

Vets, Pets and Me!



Fat Dogs and Coughing Horses
Elementary Curriculum
Grades 1-3

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NIH . . . *Turning Discovery Into Health*

Its contents are solely the responsibility of the authors and do not necessarily represent the official views of ORIP or NIH.

Curriculum Overview

Vets, Pets and Me! 3rd Grade Science Curriculum

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Brief Summary of Unit

Students will explore health and wellness by engaging in activities that allow them to see the similarities and differences among humans and other animals. Students will learn how to think like a veterinarian and engage in hands-on projects that allow them to practice what they have learned. A variety of technology resources and inter-disciplinary connections are emphasized throughout. Enrichment activities are included for students who need additional challenges.

Goals

The goal of this project is to help 3rd grade students appreciate the importance of and science behind keeping both people and animals healthy.

Students will be able to...

1. Describe how people and pets use nutrition and exercise to stay fit
2. Discuss and illustrate how pets act as exercise partners and friends to keep you healthy
3. Describe how doctors prevent illness in people and animals through examinations and vaccinations

Essential Questions

1. What health issues affect both people and animals? How does this happen?
2. What preventive steps can be taken to prevent illnesses in both people and animals?
3. What tools are used to evaluate the health of people and animals?
4. How can the data collected by these tools be used to inform doctors and veterinarians of their patient's health?

Academic Standards

Common Core Reading Standards (3rd Grade)

- RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea.
- RI.3.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
- RI.3.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Indiana Social Studies Standards (3rd Grade)

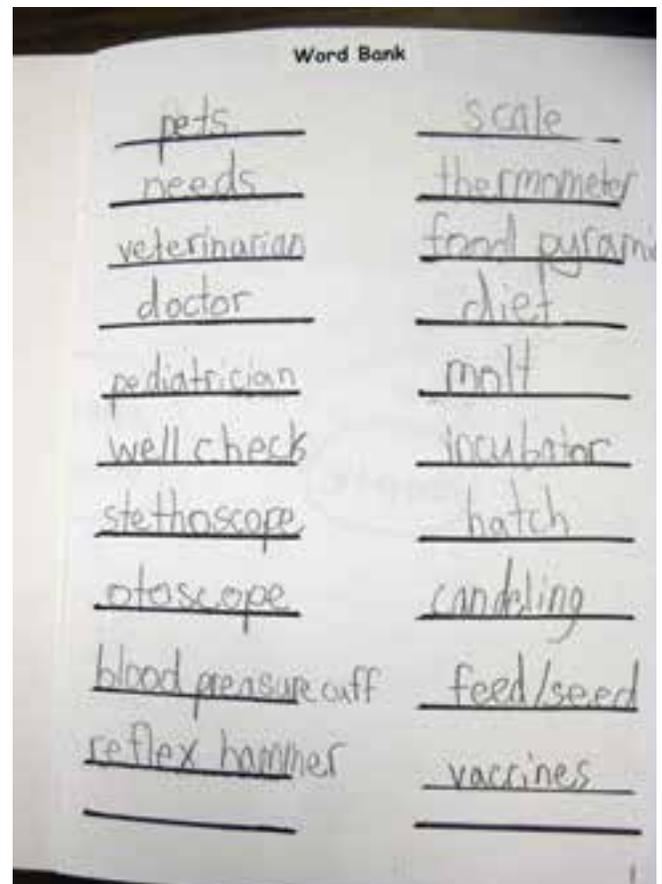
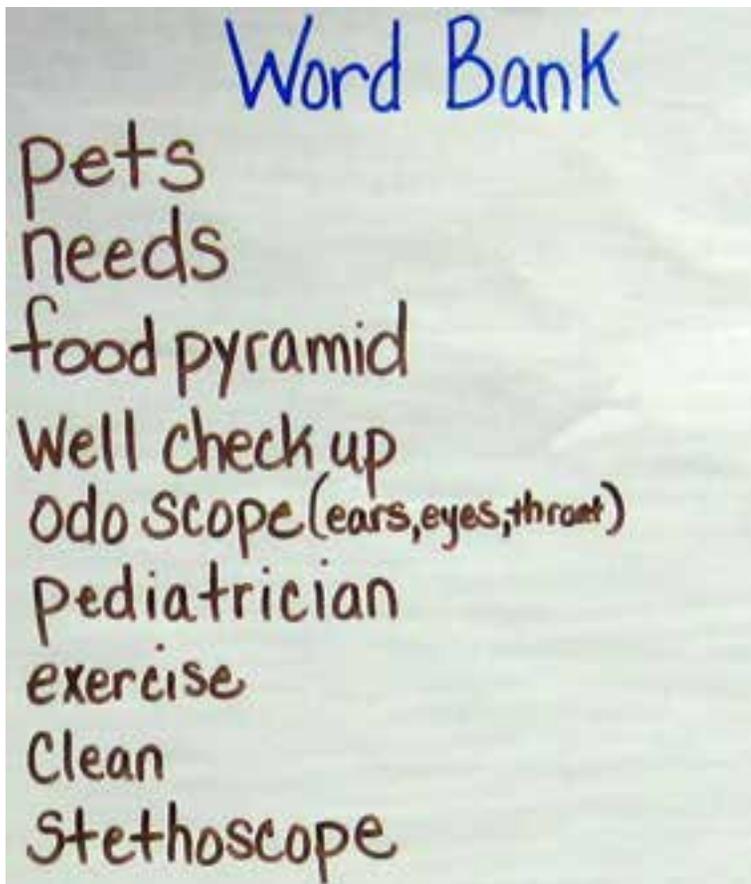
- SS.3.2.5 2007 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
- SS.3.4.2 2007 Give examples of goods and services provided by local business and industry.
- SS.3.4.4 2007 Define interdependence and give examples of how people in the local community depend on each other for goods and services.

Indiana Health Standards (3rd Grade)

- HW.3.1.1 2007 Identify the link between healthy choices and being healthy.
- HW.3.1.2 2007 Give examples of physical and emotional health.
- HW.3.3.1 2007 State characteristics of valid health products and services.
- HW.3.5.5 2007 Identify a healthy choice when making a decision.
- HW.3.6.1 2007 Select a personal health goal and track progress.
- HW.3.7.2 2007 Identify a healthy practice to maintain personal health and wellness.

Key Vocabulary

- | | |
|-----------------|-----------------------|
| Candling | Pediatrician |
| Compare | Pet |
| Contrast | Poultry |
| Data Collection | Reflex hammer |
| Exercise | Scientists |
| Food pyramid | Stethoscope |
| Foreign bodies | Vaccination |
| Incubator | Veterinarian |
| Nutrition | Veterinary Technician |
| Observation | Well care |
| Otoscope | |



Lesson 1

Overview

The purpose of this lesson is to assess prior knowledge of the goals of the unit through the completion of a concept map, as well as engage students in a discussion about the characteristics of a pet. The lesson will end with students listening to a book and completing a literature log identifying the major parts of the story.

Objectives

- The students will engage in a discussion about pets to activate prior knowledge and create interest in the unit.
- The students will actively listen to a story and be able to recall the main idea, characters, setting, events, problem, and ending.

