

MR. FAB

Grade Level or Special Area: Third Grade

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Length of Unit: 8

I. ABSTRACT

This unit should be taught in sequence. The focus of the unit will be on the classification of animals. The lessons enable the students to identify the five classes of vertebrates and their characteristics. The students will be assessed with various projects and activities while working in whole groups, cooperative groups, and individually. Upon completion of their unit, students will engage in a culminating activity, which will include the five classes of vertebrates.

II. OVERVIEW

- A. Concept Objectives
 - 1. Students will develop a more expansive vocabulary.
 - 2. Students will understand characteristics and classifications of animals.
- B. Content from the *Core Knowledge Sequence*
 - 1. Animal classification
 - 2. Vertebrates or invertebrates.
 - 3. Warm-blooded or cold-blooded animals.
- C. Skill Objectives
 - 1. Students will answer questions about animal classification.
 - 2. Students will write information obtained during the lesson.
 - 3. Students will identify animals as warm-blooded animals, cold-blooded animals, vertebrate, or invertebrate animals.

III. BACKGROUND KNOWLEDGE

- A. For Teachers
 - 1. Information on animal classification from *What Your Third Grader Needs to Know*
- B. For Students
 - 1.

IV. RESOURCES

- A. Hirsch, E.D. *What Your Third Grader Needs to Know*. New York: Dell Publishing, 1994, ISBN 0-38-31257-1.

V. LESSONS

Lesson One: Vertebrate Classification Introduction

- A. *Daily Objectives*
 - 1. Concept Objective(s)
 - a. Students will develop a more expansive vocabulary.
 - b. Students will understand characteristics and classifications of animals.
 - 2. Lesson Content
 - a. Animal classification
 - b. Vertebrates
 - 3. Skill Objective(s)

- a. Students will answer questions about vertebrate classification.
- b. Students will work together cooperatively.

B. *Materials*

1. *What Your Third Grader Needs to Know*
2. white lab coat and/or large men's white button up shirt
3. masking tape
4. safety pins
5. cut out pictures of animals from magazines (one from each vertebrate class)
6. scissors
7. wire spectacles or glasses (optional)
8. CD or cassette player
9. CD or cassette tape of "Weird Science" theme song
10. sentence strips
11. pencils
12. crayons, colored pencils, and/or markers
13. Appendix A

C. *Key Vocabulary*

1. vertebrae-any of the bones or segments composing the spinal column in man and higher animals that encases the spinal cord.
2. vertebrate-having a backbone or spinal column; belonging to the group of animals having a brain enclosed in a skull or cranium and a segmented spinal column, including mammals, birds, reptiles, amphibians, and fish.
3. classify-to arrange or organize into groups based on like characteristics
4. spinal column-the series of vertebrae in a vertebrate animal forming the axis of the skeleton and protecting the spinal cord; spine, backbone.
5. acronym-a word formed by the initial letters or groups of letters in a set or phrase

D. *Procedures/Activities*

1. Tell students that today they are going to learn how scientists classify animals or put them into groups based on like traits or characteristics.
2. Ask students who have brown hair to stand up. Have them stand in one corner of the room. Ask students who have blonde hair to stand in another corner of the room. Ask students with black hair to stand in another corner of the room. Ask students with red hair to stand in another corner of the room.
3. Once students have been "classified," ask the students to explain what we just did (classified the students in our class according to hair color).
4. Have all students sit back down.
5. Explain to the students that, just as they were classified according to their hair color, animals are classified according to similar characteristics. Most are classified based on their skin, where they live, what they eat, and how they raise their babies.
6. Tell students that today they are going to meet a fabulous scientist. This scientist is responsible for classifying all the vertebrate animals. Explain to students that vertebrates are animals that have a backbone.
7. Tell the students that this very fabulous scientist, MR. FAB for short, is going to visit their classroom.
8. Play the "Weird Science" music. Go into the hallway and/or classroom closet (if available) and put on the MR. FAB lab coat (see Appendix A) and spectacles (optional).

