

P.E. IS Physically Educating

Special Area: Physical Education (Grades K-5)

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Lesson length: One 40 minute lesson for each grade level, K - 4

I. ABSTRACT

Physical Education can be easily integrated into the Core Knowledge Curriculum for grades Kindergarten through Grade Five. Students will experience traveling through the circulatory system, navigating the flooding Nile, kinesthetically experience animal habitats, and flee from stinging mosquitoes.

II. OVERVIEW

A. Concept Objective

1. Students will reinforce the study of classroom topics in the physical education class.
2. The students will understand and identify the major bones of the human body and appreciate their function
3. The students will learn and identify the letters in the alphabet and begin to form words while playing a game.
3. Students will review the habitats of various animals talked discussed in class
4. The student will learn about disease carrying insects and how to identify them
5. The students will learn about the rainy season and how it effects the Nile River
6. The students will understand the circulatory path of the blood flow after the blood is pumped from the heart up to when it returns to the heart.

B. Content from the *Core Knowledge Sequence*

1. Human Body: Skeletal System –
 - a. Grade One: Skeleton, bones and skull
 - b. Grade Three:
 - ◆ Skeleton, bones and marrow
 - ◆ Musculo-skeleton connections: Ligaments, Tendon, Achilles tendons, cartilage
 - ◆ Skull, cranium
 - ◆ Spinal column, vertebrae
 - ◆ Joints
 - ◆ Ribs, rib cage sternum
 - ◆ Scapula, pelvis, tibia, fibula
 - ◆ Broken bones, x-rays
2. Decoding – Kindergarten
 - a. Recognize and name all uppercase and lower case letters of the alphabet
 - b. Match a letter to a spoken phoneme
 - c. Decode a letter into the phoneme it represents
3. Habitats – Grade One
 - a. Living things live in environments to which they are particularly suited
 - b. Specific habitats and what lives there, for example:
 - ◆ Forest (oak tress, squirrels, raccoons, snails, mice)

- ◆ Meadow and prairie (wildflowers, grasses, prairies dogs)
- ◆ Underground (fungi, moles, worms)
- ◆ Desert (cactus, lizard, scorpion)
- ◆ Water – (fish, oysters, starfish)
- 4. Insects - Grade Two
 - a. Insects can be helpful and harmful to people
 - b. Distinguishing characteristics
- 5. Rivers – Grade Three
 - a. Important rivers of the world
 - ◆ Africa: Nile
- 6. The Circulatory System – Grade Four
 - a. Heart: four chambers (auricles and ventricles), aorta
- C. Skills to be taught
 - 1. Working cooperatively
 - 2. Sportsmanship
 - 3. Following directions
 - 4. Traveling Safely using various locomotor skills

II. BACKGROUND KNOWLEDGE

- A. N/a

IV. RESOURCES

- A. Computer/Web sites
- B. *What Your Kindergartner Should Know*
- C. *What Your 1st Grader Should Know*
- D. *What Your 2nd Grader Should Know*
- E. *What Your 3rd Grader Should Know*
- F. *What Your 4th Grader Should Know*
- G. Webster Dictionary

V. LESSONS

Lesson One: Skeletal System (Grades: Kindergarten through Grade 5)

(Length of lesson - Throughout the year)

- A. *Daily Objectives*
 - 1. Concept Objective
 - a. Students will reinforce the study of classroom topics in the physical education class.
 - b. The students will understand and identify the major bones of the human body and appreciate their function
 - 2. Lesson Content: Human Body: Skeletal System
 - a. Grade One: Skeleton, bones and skull
 - b. Grade Three:
 - ◆ Skeleton, bones and marrow
 - ◆ Musculo-skeleton connections: Ligaments, Tendon, Achilles tendons, cartilage
 - ◆ Skull, cranium
 - ◆ Spinal column, vertebrae
 - ◆ Joints
 - ◆ Ribs, rib cage sternum
 - ◆ Scapula, pelvis, tibia, fibula