Materials

- Conceptual Assessment Instrument
- Chart paper, white board, or chalk board
- Miles, E. (2009). Lucky (Puppy Place Series). New York, NY: Scholastic Inc.
- Puppy Place Literature Log

Procedure

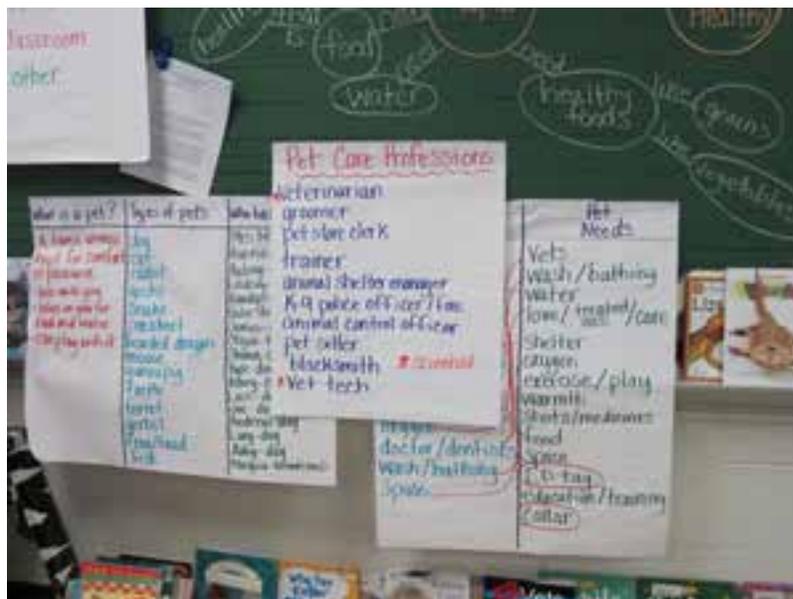
1. Introduce yourself and the purpose of the unit.
2. Use the Conceptual Assessment Instrument as a pre-assessment. Explain that you do not expect them to know much at this point.
3. Create a chart with three columns using the board or chart paper:
 - a. Column 1- What is a pet?
 - b. Column 2- Types of pets
 - c. Column 3- Who has a pet?
4. Ask the students to talk to someone sitting next to them for two minutes about what a pet is. After two minutes, call on several students to share their ideas. Record their responses in column one of the chart.

Lesson 1

5. Give the students a challenge to write down as many kinds of pets as they can think of with a partner. After several minutes, ask for students to share their list and record responses in column two of the chart.
6. Explain to the students that you are now going to survey the class. Explain that a survey is a way to gather information about something. Ask the students to raise their hands if they have a pet at home. Count the number and write it on the chart at the top of column three. Next, ask each student who raised their hand to tell you what type of pet they have and record a list in column three. Place tally marks next to each type of pet if more than one person has one.
7. Encourage students to bring in actual pictures of their pets to display in the classroom.
8. Introduce the book *Lucky (Puppy Place Series)* to the class. Explain that as a class we will be reading a book or portion of a book together each day.
9. Read the book to the class.
10. Give students the “Puppy Place Literature Log” and ask them to complete it independently. If students finish early, provide additional books about pets or veterinarians they may choose from to read.
11. End the lesson by giving students an opportunity to share their responses to the literature log with a friend.

Extension Activity

If time permits, demonstrate to students how the data in column three from the chart earlier in the lesson can be converted into a bar graph. Survey the students again with a second question: “If you could have any pet, what would it be?” Record their responses on a separate chart and ask the students to convert the data into a bar graph by themselves this time.



Lesson 2

OVERVIEW

The purpose of this lesson is to engage students in conversation about the meaning and importance of responsibility. Students will listen to a story about a young character getting a new pet and observe how the character exhibits responsible behavior. They will then create a collage of pets they would like to own and write several sentences explaining how they would care for them responsibly.

OBJECTIVES

- The students will be introduced to the word responsibility and discuss how it applies to taking care of a pet.
- The students will create a collage of pets they would like to have using pictures of animals cut from magazines.
- The students will write several sentences explaining how they would responsibly care for these pets if they indeed had one or more in the future.

MATERIALS

- Brown, M. (2005). Arthur's new puppy: An Arthur adventure. New York: Little Brown Books for Young Readers.
- A stack of old magazines that can be cut apart
- Scissors for each child
- Glue for each child
- Construction paper for each child

PROCEDURES

1. Review with students the chart that was created in lesson number one.
2. Ask the students what the word "responsibility" means.
3. Explain that the root word of responsibility is the word responsible. According to the online Merriam Webster dictionary for kids, responsible means to take charge of or be trusted with important matters.
4. Give the students several minutes to talk with a partner about what they are responsible for. What responsibilities do they have at home? At school?
5. Ask students to share a few of their responses with the whole group.

Lesson 2

6. Explain that we are going to read a book about someone who is responsible for a new pet. Read the book Arthur's New Puppy to the class.
7. Discuss as a group how Arthur was responsible for his pet.
8. Ask the students if anyone knows what a collage is. A collage is a collection of small pictures or images put together to make a larger image.
9. Explain that their job will be to look through old magazines to find pictures of pets they would like to have if they could have a new pet like Arthur. They will then glue these pictures down on a piece of construction paper in an interesting way.
10. Distribute scissors and magazines. Give students time to cut out ten or more animal pictures and glue them down.
11. Display the final projects for the rest of the class to see.
12. Ask students to think about the responsibilities they would have if they really had these animals as pets. Instruct students to write several complete sentences describing what chores they would have to do on a daily basis.

EXTENSION ACTIVITY:

Ask the students if people in different countries have different types of pets. Give the students access to books or kid-friendly internet sites to help them answer this question. Students can create a list of popular pets in different countries or print out pictures of these animals and create a new collage on the back of their initial collage with the countries labeled.



Lesson 3

OVERVIEW

The purpose of this lesson is to help students identify the common needs of both humans and pets. In the process, students will write a story about a pretend pet and learn how to create and maintain a science notebook.

OBJECTIVES

- The students will create their personal science notebooks.
- The students will learn to distinguish needs from wants and then identify common needs of both humans and pets.
- The students will add detail to the sentences they wrote in lesson two about a pet they wish they had in order to create a complete story with a beginning, middle, and end.

MATERIALS

- Klentschy, M. (2008). Using science notebooks in the elementary classrooms. Arlington, VA: National Science Teachers Association.
- One notebook for each student
- Pencil for each student
- Two pieces of chart paper
- Markers
- Chart from day one

PROCEDURES

1. Review with students the meaning of responsibility introduced yesterday.
2. Ask students to share an example with a partner in the next two minutes of a time they were responsible in the last day.
3. Explain that today we are going to learn a way to responsibly record our thoughts and ideas about science.
4. Poll the students to determine how many of them have ever kept a diary or journal.
5. Give each student a blank notebook and guide them in the creation of their new science notebooks. Students should number the pages and create the following sections:
 - a. Table of Contents
 - b. Word Bank
 - c. Concept Map
 - d. I Wonders...
 - e. Health Careers
 - f. Observations
 - g. Data
 - h. Student Daily Reflections
 - i. Investigation
 - j. Claims/Evidence
 - k. Video Notes
 - l. Guest Speaker Notes
 - m. Research Notes
 - n. Quick Writes