9. Come back into the classroom and introduce yourself as MR. FAB, the scientist. Explain that MR. FAB is an acronym to help them remember all the classifications of vertebrate animals.
10. Tell students the “M” stands for mammals. Ask students if they can point out a picture of a mammal on MR. FAB’s lab coat. Tell students they will be learning more about mammals soon.
11. Ask students if they know what the “R” stands for. “R” is for reptiles. Ask students to locate a reptile on MR. FAB’s lab coat.
12. Ask students what the “F” stands for. Have students point out a fish on the lab coat.
13. Ask the students what they think “A” might stand for. Have the students point out an amphibian on the lab coat.
14. The last category starts with a “B.” Have the students name the category of birds and point out a bird on your lab coat.

E. *Assessment/Evaluation*

1. Break students into several groups. Students are directed to decide what their own MR. FAB (a scientist) would look like, sound like, act like, etc. Students then decide upon one student in each group to role model MR. FAB and one student to interview MR. FAB. Students should also create questions for the interviewer to ask MR. FAB. Example questions: “MR. FAB, what do you like to eat?” “What type of scientist are you?” Students then role-play a talk show or radio show introducing their own MR. FAB.
2. Evaluate students on participation within their groups. Students should create at least 10 questions to ask their MR. FAB and have answers to go with their questions. Questions should relate to a person who studies animals and loves animals. Two students should be prepared to ask and answer questions according to what their group created. These two students should be able to ask and answer in an interview style setting.

Lesson Two: Warm-blooded or Cold-blooded

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Students will develop a more expansive vocabulary.
 - b. Students will understand the characteristics and classifications of animals.
2. Lesson Content
 - a. Warm-blooded or cold-blooded animals.
 - b. Identify that warm-blooded animals keep warm from their body coverings and consuming food for heat energy.
 - c. Identify that cold-blooded animals rely on their surrounding for warmth.
3. Skill Objective(s)
 - a. Students will answer questions about warm-blooded and cold-blooded animals.
 - b. Students will identify warm-blooded animals.
 - c. Students will identify cold-blooded animals.

B. *Materials*

1. *What Your Third Grader Needs to Know*
2. pictures of warm- and cold-blooded animals
3. thermometer

4. fish in a clear container
5. one glass of cold water
6. transparency Appendix B
7. white drawing paper
8. markers or crayons

C. *Key Vocabulary*

1. warm-blooded – having an internal body temperature that is maintained at a constant level regardless of external conditions.
2. cold-blooded – having an internal body temperature that varies with the surrounding air, water, etc.
3. hypothesis – a scientific guess made before the outcome of an experiment.

D. *Procedures/Activities*

1. Show students pictures of different animals both warm- and cold-blooded. Ask students to pay close attention to the characteristics of these animals.
2. Ask students if they know what our body temperature is. Take a student's temperature to share with the class.
3. Ask students if their body temperature changes with the temperature outside. Accept all answers. Explain that our environment does not directly affect our body temperature.
4. Ask students how we keep warm when it is cold outside. Accept all answers. Explain to the students how we are able to keep warm in cold weather.
5. Define warm-blooded.
6. Ask students if they are able to name any animals that might fit into the classification of warm-blooded.
7. Ask students how animals without warm-blooded characteristics are able to keep warm if they are unable to generate their own heat.
8. Define cold-blooded.
9. Ask students if they are able to name any animals that might fit into the classification of cold-blooded.
10. Discuss with students what happens to cold-blooded animals in the winter and why it is so important for them to stay warm.
11. Ask students what they think will happen to a cold-blooded animal if its environment were to become too cold.
12. Show the scientific process worksheet (Appendix B).
13. Fill out the worksheet together as a class.
14. Define hypothesis.
15. Tally the students' hypotheses on the transparency.
16. Take the clear container with the fish inside and put it at the front of the classroom. Slowly pour the glass of cold water into the clear container.
17. Discuss the students' hypotheses.
18. Finish filling out the scientific process worksheet.
19. Review and question students about what they have learned.

E. *Assessment/Evaluation*

1. Students will divide a piece of white paper by folding it in half. They will then draw a warm-blooded animal in its environment keeping warm on one side, and do the same for a cold-blooded animal on the other side. At the bottom of each picture they will define warm-blooded and cold-blooded.
2. Assess drawings and definitions for understanding.