- ◆ Broken bones, x-rays
 - 3. Skill Objectives
 - a. Working cooperatively
 - b. Sportsmanship
 - c. Following directions
 - d. Traveling Safely using various locomotor skills
- B. *Materials*
 - 1. Cards with the individual bones written on them
 - 2. Skeleton or poster of skeleton
 - 3. Previous knowledge attained from previous classes
- C. *Key Vocabulary*
 - 1. Cranium - Skull
 - 2. Frontal – forehead
 - 3. Nasal – nose
 - 4. Maxilla – upper jaw
 - 5. Mandible – lower jaw
 - 6. Malar – cheekbone
 - 7. Temporal – side of head
 - 8. Parietal – top of head
 - 9. Occipital – back of head
 - 10. Clavicle – collarbone
 - 11. Sternum – breastbone (talk about xiphoid process)
 - 12. Ribs – 12 pairs (the cage)
 - 13. Hips – lateral extension of the pelvis
 - 14. Femur – thigh bone
 - 15. Tibia – larger bone/shin in lower leg
 - 16. Fibula – smaller lower leg bone
 - 17. Tarsal – ankle bones
 - 18. Metatarsals – bones in feet
 - 19. Phalanges – fingers and toes
 - 20. Humerus – upper arm
 - 21. Radius – thumb side of lower arm
 - 22. Ulna – little finger side of lower arm
 - 23. Carpals – wrist bones
 - 24. Metacarpals – bones in hand
 - 25. Spine – backbone
 - 26. Scapula – shoulder blade
 - 27. Pelvis -
- D. *Procedures/Activities*
 - 1. At the beginning of every class, the students will look at the bone, spell the bone, touch the bone and talk about the function of the bone
 - 2. Every class lesson begins with a new bone and a review. (See above list)
 - 3. Every class session begins with a review of all the previous bones taught and a new bone is introduced.
 - 4. Throughout the year, the physical education teacher teaches using the bones with sentences (“Put your phalanges on the floor. Tuck your mandible to your sternum and place your occipital on the floor and roll.”)
 - 5. Fifth grade students take a written test on all the bones at the end of the school year
- E. *Evaluation/Assessment*
 - 1. Oral response from students

2. Kinesthetic recall

Lesson Two: Letter Recognition (Kindergarten)

A. Daily Objectives

1. Concept Objectives
 - a. Students will reinforce the study of classroom topics in the physical education class.
 - b. The students will learn and identify the letters in the alphabet and begin to form words while playing a game
2. Lesson Content: Decoding – Kindergarten
 - a. Recognize and name all uppercase and lowercase letters of the alphabet
 - b. Match a letter to a spoken phoneme
3. Skill Objectives
 - a. Working cooperatively
 - b. Sportsmanship
 - c. Following directions
 - d. Traveling Safely using various locomotor skills

B. Materials

1. Cards with all letters of the alphabet on them. (at least 6 sets)
2. Cones and/or dots for each group to stand behind
3. Master set of letters on larger cards

C. Procedures/Activities

1. Divide the class into 5 groups of 4 or whatever number suits your situation. Have them line up behind their dot or cone.
2. The teacher will scatter the sets of letters face up approximately 20 feet in front of the lines.
3. When the teacher holds up the first letter, “a” the first person in each line runs up to the scattered letters and finds an “a”. They then run back and touch their dot. Once they are all back, the teachers says “1,2,3” and the whole group makes the sound of that letter. They continue to perform the “relay” until they complete all 26 letters in the alphabet.
4. Towards the end of the year, you could have them try to form word from the letters

E. Evaluation/Assessment

1. Teacher observation
2. Student recall

Lesson Three: Habitats (Grade One)

A. Daily Objectives

1. Concept Objectives
 - a. Students will reinforce the study of classroom topics in the physical education class.
 - b. Students will review the habitats of various animals talked about in class
2. Lesson Content
 - a. Living things live in environments to which they are particularly suited
 - b. Specific habitats and what lives there, for example:
 - ◆ Forest (oak trees, squirrels, raccoons, snails, mice)
 - ◆ Meadow and prairie (wildflowers, grasses, prairie dogs)

- ◆ Underground (fungi, moles, worms)
 - ◆ Desert (cactus, lizard, scorpion)
3. Skill Objectives
 - a. Working cooperatively
 - b. Sportsmanship
 - c. Following directions
 - d. Traveling Safely using various locomotor skills
- B. Materials*
1. Kid's in Motion CD
 2. CD player with a pause button
- C. Key Vocabulary*
1. Habitat –place or region inhabited by an animal in its natural state
 2. Climate-weather conditions of a place over a period of time
- D. Procedures/Activities*
1. Introduction/review of the different habitats with examples
 - a. The Forest Habitat – (squirrel, skunk, woodpeckers, spiders)
 - b. Underground Habitat – (earthworm, grub, moles)
 - c. The Desert Habitat – (Lizards, camels)
 - d. Water Habitats – (Fish, oysters, clams)
 2. Pick a few animals and talk about their different habitats and how it affects their movement
 3. Have the students spread out in empty spaces. Put on the first song “Animal Action I” from the Kids in Motion CD. After the students have moved to animal that is called out, press pause and discuss how and why each animal would move that way. The animals are:
 - a. Elephant -
 - b. Cat
 - c. Frog
 - d. Bird
 - e. Snake
 - f. Monkey
 3. After the first song, play “Animal Action II” and repeat the process. The animals are:
 - a. Horse
 - b. Spider
 - c. Bunny
 - d. Lion
 - e. Bee
 - f. duck
- E. Evaluation/Assessment*
2. Teacher observation
 3. Oral interaction