Lesson 3

6. Use the book by Klentschy (2008) to provide students with a description of what each section will be used for
7. Check to make sure everyone has finished setting up their science notebooks. As students finish, ask them to set the notebooks to the side.
8. Place two pieces of chart paper on the wall at the front of the classroom. Write “Pets’ Needs” at the top of sheet one and “Children’s’ Needs” at the top of sheet two.
9. Ask the students what the difference is between a NEED and a WANT.
10. Give students two minutes to share with a partner one need and one want they currently have.
11. Record on chart two what students need in order to be safe and healthy.
12. Brainstorm a list of the needs pets have in order for them to be safe and healthy. Record students ideas on chart one. (Make sure needs include food, water, shelter, space, love, exercise and play, bathing, education [training], I.D. tag and collar, and visits to the doctor/veterinarian.)
13. Ask students to identify which needs are on both charts. Call on students to circle in a different color or place a star next to the items that appear on both lists.
14. Instruct students to copy the charts into their science notebooks in the “Research Notes” section.
15. Ask students to pull out the collages they made yesterday and the sentences they wrote about them.
16. Explain to students that for the remainder of the class period they will write a story about taking care of one of the pets in their collage. Their story should have a beginning, middle, and end. Remind students to use their sentences from yesterday and the list of pets’ needs from today to help them. The stories can be written in their science notebooks or on a separate sheet of paper.
17. If time permits, give students the opportunity to share their stories with the class.

EXTENSION ACTIVITY

If students finish early, ask them to retell the story they wrote to a friend from the standpoint of the pet. For example, if a student had written, “I was asleep. My dog licked my face. I woke up and fed her breakfast even though I was tired,” they could now say, “I was so hungry. My owner was snoring. I had to lick her until she would wake up and give me some food. Yummy!”



Lesson 4

OVERVIEW

The purpose of this lesson is to introduce the characteristics of a quality observation and to provide students with an opportunity to make observations of a crayfish in the classroom.

OBJECTIVES

- The students will carefully and safely interact with a live animal in the classroom.
- The students will record detailed diagrams and descriptive words about their observations in their science notebooks.

MATERIALS

- Live crayfish
- Tub of water
- Kalman, B. & Sjonger, R. (2007). The lifecycle of a crayfish. New York, NY: Crabtree Publishing Company.
- Science notebooks
- Reference books about crayfish
- “How I Became a Scientist” SEPA Activity Book for 3rd Graders

PROCEDURES

1. Ask students to list the characteristics they think a veterinarian or other scientist needs to have.
2. Explain to students that today we are going to learn how to make good observations. This involves using all of your senses. (Make sure students know they are not to taste anything without permission however).
3. Written records of observations should include labels, drawings, color, I Wonders, descriptive words and phrases, and measurement.
4. Show students an example of a quality written record of an observation.
5. Tell students that in order to help them practice making good observations; you have brought a live animal for them to observe today. Display the tub with the crayfish and ask the students if anyone knows what this animal is called. (Other animals can be substituted for crayfish. Examples include worms, frogs or tadpoles, butterflies or caterpillars.)
6. Read the book The Lifecycle of a Crayfish to the class.
7. Explain that because live animals will be used, certain precautions must be followed. Safety for

Lesson 4

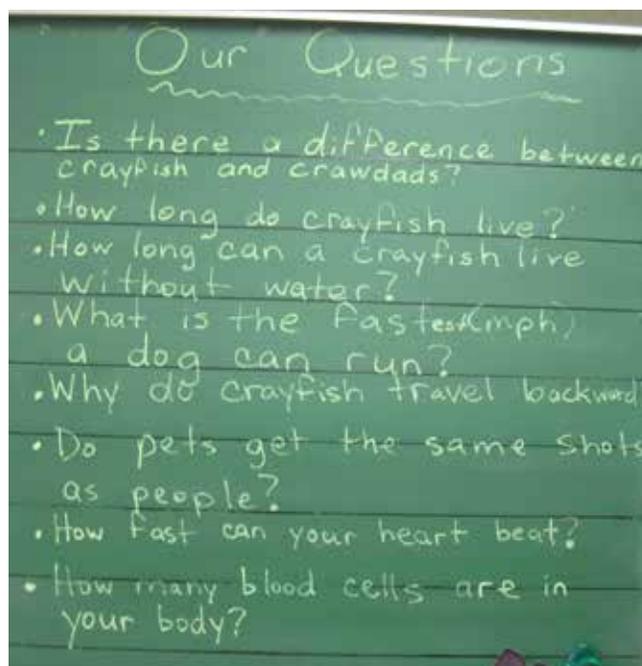
both the animals and the students is important.

8. The procedure today for observing the crayfish will be.
 - a. Teacher will place the tub with the crayfish on the table,
 - b. Students will observe the body structures of the crayfish and draw pictures of what they see in their science notebooks.
 - c. Books will be available to help students label the body structures correctly.
 - d. Teacher will help those students that would like to hold the crayfish do so properly and carefully.
9. As students finish making their observations, ask them to read the “How I Became a Scientist” Activity Book for 3rd Graders.
10. Before ending the class, ask students to take a minute to silently think about one or two things they learned regarding crayfish or working with live animals in general. Ask students to record these thoughts in their science notebooks.
11. If time permits, allow students to share their responses.

EXTENSION ACTIVITY

Brainstorm a list of pets that are commonly found in classrooms. Visit the website listed below to download fact sheets for some of the most popular classroom pets (e.g. hamster, rabbit, snake, guinea pig, and turtle). http://www.aalas.org/resources/classroom_animals.aspx

Read one or more of the factsheets and work with a partner to determine the three most important rules for handling and caring for the animals of your choice.



Lesson 5

OVERVIEW

The purpose of this lesson is to introduce students to the needs of chicks and provide additional opportunities to make observations.

OBJECTIVES

- The students will discuss the environmental conditions chick eggs need in order to hatch.
- The students will record observations of the chick eggs and the crayfish.

MATERIALS

- Chick eggs
- Incubator
- Egg candler
- Science notebooks
- Mercia, L. (1990). Raising poultry the modern way. Pownal, VT: Storey Communications, Inc.
- Stone, L.M. (2000). Chickens have chicks. Minneapolis, MN: Compass Point Books.

PROCEDURES

1. Challenge the students to list each of the components of a quality observation discussed in lesson four.
2. Explain to students that today they will have an opportunity to observe a second live animal in the classroom. Ask the students to guess what it might be.
3. Show the students the small eggs and ask what might be inside.
4. Tell the students that a baby chick is inside. Ask them how we could tell that is what is inside without cracking open the egg.
5. Use the egg candler to see inside the egg. Ask the students what they observe.
6. Read the book Chickens Have Chicks by L. Stone to the class. Ask the students to jot down any notes in their science notebooks as you read.
7. Ask the students to observe the eggs as they are right now and record their observations in their science notebooks. They should record their size, shape, color, etc.
8. Pose the following question: “Because there are no mother chickens around to sit on the eggs, how might we hatch them?”

Lesson 5

9. Display the incubator and explain how it works.
10. Read the book *Raising Poultry the Modern Way* and ask the students to jot down any notes in their science notebooks.
11. Place the eggs in the incubator and ask the students to draw a diagram of the environment the eggs are in carefully in their science notebooks.
12. Ask the students to brainstorm what we must do in order to take care of the chicks once they are hatched.
13. Record any questions students have about hatching chicks on a chart to be answered as the unit progresses.
14. Give students an opportunity to observe the crayfish again and see if any new behaviors can be seen.
15. Ask the students to reflect on today's lesson and record their thoughts in their science notebooks.