Lesson Three: Vertebrates or Invertebrates

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Students will develop a more expansive vocabulary.
 - b. Students will understand characteristics and classifications of animals.
2. Lesson Content
 - a. Vertebrates or invertebrates.
 - b. Identify that vertebrates have backbones and internal skeletons.
 - c. Identify that invertebrates do not have backbones or internal skeletons.
3. Skill Objective(s)
 - a. Students will answer questions about vertebrates and invertebrates.
 - b. Students will identify invertebrate animals.

B. *Materials*

1. *What Your Third Grader Needs to Know*
2. strand of beads
3. silly putty in the shape of a worm
4. silly putty for students
5. transparency Appendix C
6. magazines
7. white drawing paper
8. scissors
9. glue
10. pictures of animals on Appendix C

C. *Key Vocabulary*

1. vertebrates- having a backbone or spinal column.
2. invertebrates- lacking a backbone or spinal column.
3. insects-small animals characterized by having three pairs of legs and a body segmented into the head, abdomen, and thorax and usually having two pairs of wings.
4. aquatic- consisting of, related to, or being in water.
5. terrestrial- of, relating to, or composed of land.
6. microscopic- to small to be seen by the unaided eye but large enough to be studied under a microscope.
7. decomposers- an organism that feeds on or breaks down dead plant or animal matter thus making organic nutrients available to the ecosystem.
8. food web- food chains in an ecological community.

D. *Procedures/Activities*

1. Show students a strand of beads. Review vertebrae (if studied skeletal system) or introduce vertebrae. Show students how a vertebrae is like a strand of beads.
2. Tell students there are five groups of animals that are classified as vertebrates (MR. FAB – mammals, reptiles, fish, amphibians, birds). Tell students that they will learn more about each one of these animals later in the unit.
3. Define invertebrates.
4. Show students silly putty in the shape of a worm. Stand the silly putty on one end and let it fall over.
5. Tell students that invertebrates are like the silly putty because they do not have a backbone to hold it up.

6. Allow students to manipulate the silly putty for a few minutes.
 7. Tell students that invertebrates are found in all aquatic and terrestrial environments, usually smaller than vertebrates, but can range in size from microscopic forms to giant squids, are important in the food web because they recycle organic matter.
 8. Show students the chart of invertebrates (insects, arachnids, crustaceans, myriapods). Transparency Appendix C.
 9. Discuss and identify animals on the chart. Show pictures of different invertebrates.
 10. Review and question students about what they have learned.
- E. *Assessment/Evaluation*
1. Students create their own webs of invertebrates including pictures illustrated or from magazines. The web should contain a main heading with Invertebrates as the title. At least two categories of invertebrates should branch off from the web. At least three invertebrates from each category should branch off from this section.
 2. Assess webs for correct information.

Lesson Four: Mammals

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Students will develop a more expansive vocabulary.
 - b. Students will understand characteristics and classifications of animals.
 2. Lesson Content
 - a. Animal classification.
 - b. Become familiar with examples of animals in the mammal category.
 - c. Warm-blooded vertebrates.
 3. Skill Objective(s)
 - a. Students will answer questions about mammals.
 - b. Students will identify characteristics of a mammal.
- B. *Materials*
1. *What Your Third Grader Needs to Know*
 2. piece of cloth or item that feels like fur or hair
 3. cardboard box with a hole cut out large enough for a hand to fit through
 4. glue
 5. construction paper
 6. pencils
 7. crayons, colored pencils, or markers
 8. Appendix D and E
- C. *Key Vocabulary*
1. mammal-any vertebrate of the class Mammalia that feeds its young with milk from the female mammary glands, that has the body more or less covered with hair, and that, with the exception of monotremes, brings forth living young rather than eggs.
 2. monotremes-order of mammals that lay eggs, comprising only of the duckbill platypus and the echidna of Australia.
 3. echidna-also called spiny anteater. Live in Australia, Tasmania, and New Guinea have claws and a slender snout and are covered with coarse hair and long spines.