Lesson Three: Insects (Grade Two)

- A. Daily Objectives*
1. Concept Objectives
 - a. Students will reinforce the study of classroom topics in the physical education class.
 - b. The student will learn about disease carrying insects and how to identify them
 2. Lesson Content

- a. Insects can be helpful and harmful to people
- b. Distinguishing characteristics
- 3. Skill Objectives
 - c. Working cooperatively
 - d. Sportsmanship
 - e. Following directions
 - f. Traveling Safely using various locomotor skills
- B. *Materials*
 - 1. Large floor/ground space
 - 2. Several 2-foot “pool noodles” (one noodle can be cut into several pieces)
- C. *Key Vocabulary*
 - 1. Stinger – a small sharp organ in some animals that pierces the skin of a victim and often injects poison or an irritant from a connected gland
 - 2. Calamine lotion – a topical antihistamine for relief from itching
 - 3. Carrier – an animal carrying the germs of a disease
- D. *Procedures/Activities*
 - 1. After the classroom lesson has been taught, review the helpful and harmful insects with the class. Talk about how mosquitoes carry diseases.
 - 2. Introduce the Mosquito Tag game
 - 3. Pick one student to be the mosquito. The mosquito moves around the room with the noodle held onto his forehead and tries to sting/bite other children. Once the mosquito has bitten you, you must “scratch” the area where you were bitten and stand in place with your legs apart. The unfrozen people are “calamine lotion bottles.” Once a calamine lotion bottle crawls under the “bitten” person, they are free again. Change “mosquitoes “ and give others a chance to “bite”.
- E. *Assessment/Evaluation*
 - 1. Teacher observation
 - 2. Oral feedback

Lesson Four: Rivers (Grade Three)

- A. *Daily Objectives*
 - 1. Concept Objectives
 - a. Students will reinforce the study of classroom topics in the physical education class.
 - b. The students will learn about the rainy season and how it effects the Nile River
 - 2. Lesson Content
 - a. Important rivers of the world
 - ◆ Africa: Nile
 - 3. Skill Objectives
 - c. Working cooperatively
 - d. Safety
 - c. Sportsmanship
 - d. Following directions
- B. *Materials*
 - 1. Enough Hula Hoops for every child to be able to have one.
 - 2. Music to be able to play and turn on and off (music represents rain)
 - 3. Foam balls
 - 4. Cones or dots to make boundaries

C *Key Vocabulary*

1. flooding – a large quantity of water covering what used to be dry land

D. *Procedures/Activities*

1. Review the months that the water is lowest (March/April) .In April the floods begin, reaching the highest levels in mid September.
2. Spread hula hoops throughout the open space. Each hula-hoop represents dry land.
3. Have every child stand inside of a hula-hoop.
4. Explain to them that every time the music is playing, the heavy rains are coming down and everyone must get off the island and “swim” (jog) around the room
5. When the music stops, everyone tries to find an empty hula-hoop (dry Land). Only one person per island. If you do not find an island, you must continue to swim (working on cardiovascular endurance). If you stop swimming, you would sink.
6. As the rain is coming down and everyone continues to swim around the room, the teacher, or a helper is removing one or two hula hoops each time. This represents the floodwaters are rising, which means it is getting to be later and later in the summer.
7. No circling the hula hoops because if you do the Nile alligators may eat you
8. Continue the game until all the hula-hoops are gone and it is mid September.
9. Throughout the game, continue to call out the time of the year, helping them to understand that as the summer continues, the flooding increases.