EXTENSION ACTIVITY

Imagine you find a multi-colored egg in your backyard. You do not know what is inside, but you decide to take care of it until it hatches. Write a creative story about what eventually hatches out of the egg and how you will take care of the creature. The animal can be a real animal or an imaginary animal.



Lesson 6

OVERVIEW

The purpose of this lesson is to introduce students to the importance of a healthy diet and eating a balanced meal. At the end of this lesson students will begin thinking about how the foods given to pets also affect their health.

OBJECTIVES

- The students will explore the food groups using the USDA “My Plate” guidelines.
- The students will examine their school menu to determine which food groups are represented.

MATERIALS

- “My Plate” poster or handout found at the following website: <http://www.choosemyplate.gov/>
- Computer with internet access for pairs of students (if possible)
- “Blast Off” online game: http://www.fns.usda.gov/multimedia/Games/Blastoff/BlastOff_Game.html
- Science notebooks

PROCEDURES

1. Review yesterday’s lesson.
2. Give each student a copy of the “My Plate” handout linked in the materials section above.
3. Ask students what their favorite food is.
4. Explain that everyone needs food to live and grow, but some foods are better for us than others. If people eat too many foods that are high in sugar and fat, they will not have enough room to eat more healthy foods.
5. Ask students to notice the size of each section of the plate. Some are larger than others. The larger the piece, the more of this food we should eat. Make sure students notice the small circle next to the plate labeled ‘dairy’.
6. Explain to students that the plate is divided into four sections. Notice that one-half of the plate consists of fruits and vegetables. Ask what this should tell us.
7. Give students three minutes to list as many fruits and vegetables they can think of with a partner in their science notebooks.
8. The second half of the plate consists of grains and proteins. If possible, take students to the computer lab to explore www.choosemyplate.gov/food-groups/. Instruct students to click on the grains group and the proteins group to explore the different varieties of both.

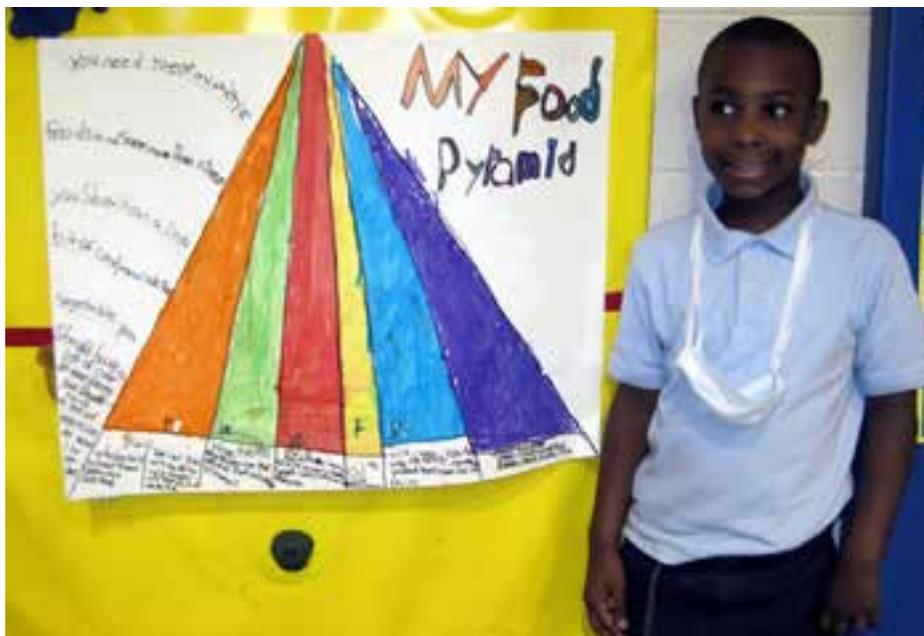
Lesson 6

9. Ask students to record five or more grains and five or more proteins in their science notebooks.
10. Look at the lunch menu for today. Ask students which food groups each of the items on the menu would fit. The teacher may have to explain that some foods, like hamburgers or pizza, will fit into several groups.
11. Ask students what would happen if all we ate were junk foods. How do you feel after eating a lot of candy, chips, and birthday cake at a party?
12. Explain that just as what we eat affects us, the foods we feed our pets affect them as well. Tell students we will be exploring more about healthy food for pets later in the unit.
13. If time permits, allow students to play the online game “Blast Off” at the USDA website linked below: http://www.fns.usda.gov/multimedia/Games/Blastoff/BlastOff_Game.html
14. Give students several minutes to reflect on today’s lesson and write their thoughts in their science notebooks.
15. Allow students to check on the chick eggs and crayfish as they finish.

EXTENSION ACTIVITY

Students can play a second online game created by the USDA called “Track and Field Fuel-Up Challenge Game”. Click on the link here to access it:

<http://www.fns.usda.gov/multimedia/games/trackandfield/index.html>



Lesson 7

OVERVIEW

The purpose of this lesson is to learn why fruits and vegetables are healthy for us and to introduce the food tracking homework assignment.

OBJECTIVES

- The students will understand the nutritional value of fruits and vegetables.
- The students will commit to trying one new fruit or vegetable they have avoided eating in the past.

MATERIALS

- “What I Eat” homework tracking form
- Video: <http://www.youtube.com/watch?v=YuPIUQvViX8>
- New York Times article:
<http://www.reuters.com/article/2010/11/23/us-alpha-carotene-idUSTRE6AM6UH20101123>
- Science notebooks

PROCEDURES

1. Ask students to talk to a partner for two minutes about what they learned yesterday regarding healthy eating.
2. Give several students an opportunity to share out to the whole class.
3. Instruct students to get out their science notebooks and turn to the list of fruits and vegetables they generated yesterday. Their job is to circle each of the foods on their list that they have never tried.
4. Poll the students to determine the top five most common fruits or vegetables one or more students have not tried before.
5. Ask students why they have avoided those foods and encourage them to commit to trying at least one item on their list.
6. Show the students the video of Jack Prelutsky’s poem “Bleezer’s Ice Cream”. Ask the students which of these crazy flavors they would never try.
7. Explain to students that it is very important that they eat plenty of fruits and vegetables because:
 - a. They are excellent sources of several vital nutrients (e.g. Vitamin A, vitamin C, potassium, dietary fiber)
 - b. Vitamin A keeps eyes and skin healthy and helps to protect against infections.
 - c. Vitamin C helps heal cuts and wounds and keeps teeth and gums healthy.
 - d. Fiber keeps food moving through the digestive tract.