4. duckbill platypus-a small, aquatic, egg-laying mammal having webbed feet and a bill like that of a duck.
 5. marsupial-types of mammals (kangaroo, wombat) that have a marsupium or fold of skin on the abdomen of the female containing the mammary glands and serving as a receptacle for the young.
- D. *Procedures/Activities*
1. Place the fake fur item in the box with a hole in it. Tell students that you have something in the Mystery Box for them to feel. Allow all students to feel the fur inside the box.
 2. Tell students that today they are going to learn what animal has the type of characteristic they just felt. The M in MR. FAB.
 3. Ask them to recall what the M stands for (mammals).
 4. Tell the students there are different animals, including humans, which are classified as mammals.
 5. Discuss the characteristics of mammals in detail. See Appendix D.
 6. Discuss the unique mammals including the duckbill platypus, the echidna and the marsupials. Discuss how Australia, an isolated continent, may have unique animals that are found nowhere else in the world.
 7. Review the characteristics of mammals.
- E. *Assessment/Evaluation*
1. Students will create a pop-up book about mammals. The pop-up should consist of a mammal. Inside the book, students should write characteristics of mammals. See Appendix E.
 2. Evaluate books for correct information.

Lesson Five: Reptiles

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Students will develop a more expansive vocabulary.
 - b. Students will understand characteristics and classifications of animals.
 2. Lesson Content
 - a. Animal classification.
 - b. Become familiar with examples of animals in the reptile category.
 - c. Classify reptiles as cold-blooded, vertebrates.
 3. Skill Objective(s)
 - a. Students will answer questions about reptiles.
 - b. Students will write information obtained during lesson.
 - c. Students will identify characteristics of a reptile.
- B. *Materials*
1. *What Your Third Grader Needs to Know*
 2. cardstock
 3. egg shells
 4. Saran wrap
 5. sunflower seeds
 6. markers or crayons
 7. glue
 8. pictures of the 4 classifications of reptiles (snakes and lizards, turtles, crocodilians, tuatara)

9. glue
10. white drawing paper
11. scissors
12. transparency Appendix F and G

C. *Key Vocabulary*

1. vision- eyesight.
2. pupil-the apparently black circular opening in the center of the iris of the eye, through which light passes to the retina.
3. shed-to rid oneself of something not wanted or needed.
4. molt- to shed periodically part or all of a coat or outer covering which is then replaced by a new covering.
5. tropical-hot and humid.
6. snout-the projecting nose, jaw, or anterior facial part of an animal's head.
7. crocodilians-any of the various reptiles of the order Crocodylia, which includes the alligators, crocodiles, caimans, gavials.
8. gavials- a large reptile of southern Asia, related to and resembling the crocodiles and having a long, slender snout.
9. tutura-a lizardlike reptile that is found only on certain islands off of New Zealand.

D. *Procedures/Activities*

1. Tell students that today they are going to learn the R in MR. FAB.
2. Ask them to recall what the R stands for (reptiles).
3. Tell the students there are 4 animals that are classified as reptiles (lizards and snakes, turtles, crocodilians, tuatara).
4. Discuss the crocodilians and tuatara. Show pictures of these types of animals.
5. Discuss the characteristics of the reptiles in detail. See Appendix F.
6. Review the characteristics by asking students to recall facts that were discussed.

E. *Assessment/Evaluation*

1. Students will make a reptile fact book that will include all of the characteristics of a reptile. See Appendix G for how to create the book.
2. Evaluate students' books for appropriate items and correct facts written in books.
3. Students will share their books with family and friends at the annual science show.

Lesson Six: Fish

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Students will develop a more expansive vocabulary.
 - b. Students will understand characteristics and classifications of animals.
2. Lesson Content
 - a. Animal classification.
 - b. Become familiar with examples of animals in the fish category.
 - c. Classify fish as cold-blooded vertebrates.
3. Skill Objective(s)
 - a. Students will answer questions about fish.
 - b. Students will write information obtained during lesson.

