning Sheet (per student/group)

CONSUMABLE

- Graph paper (per student)

Lesson 16 - Conservation Project

PRINTED MATERIALS

- Conservation Project Ideas document (per student)

Lesson 17 - Engineering a Zoo Habitat

PRINTED MATERIALS

- Engineering Design Process diagram displayed

CONSUMABLE

- Index stock paper, construction paper, pipe cleaners, wooden craft sticks, toothpicks, masking tape, glue sticks, aluminum foil, wax paper, cotton balls, string, straws, paper plates, cups and/or any consumable items available.