Lesson 7

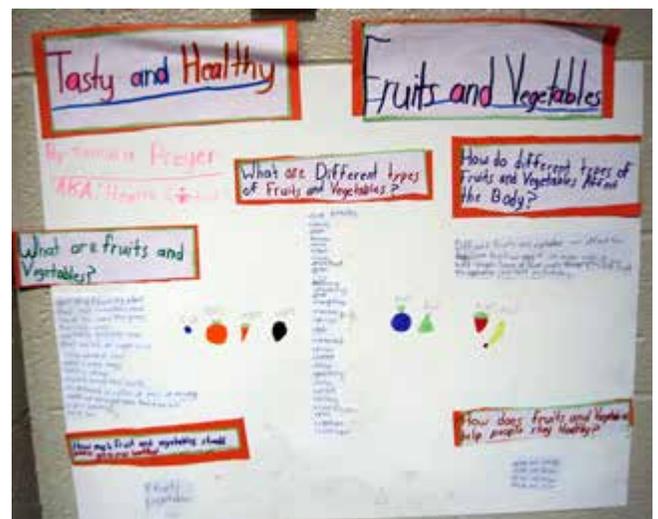
- e. Most fruits and vegetables are naturally low in fat and calories and do not contain cholesterol. (Explain that too much cholesterol can lead to high blood pressure and heart problems).
8. Challenge students to name a vegetable that makes up a quarter of all vegetables eaten by elementary students, but is not low in fat or calories and is high in cholesterol. The answer is- French fries.
9. Tell students that dark green and orange vegetables are especially healthy. Ask students to name as many as they can. Give students an opportunity to share their theory as to why orange and dark green vegetables are so nutritious. The answer to this question is found in the New York Times article linked in the materials section.
10. Give each student a copy of the “What I Eat” homework tracking form. Their task is to record everything they eat over the next week and then bring it back to class.
11. Explain that once the homework has been completed, we will use highlighters to identify each of the fruits and vegetables students have eaten and determine a total count. Students will also graph their individual daily totals and compare with a partner.
12. If time permits, allow students the opportunity to create their own crazy pretend ice cream flavor like those in the poem “Bleezer’s Ice Cream”.
13. Give students several minutes to reflect on today’s lesson and write their thoughts in their science notebooks.
14. Allow students to check on the chick eggs and crayfish as they finish.

EXTENSION ACTIVITY

Print out the eight tip sheets and accompanying activities that can be found here:

http://www.he.k-state.edu/fnp/displays/fuel_up/Ten_Tips_pdfs/all_tip_sheets.pdf

Divide students into small groups and give each group a different tip sheet plus the activities that correspond with it. Ask students to read the ten tips on their sheet together and complete one of the activities. When all students have finished, ask each group to share their ten tips and what they did with the whole class.



Lesson 8

OVERVIEW

The purpose of this lesson is to provide students with the opportunity to conduct simple research on the dietary needs of pets. Students will compare the healthy diet of a pet to that of a human through the creation of a Venn diagram.

OBJECTIVES

- The students will research the types of foods various pets need to stay healthy.
- The students will create Venn diagrams comparing and contrasting the foods humans need versus the pet of their choice.

MATERIALS

- Armentrout, P. & Armentrout, D. (2010). Slithering snakes and how to care for them (Let's talk about pets). Vero Beach, FL: Rourke Pub. Group.
- Barnes, J. (2007). Pet parakeets. Pleasantville, NY: Gareth Stevens Publishing.
- Jeffrey, L.S. (2004). Cats: How to choose and care for a cat. Berkeley Heights, NJ: Enslow Publishers, Inc.
- Jeffrey, L.S. (2004). Dogs: How to choose and care for a dog. Berkeley Heights, NJ: Enslow Publishers, Inc.
- Jeffrey, L.S. (2004). Horses: How to choose and care for a horse. Berkeley Heights, NJ: Enslow Publishers, Inc.
- Kalman, B. & MacAulay, K. (2004). Guinea pigs. New York, NY: Crabtree Publishing Company.
- Piers, H. (1992). Taking care of your rabbit: A young pet owner's guide. Hauppauge, NY: Barron's Educational Series.
- Sjonger, R. & Kalman, B.(2004). Gerbils. New York, NY: Crabtree Publishing Company.
- Instructions for Venn Diagram foldable:
http://flesolcobbcentral.typepad.com/cobb_math_esol/files/VennDiagramThreeTabBook.pdf
- Science notebooks

PROCEDURES

1. Ask students to raise their hands if they tried a new fruit or vegetable last night.
2. Remind students to keep track of everything they eat on their "What I Eat" homework tracking sheet.
3. Explain that today we are going to focus on the nutritional needs of animals.

Lesson 8

4. Use rabbits as an example by reading pages 16-17 from the book Taking Care of Your Rabbit to the class.
5. Ask students what foods rabbits need to stay healthy.
6. Introduce students to Venn diagrams by drawing two large intersecting circles on the board. Label the first circle “Rabbits” and the second circle “Humans”.
7. Explain that Venn diagrams are used to compare and contrast two different things. The area where the two circles intersect represents what the two things have in common.
8. Complete the Venn diagram together as a class comparing the healthy foods rabbits need versus humans.
9. Tell students that they will now do research in small groups to complete a second Venn diagram. Ask students which of the following animals they would like to research:
 - a. Cat
 - b. Dog
 - c. Gerbil
 - d. Guinea pig
 - e. Horse
 - f. Parakeet
10. Divide students into groups based on their choice. Provide each group with the book listed in the materials section that pertains to their pet.
11. Explain that they will not be creating a typical Venn diagram, but a special version using folded paper.
12. Guide students in the completion of the foldable Venn diagram created by Dinah Zike. Follow the directions linked in the materials section.
13. Give students time to work together in their small groups.
14. Once everyone has finished, ask each group to share their final product.
15. Give students several minutes to reflect on today’s lesson and write their thoughts in their science notebooks.
16. Allow students to check on the chick eggs and crayfish as they finish.

EXTENSION ACTIVITY

Dinah Zike, the creator of the Venn diagram foldable, has many other great graphic organizers and projects students can make. Consider finding one of her many teacher resource books and allow students to choose a foldable book they would like to make on their own.



Lesson 9

OVERVIEW

The purpose of this lesson is to give students the opportunity to listen to an actual doctor or nurse talk about preventative care. Students will have the opportunity to ask questions and see an actual wellness check in person.

NOTE: This lesson requires finding a local doctor or nurse that is willing to visit your classroom in person to discuss preventative care in humans.

OBJECTIVES

- The students will discuss the importance of preventative care for humans.
- The students will observe a wellness check and record an accurate description of the process in their science notebooks.

MATERIALS

- Guest doctor
- Schaefer, L. M. (2000). We need doctors. Mankato, MN: Capstone Press.
- Other books about doctors and nurses for students to read
- Science notebooks

PROCEDURES

1. Review yesterday's lesson.
2. Check with students to make sure they are continuing to record their daily food intake.
3. Explain that a special guest has agreed to stop by today. Introduce the doctor or nurse to the students.
4. Ask the doctor or nurse to discuss the following points:
 - a. What is preventative care?
 - b. What can we do today to stay healthy in the future?
 - c. What is a wellness check?
 - d. What tools do you use?
 - e. What kinds of data do you collect and share with your patients?
 - f. How are doctors and nurses like scientists?
5. Give students several minutes to ask questions.

Lesson 9

6. Ask the doctor or nurse to perform a pretend wellness check on either the teacher or a student volunteer. Students are to record what the doctor or nurse does in their science notebooks carefully.
7. Thank the doctor or nurse for coming to visit.
8. Read the book *We Need Doctors* to the class.
9. Provide students with additional books about doctors and nurses. Ask the students to choose one and read it independently or with a partner.
10. Give students several minutes to reflect on today's lesson and write their thoughts in their science notebooks.
11. Allow students to check on the chick eggs and crayfish as they finish.

EXTENSION ACTIVITY

Students can write a thank you letter to the guest speaker that includes one question about being a doctor or nurse, two ways the student tries to stay healthy, and three things they learned from listening to the guest speaker's presentation.