B. *Materials*

1. *What Your Third Grader Needs to Know*

2. pictures of various types of fish
 3. books about fish – library books are fine
 4. one shoebox per group of 4-5 students
 5. blue saran wrap
 6. construction paper
 7. glue
 8. string
 9. markers
 10. crayons
 11. pipe cleaners
 12. sand
 13. scissors
 14. white drawing paper
 15. Appendix H – transparency of fish characteristics
 16. Appendix I – directions to make fish diorama
- C. *Key Vocabulary*
1. gills – the organ on a fish’s side through which it breathes
 2. fins – flap-shaped parts on a fish’s body used to swim and steer
 3. dorsal fin – the fin on a fish’s back that helps to guide it through the water
 4. tail fin – the fin at the end of a fish’s body that helps it to swim
 5. scales – small pieces of hard skin that cover the body of a fish
 6. shark – a large and often fierce fish that feeds on meat and has very sharp teeth
 7. ectothermic – when an animal gets its heat from outside its body
 8. side fins – the fins on either side of a fish that help to steer the fish through the water
- D. *Procedures/Activities*
1. Tell students that they are going to learn the F in MR. FAB.
 2. Ask them to recall what the F stands for (fish).
 3. Discuss and show pictures of the three main types of fish – 1. jawless fish, 2. sharks and rays, 3. bony fish.
 4. Discuss in detail the main characteristics of fish (show transparency H).
 5. Review the characteristics by asking students to recall facts that were discussed.
- E. *Assessment/Evaluation*
1. Students will work in groups to make an underwater diorama that will include all of the main types of fish, including labels of characteristics. See Appendix I for how to create the diorama.
 2. Evaluate students’ projects for appropriate items and correct facts.

Lesson Seven: Amphibians

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Students will develop a more expansive vocabulary.
 - b. Students will understand characteristics and classifications of animals.
 2. Lesson Content
 - a. Animal classification.
 - b. Become familiar with examples of animals in the amphibian category.
 - c. Classify amphibians as cold-blooded vertebrates.
 3. Skill Objective(s)

- a. Students will answer questions about amphibians.
 - b. Students will write information obtained during lesson.
 - c. Students will compare reptiles to amphibians.
- B. *Materials*
- 1. *What Your Third Grader Needs to Know*
 - 2. pencils
 - 3. Copies of Venn diagram
 - 4. pictures of amphibians
 - 5. transparency – Appendix J (characteristics of amphibians)
 - 6. books about amphibians – library books are fine
- C. *Key Vocabulary*
- 1. metamorphosis – the series of changes certain animals go through as they develop from eggs to adults; means “having a double life” in Latin
 - 2. amphibian – a cold-blooded animal with a backbone that lives in water and breathes with gills when young. As an adult, it develops lungs and lives on land
 - 3. limbs – a part of the body used in moving and grasping such as arms and legs
 - 4. spawn – the eggs produced by fish and amphibians
- D. *Procedures/Activities*
- 1. Tell students that today they are going to learn the A in MR. FAB.
 - 2. Ask them to recall what the A stands for (amphibians).
 - 3. Tell the students that there are five animals that are classified as amphibians (frogs, toads, newts, and salamanders).
 - 4. Discuss the characteristics of amphibians in detail. See Appendix J.
 - 5. Discuss the similarities and differences of amphibians and reptiles. Use Appendix L to review reptiles.
 - 6. Show pictures and books of amphibians and reptiles to help visualize differences.
 - 7. Have students create a Venn diagram showing the similarities and differences between amphibians and reptiles.
- E. *Assessment/Evaluation*
- 1. Students will make a Venn diagram that will include similarities and differences between amphibians and reptiles.
 - 2. Evaluate Venn diagram for appropriate items and correct facts.

Lesson Eight: Birds

- A. *Daily Objectives*
- 1. Concept Objective(s)
 - a. Students will develop a more expansive vocabulary.
 - b. Students will understand characteristics and classifications of animals.
 - 2. Lesson Content
 - a. Animal classification.
 - b. Understand that birds have evolved from reptiles.
 - c. Classify birds as warm-blooded, vertebrates.
 - 3. Skill Objective(s)
 - d. Students will answer questions about birds.
 - e. Students will write information obtained during lesson.
 - f. Students will identify facts about birds.
- B. *Materials*
- 1. *What Your Third Grader Needs to Know*
 - 2. large bird feather
 - 3. overhead projector

4. bag of different colored feathers
5. 11x14 (or larger) white paper
6. tape
7. glue
8. markers or crayons
9. scissors
10. chicken bones (cleaned and dried)
11. cow bones (clean and dried)
12. raw chicken egg
13. twigs
14. 3x5 index cards
15. transparency Appendix K and L.

