Visual Abilities Lab

Name:_________________________________________Score:____________

Introduction
This lab consists of a series of activities that explore various vision abilities covered in Chapter 8, Movement and the Changing Senses, of the motor development text.

Visual Activity 1: Eye Dominance & Depth Perception

Purpose: The purpose of this activity is to determine your eye dominance and depth perception.

Equipment: Card in hole test and depth perception box

Procedure: In determining your eye dominance an 8 ½’ x 11’ sheet of paper with the hole in middle will be used. Hold the sheet of paper with both hands extended toward the dot on the black board. Line up the hole with the dot. So you can see the dot through the hole then close your right eye and left eye. The eye that is open where you can see the dot is your dominant eye.

Place the depth perception box on a table at approximately eye level. You may need to be seated. Position the subject 15 feet from the unit and place the two control strings one in each hand. Instruct the subject to align the rods from several randomly selected starting position using one eye open (monocular) and both eyes open (binocular vision). Measure one’s binocular, monocular right and left depth. Record the differences from zero to nearest millimeter.

Record your individual results below.

<table>
<thead>
<tr>
<th>Dominate eye</th>
<th>Non-dominate</th>
<th>Left Monocular</th>
<th>Right Monocular</th>
<th>Binocular</th>
</tr>
</thead>
</table>

Activity 2: Static Visual Acuity, peripheral vision and contrast sensitivity

Introduction. The visual abilities of static visual acuity and contrast sensitivity, are necessary in performing many hand-eye or eye-foot ballistic movements such as catching and hitting. Also, the text indicates, vision plays a role in controlling many voluntary motor skills such writing, prehension, walking, avoiding objects during locomotion and playing table tennis.

Purpose: The purpose of this experiment is to assess one’s visual acuity and contrast sensitivity visual abilities.

Equipment: Stereo 2000 Vision tester
**Procedure:** Not in any given order with the aid of a partner, lab assistant, and instructor assess the following visual abilities;

1. *Static visual acuity or 20/20 vision.* Use the Stereo Vision 2000 Tester to assess your far and near static visual acuity. Record your level of static visual acuity on the form below.
3. *Peripheral vision.* Use the vision 2000 Tester to assess your field of vision.

**Data Recording:** On the Stereo Optical Far Contrast Tester Form record your near and far static visual acuity, and far contrast sensitivity.

**Lab Questions:**

1. The development of eye dominance is believed to occur early in life. When does eye dominance in person fully develop? Are you unilateral or crossed-lateral dominant? How does your type of eye dominance effect your ability to perform motor or sport skills?

2. What is depth perception and how does it relate to performing motor and sports skill? When you covered one eye to determine depth which eye was better? Is the eye that is more accurate, your dominate eye? Any ideas on why your dominate eye was more
accurate? Not as accurate? How accurate was your depth perception when using binocular vision? According to researchers, what needs to take place for people to develop depth perception?

3. What is contrast sensitivity? Do you have normal contrast sensitivity? What is considered according to your text normal lateral peripheral vision and are you normal. How do these visual abilities related to performing motor and sport skills?

4. Did you have normal (20/20) near and far static visual acuity? Approximately at what age does visual acuity fully develop? What roles does visual acuity play in performing motor and sport skills?