Lesson 10

OVERVIEW

The purpose of this lesson is to provide students with an opportunity to exercise as a group and discuss the importance of exercise for both humans and pets.

NOTE: Consider planning the mini-field day in cooperation with your school's physical education teacher.

OBJECTIVES

- The students will participate in a mini-field day and observe how exercise affects their bodies.
- The students will compare and contrast how pets exercise versus humans.

MATERIALS

- Timer
- Water for drinking
- Ready, D. (1997). Doctors (Community helpers). Mankato, MN: Bridgestone Books.
- Science notebooks

PROCEDURES

1. Ask the students to list some of the preventative measures people can take regarding their health mentioned yesterday by the visiting doctor or nurse.
2. Remind students that exercise is important.
3. Explain that today we will take part in a mini-field day. The students' task is to observe how each exercise affects them physically, emotionally, and mentally.
4. Take the students outside or into the gym and conduct the following suggested activities:
 - a. Stretch together to warm-up as a whole group.
 - b. Ask the students to estimate how many jumping jacks they can do in one minute. Time the students to see how accurate their estimate was.
 - c. Repeat the same process with sit-ups or push-ups.
 - d. Challenge the students to see how many laps they can run around the gym or playground in fifteen minutes.

Lesson 10

- e. Pause for a water break
- f. Stretch together as a group to cool down.
5. Take the students back into the classroom and ask the students to discuss what they noticed about their bodies and how they felt while exercising. (e.g. heart rate increase, sweating, soreness).
6. Ask the students to talk with a partner about why it is important to exercise. What would happen if someone did not ever exercise?
7. Explain to students that it is important for pets to exercise too. Use a T-chart to compare and contrast how people exercise versus how pets exercise.
8. Pose the following statement and ask the students if they agree with it or not: “If your dog is overweight, chances are you will be too.” Why might this be true in some circumstances?
9. Take questions and if time allows, read the book *Doctors (Community Helpers)* to the class.
10. Give students several minutes to reflect on today’s lesson and write their thoughts in their science notebooks.
11. Allow students to check on the chick eggs and crayfish as they finish.

EXTENSION ACTIVITY

Ask the students to imagine they work for a zoo. The head zookeeper asked them to create a toy for one of the animals that will encourage it to play and move around in order to stay healthy through exercise. Provide students with books about various animals and drawing paper for them to sketch their ideas.



Lessons 11-13

OVERVIEW

The purpose of this lesson is to provide students with a variety of activities to choose from related to pets, veterinarians, exercise, etc.

NOTE: The learning center activities can be structured in several ways. The teacher may decide to: 1) require everyone to finish all activities; 2) set the number of activities each student must finish, but it is up to them which centers they choose; or 3) require everyone finish one particular activity, but the rest are up to the students.

OBJECTIVES

- The students will choose from various learning centers while cooperating and staying on task.
- The students will keep track of what they learn from each center in their science notebooks.

MATERIALS

- Science notebooks
- Nintendo DS game console
- Nintendo DS games listed below:
 - Animal Planet TM Emergency Vets.TM. (2009). Activision Publishing, Inc.
 - Animal Planet TM Vet Life.TM. (2009) Activision Publishing, Inc.
 - Imagine Zookeeper.TM. (2009) UBISOFT.
 - Nintendogs Dachshund & Friends.TM. (2005). Nintendo.
 - Pet Pals: New Leash on Life.TM. (2010) DESTINEER
 - Petz Nursery. (2009). UBISOFT
- Chick Life Cycle Exploration Set. Vernon Hills, IL: Learning Resources.
- Computer with internet access
- Books listed in “Optional Resources” section of the materials list for the unit
- Various stuffed animals
- Stethoscope
- Reflex hammer
- Thermometer
- Radiographs of animals with injuries or that have swallowed something
- Virtual Vet Visit website: www.purdue.edu/svmengaged/virtualvet/VVV
- Elementary Microscope Animals Slide Set (12 slides):
 - Canary Feather
 - Fowl Feather
 - Striated Muscle of Frog
 - Fur from Mouse
 - Hair from Sheep
 - Hair from Pheasant
 - Hair from Horse
 - Hair from Hare
 - Hair from Fox
 - Hair from Dog
 - Hair from Cat
 - Scale from Goldfish

PROCEDURES

1. Explain to students that instead of everyone doing the same thing today, they will be able to choose what they would like to do.
2. Discuss the rules for behavior with students.
3. List the requirements for this lesson (See the note above).
4. Introduce each of the eight learning centers to the students:
 - a. **Center 1 – Chicks** - Students will spend time observing the hatched chicks. Additional books about chicks are provided as well as a model of the lifecycle of a chicken.
 - b. **Center 2 - DS Games** - Students will spend time playing one or more of the Nintendo DS games listed in the materials section above. The games will give students an opportunity to virtually experience caring for pets, learning about veterinarian life and working with animals they do not have access to.
 - c. **Center 3 – Virtual Vet Visit** - Students will use computers to visit the website below:
www.purdue.edu/svmengaged/virtualvet/VVV.
The site includes a “well check visit” for a horse, a blood pressure check on a cat, and more.
 - d. **Center 4 – Book Browse** - Students will browse through and read a variety of pet care, veterinarian, doctor, and health books (See optional resources listed in the materials section). Ask the students to write a sentence or two about what they read in their science notebooks.
 - e. **Center 5 – You Are a Vet** - Students will use the tools a veterinarian uses (e.g. stethoscope, reflex hammer, thermometer) and perform “check-ups” on stuffed animals they have in the room.
 - f. **Center 6 – Foreign Body** - Students will explore radiographs of animals that have foreign bodies, broken bones, pregnancies, etc. Students will be given pictures of the items animals have swallowed and will match up the items with the radiographs.
 - g. **Center 7 – Crayfish** - The teacher will place food in an observational tub for crayfish. Students will observe the crayfish eating and take notes of what they see.
 - h. **Center 8 – Microscope Exploration** - Students will explore slides using a microscope of pet fur and feathers. Students can also bring fur and toenails in from home to create their own slides. Ask the students to draw pictures of what they see under the microscope in their science notebooks.
5. Poll students to decide which activities they would like to do. Work out a rotating schedule so that no one is waiting and there are no arguments.
6. Give students time to work.
7. When the allotted time is up, debrief with students regarding what they learned and how it went.

EXTENSION ACTIVITY

Ask students to brainstorm ideas for creating a new learning center that could be used tomorrow or next year with a new class.

Lesson 14

OVERVIEW

The purpose of this lesson is to explore the important roles veterinarians have in taking care of pets. Students will read a non-fiction book about veterinarians in small groups and then create a foldable book of their own that lists what they learned.

OBJECTIVES

- The students will read and analyze a non-fiction book in small groups.
- The students will understand the various roles veterinarians must fulfill on a daily basis.