C. *Key Vocabulary*

1. molt – to shed periodically part or all of a coat or outer covering, which is then replaced by a new covering.
2. Hollow – having a cavity inside; not solid.
3. feather – any of the soft, light growths covering the body of a bird.
4. down – soft, fine feathers
5. incubation – to keep in a favorable environment for hatching or developing.

D. *Procedures/Activities*

1. Tell students that today they are going to learn the B in MR. FAB.
2. Ask them to recall what the B stands for (birds).
3. Place the large bird feather on the overhead projector. Ask the students to examine the feather carefully. As a class label the parts of a feather (shaft, outer vane, inner vane, feather tip, notch, parallel barbs, down curved edge, up curved edge, quill)
4. Pass out a chicken bone and a cow bone to groups of 4 or 5 students. Give them about 5 minutes to come up with similarities and differences between the two. Discuss these differences.
5. Invite students up to try to squeeze and break a raw egg with their bare hands. Discuss why this is impossible to do.
6. Discuss all the characteristics of birds in detail. See Appendix K.
7. Review the characteristics by asking students to recall facts that were discussed.

E. *Assessment/Evaluation*

1. Students will make a flip chart containing bird facts. This chart will include all of the characteristics of a bird, plus interesting facts. See Appendix L for how to create the flip chart.
2. Evaluate students' charts for appropriate items and correct facts.

VI. CULMINATING ACTIVITY

- A. Students will incorporate ideas from each classification group of vertebrates into a life-size MR. FAB (mammals, reptiles, fish, amphibians, birds) See Appendix M for directions.
- B. Take a field trip to the zoo. Students must find three animals from each MR. FAB category while at the zoo and write them down.

VII. HANDOUTS/WORKSHEETS

1. Appendixes A-M.

VIII. BIBLIOGRAPHY

Hirsch, Jr. E.D. *What Your Third Grader Needs to Know*. New York: Dell Publishing, 1994, ISBN 0-385-31257-1.

Appendix A
MR. FAB

Directions for making a MR. FAB lab coat:

1. Find a white lab coat or a large, white, button-down men's dress shirt.
2. Cut out pictures of animals from magazines such as *Ranger Rick* and *National Geographic Magazine*. Make sure you have at least one picture of an animal from every vertebrate class represented (Mammals, Reptiles, Fish, Amphibians, and Birds).
3. Tape or safety pin each picture onto the lab coat.
4. Tape or safety pin a sign on the front of the coat that says "MR. FAB!"
5. Now you have your very own MR. FAB lab coat!

Scientific Process Worksheet

Question: What will the fish do when cold water is added to its environment?

Materials: _____

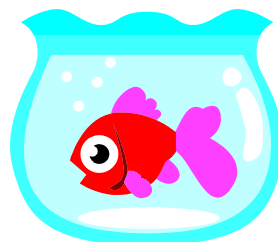
Hypothesis:

- A) The fish will swim faster to keep warm when cold water is added to his environment.
- B) The fish will sink to the bottom of the fishbowl.
- C) _____.

Procedures:

- A) Have fish in a bowl that contains room temperature water for at least 15 minutes.
- B) Slowly pour a glass of cold water into the fishbowl.
- C) Watch what happens and record your data.

Outcome: Was your hypothesis correct? Why do you think the fish did what he did?



Invertebrates

Insects: bees, butterflies, beetles, ants, moths, praying mantis, cicadas, cockroaches, fleas, wasps, and flies.

Arachnids: spiders, scorpions, ticks, and mites.

Crustaceans: crabs, shrimps, prawns, lobsters, crayfish.

Myriapods: centipedes and millipedes.

Mollusks: octopus, squid, cuttlefish, clams, oysters, scallops, snails, slugs, jellyfish.