E. *Evaluation/Assessment*

1. Teacher observation
2. Student input

Lesson Five: The Circulatory System (Grade Four)

A. *Daily Objectives*

1. Concept Objectives
 - a. Students will reinforce the study of classroom topics in the physical education class.
 - b. The students will understand the circulatory path of the blood flow after the blood is pumped from the heart up to when it returns to the heart
2. Lesson Content
 - a. Heart: four chambers (auricles and ventricles), aorta
3. Skill Objectives
 - a. Working cooperatively
 - b. Sportsmanship
 - c. Following directions
 - d. Traveling Safely using various locomotor skills

B. *Materials*

1. Scooters (optional)
2. Tape to mark the flow
3. Pre-made signs
 - a. To Heart
 - b. To Capillaries
 - c. To Veins

- d. To Heart without O₂
- e. To Lungs with CO₂/without O₂
- f. Waste in (4 signs)
- g. O₂ out (4 signs)
- h. CO₂ breathed out
- i. CO₂ exchanged for O₂
- j. Clean/oxygenated blood

C. *Key Vocabulary*

- 1. heart- muscular organ that pumps the blood through the body
- 2. capillaries- tiny blood vessels connecting arteries to veins
- 3. veins- blood vessel carrying blood to the heart
- 4. lungs- breathing organs
- 5. oxygen- the gas we breath that is essential to life
- 6. carbon dioxide- the gas we exhale

D. *Procedures/Activities*

- 1. Have the layout (see Appendix) already taped down.
- 2. Review the blood flow circuit with the students
- 3. Explain/Demonstrate the procedure to the students:
 - a. Leave the heart, while riding on the scooter, with clean/oxygenated blood (each student carries a basket with bean bags and yellow fleece balls)
 - b. Carry the blood to capillaries and pick a path to take. As you travel through the capillaries, you slowly place O₂ (yellow fleece balls) into the body cells. You also pick up water and waste (bean bags)
 - c. From the capillaries, you travel to the veins choosing a path. You continue to pick up some waste (most is sent out through the urine or sweat), and placing O₂ to these areas.
 - d. From the veins (blood is blue), we travel to the heart, where the heart bumps us to the lungs.
 - e. From the lungs, where we ride of the waste, and pick up fresh O₂ (yellow balls), we travel back to the heart and begin our circuit again
 - f. After each journey, we take out basket and go pick up a designated number of beanbags and balls and place the filled basket at the beginning of the circuit and then get back in line.

E. *Evaluation /Assessment*

- 1. Teacher observation
- 2. Student input

VI. CULMINATING ACTIVITY

- A. None

VII. STUDENT WORKSHEETS HANDOUTS

- A. Appendix A – sets of letters
- B. Appendix B – diagram of the circulatory system

VI. BIBLIOGRAPHY

- A. Hirsch, Jr. E. D. *What your Kindergartner needs to Know*. New York, NY: Dell, 1996. 0-385-31841-3
- B. Hirsch, Jr. E.D. *What your 1st Grader Needs to know*. New York, NY: Dell, 1997.

- 0-385-31987-8
- C. Hirsch, E.D. *What your 2nd Grader Needs to know*. New York, NY: Dell, 1998.
0-385-31843-X
- D. Hirsch, E.D. *What your 3rd Grader Needs to know*. New York, NY: Dell, 1992.
0-38531257-1
- E. Hirsch, E.D. *What your 4th^l Grader Needs to know*. New York, NY: Dell, 1992.
0-38531260-1
- F. "Circulatory System," Microsoft Encarta Online Encyclopedia 2002
<http://ecarta.msn.com>, 1997-2002 Microsoft Corporation.
- G. [ThinkQuest . "The Living Africa: the land"\(on line\)](http://library.thinkquest.org/16645/the_land/nile_afn.shtml)
http://library.thinkquest.org/16645/the_land/nile_afn.shtml, 1998
- H. [The New Lexicon Webster's Dictionary, New York NY.Lexicon, 1988](#)
[0-7172-4545-4](#)

Appendix A

<i>a</i>	<i>b</i>	<i>c</i>
<i>g</i>	<i>h</i>	<i>i</i>
<i>m</i>	<i>n</i>	<i>o</i>
<i>s</i>	<i>t</i>	<i>u</i>
<i>y</i>	<i>z</i>	

Appendix A

<i>d</i>	<i>e</i>	<i>f</i>
<i>j</i>	<i>k</i>	<i>l</i>
<i>p</i>	<i>q</i>	<i>r</i>
<i>v</i>	<i>w</i>	<i>x</i>

Appendix A

<i>A</i>	<i>B</i>	<i>C</i>
<i>G</i>	<i>H</i>	<i>I</i>
<i>M</i>	<i>N</i>	<i>O</i>
<i>S</i>	<i>T</i>	<i>U</i>
<i>Y</i>	<i>Z</i>	

Appendix A

<i>D</i>	<i>E</i>	<i>F</i>
<i>J</i>	<i>K</i>	<i>L</i>
<i>P</i>	<i>Q</i>	<i>R</i>
<i>V</i>	<i>W</i>	<i>X</i>

Appendix A

Tubes For Carrying Blood