MATERIALS

- Adamson, H. (2004). *A day in the life of a veterinarian*. Mankato, MN: Capstone Press.
- Hamel, C.M. (2005). *I want to be a veterinarian when I grow up*. Victoria, BC: Trafford Publishing.
- Kalman, B. (2005). *Veterinarians help keep animals healthy*. New York, NY: Crabtree Publishing Company.
- Ready, D. (1997). *Veterinarians (Community helpers)*. Mankato, MN: Bridgestone Books.
- Chart paper or white board
- Plain paper or construction paper
- Science notebooks
- Website: (Instructions for the foldable)
http://www.dentonisd.org/512719693919/lib/512719693919/Instructions_for_Folds.pdf

PROCEDURES

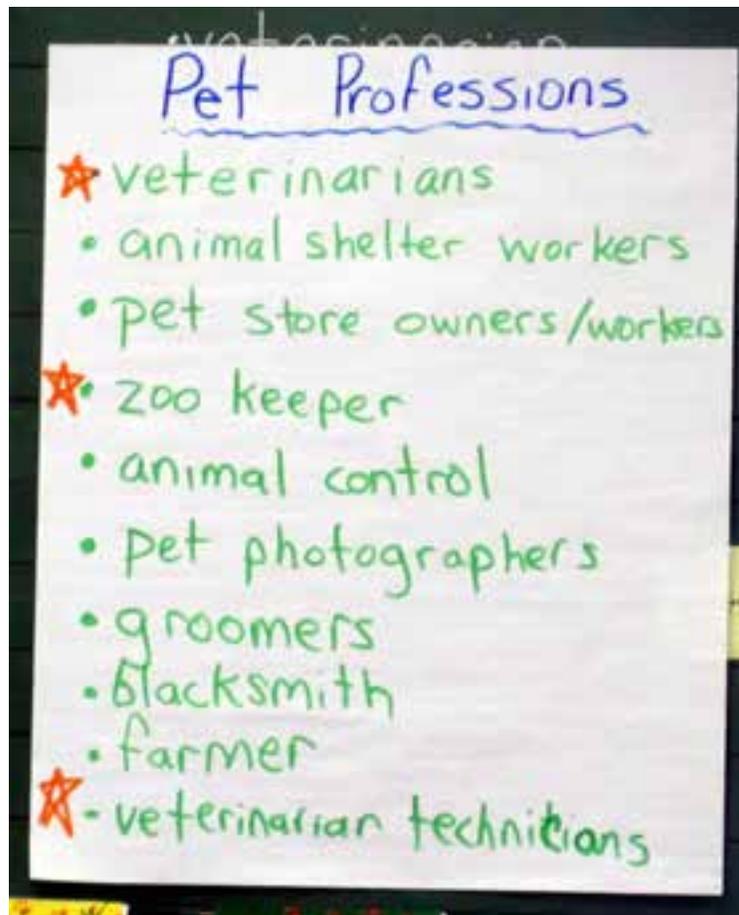
1. Review with students the charts they created at the beginning of the unit about different types of pets and their needs.
2. Ask the students to list as many careers they can think of that involve working with animals. Focus particularly on jobs that help meet pets' needs. Create a chart and be sure to include veterinarian, veterinary technician, groomer, kennel operator, pet-supply-store clerk, obedience trainer, blacksmith, pet sitter, animal control officer, and animal shelter manager.
3. As a class, place a star next to each career that would fall under the category of "scientist".
4. Divide students into small groups. Give each group a different book about veterinarians. Four suggested books are listed in the materials list above.
5. Ask each group to read the book they were given together.
6. Show students how to create a foldable book using the instructions shown here:
http://www.dentonisd.org/512719693919/lib/512719693919/Instructions_for_Folds.pdf

Lesson 14

7. Students are to draw a picture of a veterinarian on the cover and then fill the inside with facts they learned from the book they read as a group.
8. Once students are finished, ask each group to share a short summary of the veterinarian book they were given.
9. Give students several minutes to reflect on today's lesson and write their thoughts in their science notebooks.
10. Allow students to check on the chick eggs and crayfish as they finish.

EXTENSION ACTIVITY

Provide students with additional books about the other pet professions students listed on the chart. Ask students to choose one, read it, and then compare and contrast that profession to a veterinarian.



Lesson 15

OVERVIEW

The purposes of this lesson are to allow students to interact with actual veterinarians or vet techs and observe a wellness check taking place in person.

NOTE: This lesson requires finding one or more veterinarians or vet techs that are willing to visit your classroom in person with a companion dog.

OBJECTIVES

- The students will carefully observe a wellness check for a dog and record accurate notes of the process.
- The students will understand how dogs can be companion animals for the blind or hearing impaired.

MATERIALS

- Taylor, T. (2000). The trouble with Tuck. New York, NY: Delacorte Press
- Science notebooks

PROCEDURES

1. Review with students what was covered in this week's lesson.
2. Introduce the special guests to the students.
3. If more than one vet or vet tech was able to attend with an actual dog, divide students into small groups and have the guest show the students how to conduct a wellness check on a dog.
4. Ask students to observe carefully and take notes in their science notebooks.
5. If possible, allow the students to listen to the dog's heart using the stethoscope or try one of the other techniques demonstrated by the vet or vet tech.
6. Explain that we have talked a lot about how people care for and help their pets. Ask the students to list some of the things they have learned.
7. Remind the students that healthy food and exercise for pets are important. Ask the guests to take the students along for a dog walk outside on the playground.
8. Once students return to the classroom, ask them to brainstorm a list of ways pets, and particularly dogs, can help humans. Mention to students how blind or hearing impaired individuals can use a dog to help them interact with the environment normally.

Lesson 15

9. Read to students the first few chapters of the book, *The Trouble With Tuck*. In this book, a girl tries to get a seeing-eye dog for her dog named Tuck because he is going blind.
10. Ask the students to think creatively about other ways they could help Tuck without getting him a seeing-eye dog of his own.
11. Give students several minutes to reflect on today's lesson and write their thoughts in their science notebooks.
12. Allow students to check on the chick eggs and crayfish as they finish.

EXTENSION ACTIVITY

Provide students with drawing paper and various craft supplies or recycled materials. Challenge the students to create an invention from the future that would be able to help animals or humans with special needs.



Lesson 16

OVERVIEW

The purpose of this lesson is to have students take on the role of a veterinarian while exploring an actual case. Students will create a poster explaining their case and share the information orally with their classmates.

OBJECTIVES

- The students will analyze a case study in order to determine what took place.
- The students will create a quality poster that includes an illustration, labels, and a short description of the problem using correct grammar and punctuation.

MATERIALS

- Chart paper or white board
- Poster board for each group
- Markers
- Jackson, D.M. (2005). ER vets: Life in an animal emergency room. Boston, MA: Houghton Mifflin Company.

PROCEDURES

1. Ask the students to talk to a partner for three minutes to see if they can remember the steps in a wellness check for a dog without looking at their notes.
2. Review the procedures together as a class.
3. Ask the students to imagine they are actual veterinarians.
4. Divide students into pairs and give each group a case study form the book ER Vets: Life in an Animal Emergency Room.
5. Instruct the students to read the case study and determine what the problem or illness the animal is experiencing might be.
6. When students are finished, ask them to create a poster that illustrates the problem and describes the scenario.
7. Ask each group to explain their case to the class and display their poster.
8. Keep a running list on chart paper of each illness as students present.
9. Identify together as a class which illnesses animals and humans can both experience.
10. Ask the students what it must mean if humans and animals can have the same problems. Mention that animals and humans are both made of cells and both live in the same environment.

Lesson 17

OVERVIEW

The purpose of this lesson is to make students aware of all the costs associated with owning a pet. An opportunity to conduct research and share the results with the class will be provided.

NOTE: This lesson requires finding a pet store manager or employee that is willing to be a guest speaker.

OBJECTIVES

- The students will estimate costs and then conduct research to confirm or reject their predictions.