Characteristics of Mammals:

1. Warm-blooded, meaning they make their own heat.
2. Have hair on their bodies.
3. Breathe with lungs.
4. Baby mammals need care and feeding—adult mammals take care of their young.
5. Female mammals produce milk for their young.
6. Most mammals live on land, although some live in the water. Whales and dolphins are mammals because they breathe with lungs.
7. Unique mammals:
 - Marsupials: kangaroo, wombat have a pouch to carry their young.
 - Duckbill platypus and echidna are the only mammals that lay eggs instead of live birth.

Directions for Pop Up Book:

Materials:

- White drawing paper
- Construction paper
- Scissors
- Glue
- Crayons or markers

1. Fold the white drawing paper in half (hamburger style).
2. Decide where you want the pop up picture to go. Cut a notch in the paper.
3. Fold the notch inside out.
4. Glue the white drawing paper onto the construction paper.
5. Glue the small pop up picture of a mammal (students designed) onto the cutout notch.
6. Design a background for your mammal.
7. Write the name of your mammal and three characteristics of a mammal.
8. Fold the construction paper over the pop up section. Make sure the pop up folds out.
9. On the cover, write your animal name, your name, and include a decoration.

Characteristics of a reptile:

1. Hatch from eggs- left to take care of themselves. They are “mini-adults”.
2. Cold-blooded- receive heat from outside (sun or ground).
3. Dry, thick, scaly skin
4. Shed or molt their skin- several times a year, new skin grows under the old and loosens it.
5. Vertebrate- with a backbone.
6. Great vision- active at night, pupils like slits to see better at night. No eyelids.
7. Go weeks without food.
8. Many colors- most often green or brown.
9. Found all over the world – often tropical or warm areas.
10. Shape- most, long, thin with pointy snout and long tail.
11. Turtles- only reptile with a shell.

Appendix G
MR. FAB

Reptile Fact Book

Page 1- On a ½ piece of cardstock, write (students name) Reptile Book of Facts. Enclose the title in a box or some other design.

Using sunflower seeds, glue the seeds in a pattern covering the entire book except the written area. This will represent a reptile's dry, thick, scaly skin.

Page 2- Fold a ½ piece of white drawing paper into fourths. In ¼ of the paper, write Lizards and snakes. In another ¼ of the paper, write turtles. In another ¼ of the paper, write crocodilians. In the remaining ¼ of the paper, write tuatura. In each section, student writes facts that will help them to remember how to identify each animal group. May also draw or find pictures to put in each section.

Page 3- On a ½ sheet of drawing paper, glue eggshells. Students write facts about reptiles hatching from eggs.

Page 4- On a ½ sheet of drawing paper, draw a sun. Students write facts about reptiles being cold-blooded.

Page 5- On a ½ sheet of drawing paper, draw a backbone. Students write facts about reptiles having a vertebrate.

Page 6- On a ½ sheet of drawing paper, draw reptile eyes. Students write facts about reptiles' eyes.

Page 7- On a ½ sheet of drawing paper, students write facts about reptiles molting their skin. Glue a piece of Saran wrap over the page so that it lifts to show molting skin.

Place pages 1-7 in order and staple.

Characteristics of fish:

1. Some hatch from eggs – left to take care of themselves.
2. Some give live birth – left to take care of themselves.
3. Skin types:
 - Most fish have scales
 - Sharks and rays have a thick, non-scaly layer of skin
4. Vertebrate – have a backbone
5. No eyelids
6. Ectothermic – Get heat from outside their bodies.
7. Can live in fresh or salt water.
8. Found all over the world.
9. Come in all shapes and sizes.
10. Have fins and a back tail to maneuver them through water.
11. Have gills to breathe.