MATERIALS

- Pet supply catalogs, websites, and circulars
- Flyers or advertisements provided by local veterinarian's offices
- Science notebooks

PROCEDURES

1. Review yesterday's lesson.
2. Introduce today's guest speaker
3. Ask the students to predict how much they think it costs to own a pet each month.
4. Provide time for the pet store manager or employee to talk about their responsibilities and share with students the costs of various pets, pet supplies, etc.
5. Ask students to choose a pet they would like to pretend they own for this lesson.
6. Divide students into small groups based on their responses.
7. Give students books about their animals as well as various pet supply catalogs, advertisements, and circulars.
8. Explain to students that they have two jobs to complete:
 - a. Make a list of everything their pet needs based on the book they were given about their animal (e.g. food, toys, treats, adoption, vaccinations, licensing, spaying/neutering, grooming, boarding fees).
 - b. Research the current costs of fulfilling those needs using the catalogs and flyers
9. Give students time to share what they discovered with the class.
10. Compare their predictions from the beginning of the lesson with the totals they arrived at after conducting their research.

Lesson 17

11. Ask the students to raise their hands if they were surprised at how expensive it is to properly take care of a pet.
12. Give students several minutes to reflect on today's lesson and write their thoughts in their science notebooks.
13. Read the next chapter or two of the book *The Trouble With Tuck*.

EXTENSION ACTIVITY

Instead of using pet supply catalogs and a guest speaker, arrange a fieldtrip to a local pet store to collect data of pet care costs.

Lessons 18-24

OVERVIEW

The purpose of this lesson is to introduce students to the final project and answer any questions they may have. For the remainder of the unit, students will work on their projects independently until they are complete.

OBJECTIVES

- The students will manage time effectively as they work on a large project over the course of several days.
- The students will use technology and/or traditional materials as tools to communicate accurate information

MATERIALS

- Writing paper
- Construction paper
- Markers and crayons
- Computers
- PowerPoint
- iMovie
- iTunes

PROCEDURES

1. Explain to students that over the next week and a half they will be working on an end of the unit project by themselves.
2. Students may create a pet care book, podcast, PowerPoint, or iMovie that includes the following information:
 - a. Type of pet
 - b. Dietary needs
 - c. Exercise needs
 - d. Additional needs
 - e. Chart comparing and contrasting this pet's needs to human's needs
 - f. Cost of owning the pet
 - g. Preventive Care
 - h. Fun Facts page
 - i. The type of person best suited for this kind of pet

Lessons 18-24

3. Answer any questions students might have.
4. Provide students with the resources, materials, and/or technology tutorial necessary for them to complete their project.
5. Give students time to begin working.
6. Monitor the students as they work and be sure to ask for a progress report at the beginning of each work session.

EXTENSION ACTIVITY

If students finish their projects before the week and a half is up, provide a choice menu of activities that might include any of the learning centers students did not get to complete on day 11-13, a list of kid-friendly websites or books, and creative writing activities.



Lesson 25

OVERVIEW

The purposes of this lesson are to review what was learned throughout the unit and share the final projects with the class.

OBJECTIVES

- The students will recall important information they gained about taking care of pets as a result of this unit.
- The students will present their final projects to the class in a clear, strong voice.

MATERIALS

- Students' final projects
- All charts created during the unit
- End of unit assessment
- Science notebooks

PROCEDURES

1. Ask the students to work in small groups to create a list of the top three things they learned as a result of this unit. Students may use their science notebooks and the charts created throughout the unit to help them.
2. Give each group an opportunity to share.
3. Distribute an end of the unit assessment and give students time to complete it.
4. Introduce the format for sharing their final projects with the class. (Each student will stand up in front of the class, introduce themselves, and then have three minutes to summarize and display their final project. The audience must be quiet and respectful. An opportunity to ask questions will be given after each presentation.)
5. Begin presentations
6. Ask each student to evaluate themselves on scale of 1 to 5. (1= did not put forth any effort / 5= did my best)
7. Remind students to remember what they learned about taking care of a pet and what a big responsibility it actually is.
8. Celebrate the end of the unit by watching several funny pet videos from America's Funniest Videos on YouTube.

Materials List

1. **Required Resources**

a. **Books**

b. **Science Lab Equipment**

c. **Technology Resources**

- “Blast Off” Game from the USDA’s website:
http://www.fns.usda.gov/multimedia/Games/Blastoff/BlastOff_Game.html
- Canine Anatomy: www.vet.purdue.edu/engagement/sepa/anatomy.htm
- Computers with internet access
- Flip Ultra HD camcorder and power adaptor
- iMovie
- iTunes
- Instructions for Venn Diagram foldable:
http://flesolcobbcentral.typepad.com/cobb_math_esol/files/VennDiagramThreeTabBook.pdf
- Instructions for the “Veterinarian Book” assignment foldable:
http://www.dentonisd.org/512719693919/lib/512719693919/Instructions_for_Folds.pdf
- My Plate Poster: <http://www.choosemyplate.gov/>
- New York Times article:
<http://www.reuters.com/article/2010/11/23/us-alpha-carotene-idUSTRE6AM6UH20101123>
- Nintendo DS Console
- Nintendo DS Games:
 - Animal Planet TM Emergency Vets.TM. (2009). Activision Publishing, Inc.
 - Animal Planet TM Vet Life.TM. (2009) Activision Publishing, Inc.
 - Imagine Zookeeper.TM. (2009) UBISOFT.
 - Nintendogs Dachshund & Friends.TM. (2005). Nintendo.
 - Pet Pals: New Leash on Life.TM. (2010) DESTINEER
 - Petz Nursery. (2009). UBISOFT
- PowerPoint
- Video: <http://www.youtube.com/watch?v=YuPIUQvViX8>
- Virtual vet visit: www.purdue.edu/svmengaged/virtualvet/VVV

Materials List

d. Handouts

- Conceptual Assessment Instrument
- “How I Became a Scientist” SEPA Activity Book for 3rd Graders
- Puppy Place Literature Log
- “What I Eat” Homework Tracking Form

e. Miscellaneous

- Stuffed animals
- Notebook for each student
- Arts and crafts supplies
- Poster board
- Chart paper
- Recycled packaging
- Stack of old magazines
- Pet store advertisements and pet supply catalogues
- Egg candler
- Timer

2. Optional Resources

a. Books about the Health Professions

- Carris, J. (1984). *Pets, vets, and Marty Howard*. New York, NY: J.B. Lippincott Junior Books.
- Maze, S. & O’Neill Grace, C. (1997). *I want to be a veterinarian*. San Diego, CA: Harcourt Brace & Co.
- Muntean, M. (1992). *I want to be a veterinarian*. New York, NY: Sesame Street Golden Press.
- Thomas, WD. (2009). *Veterinarian*. Pleasantville, NY: Gareth Stevens Publishing.
- Walker-Hodge, J. (1999). *Animal hospital*. New York, NY: DK Publishing, Inc.

b. Additional Pet Care Readings

- Case, R. (2006). *Lizards*. Irvine, CA: Bow Tie Press.
- Hernandez-Divers, S. (2010). *Geckos*. Chicago, IL: Heinemann Library.
- La Rochelle, D. (2004). *The best pet of all*. New York, NY: Puffin Books.
- Palatini, M. (2003). *The perfect pet*. New York, NY: Harper Collins Publishers.