Directions for Fish Aquarium Diorama:

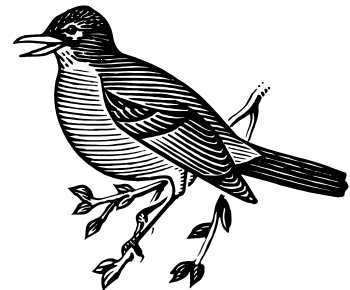
1. Place students in groups of 4 or 5.
2. Give each group one shoebox with a large rectangle cut out of the lid. This will become the “side” of the aquarium.
3. Pass out materials for activity – books & pictures of fish for reference, blue saran wrap, construction paper, glue, string, white drawing paper, markers, crayons, pipe cleaners, glue, sand, and scissors.
4. Instruct the students to decide who will cover the lid of the shoebox with blue saran wrap.
5. The other students begin making fish for their underwater aquarium. Each student should make one shark/ray and one regular fish. They can use any available materials to do this.
6. Once the fish are completed, instruct students to hang the fish from the top of the aquarium with string or have fish sticking up from the bottom with pipe cleaners. They can also glue sand to the bottom of the aquarium for a more realistic effect.
7. All sides of the aquarium walls should be colored or covered with construction paper and decorated with coral (a basic underwater theme).
8. Check dioramas for accuracy and display around the room.

Characteristics of Amphibians:

1. Hatch from jelly-covered eggs in water.
2. Go through metamorphosis and live part of their lives in water with gills and part on land.
3. Amphibians are vertebrates with backbones.
4. Have soft, wet, slimy skin with glands to keep it moist so it doesn't dry out.
5. Use lungs to breathe but also breathe through their skin.
6. Colors – some are bland and some are bright to warn predators that they are poisonous.
7. Ectothermic animals – get heat from outside the body.
8. Live all over the world near the water.

Characteristics of a bird:

1. Warm-blooded – having an internal body temperature that is maintained at a constant level regardless of external conditions.
2. Most can fly
3. Feather – any soft, light growths covering the body of a bird.
 - a. Body temperature
 - b. Protection of body
 - c. Attraction of mates
 - d. Identification of species
 - e. Taking care of
 - f. Molting
4. Down – soft, fine feathers
5. Bones – feathers alone do not permit birds to fly. Birds have extremely lightweight, hollow bones that aid in their flight.
6. Hard-shelled eggs
 - a. Incubation
 - b. Microscopic pores
 - c. Variety of colors, patterns, shapes, and textures
 - d. Most eggs are oval (very strong)
7. Most build nests
8. Care for their young



Bird Facts Flip Chart

Step 1 – At the top of an 11x14 (you may find it easier to use larger paper) piece of paper student should write “Bird Facts”. In the center, student is to create a bird out of different colored feathers, glue, and scissors. Construction paper may be used for the bird’s legs, beak, and eyes.

Step 2 – Students will glue the following onto three 3x5 index cards: feathers, twigs, chicken bone (dried and cleaned); they will then draw the following on the remaining five index cards: an egg, thermometer, vertebrate, a bird flying, and an interesting fact related picture of their choice (one topic on each card).

Step 3 – Students will tape the tops of the index cards onto the 11x14 paper around the bird that they previously made. Above the correct index card they will write the following titles onto the 11x14 paper: Feathers, Nests, Bones, Eggs, Warm-blooded, Vertebrate, Flying, and Interesting Facts (one title above each card).

Step 4 – Under each index card the student will then explain (in complete sentences) the importance of each topic. Students may use books you have selected from the library to find an interesting fact about birds if they cannot recall one from the lesson.

Culminating Activity:

Materials:

1. white bulletin board paper
2. scissors
3. glue
4. markers
5. magazines
6. white drawing paper

Procedure:

1. Students should lie on bulletin board paper and trace their bodies.
2. Cut out the body shapes. This is your MR. FAB.
3. Students write bird on the head, mammal and amphibian on the arms, reptile and fish on the legs.
4. Draw a vertebrae down the center of the body.
5. Students will write facts about each vertebrate in its designated location.
6. Students decorate each vertebrate with correct pictures or symbols that help to identify each animal. For example: feathers on the bird.
7. In one hand of MR. FAB, have the students place a piece of white drawing paper. On the drawing paper, write invertebrates, facts, and draw pictures of types of invertebrates.

Assessment:

1. Assess students for correct facts, pictures, and symbols of each vertebrate.
2. Assess students for correct facts and pictures of invertebrates.
3. Display the MR. FAB's around the school.