

**WPI**

# Eye Screening Exam

Armenian EyeCare Interactive Qualifying Project

Please read all instructions before you begin performing each test.

# Before Beginning Tests:

For these tests you will need:

- A ruler
- A timer
- Follow calibration instructions

Calibration is necessary to get as accurate results as possible, ensure all tests are the correct size.

- Make sure the line below measures **2in** or **5cm**
  - Keep this size for all tests
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# Symptom tracker

Purpose: To catch potential eye issues based on factors within school life

Circle 1 if symptom does occur and 0 if symptom does not occur

A score of 3 or above. Seek further treatment options

**0/1** Blurry vision at a distance (difficulty reading the board during class)

**0/1** Blurry vision close up

**0/1** Poor school performance

**0/1** Difficulty in understanding/remembering what was read

**0/1** Skipping words/lines

**0/1** Frequently re-reading

**0/1** Headaches/ eye strain when reading

**0/1** Letter/number reversal

**0/1** Words move on the page

**0/1** Double vision

**0/1** Difficulty with math

**0/1** Eye burning/irritation

# Distance Vision

Purpose: This test is for visual acuity at a distance greater than **3m** or **10ft**

1. Place the chart **3m** or **10ft** away from the participant
2. Patient covers their left eye and read the smallest line of shapes the patient can see from left to right
3. Patient covers their right eye and read the smallest line of shapes the patient can see from right to left
4. With both eyes open read the smallest line of shapes the patient can see from left to right
5. *The participant **passes** if they have no more than one mistake identifying the shapes, otherwise they **fail***

## Size Scaling Chart

Distance (feet)	70	60	50	40	30	20	15	10	7	4
Distance(meters)	21	18	15	12	9	6	4.5	3	2	1
letter ht (mm)	31	27	22	18	13	9	7	4	3	2

## Shapes to be Identified Key:

Circle Square



House Apple

# Reading Vision

Purpose: This test is for visual acuity for close distances such as reading

1. Place the chart **40cm** or **12in** away from the participant
2. Patient covers their left eye and read the smallest line of shapes the patient can see from left to right
3. Patient covers their right eye and read the smallest line of shapes the patient can see from right to left
4. With both eyes open read the smallest line of shapes the patient can see from left to right
5. *The participant **passes** if they have no more than one mistake identifying the shapes, otherwise they **fail***

## Size Scaling Chart

Distance (feet)	70	60	50	40	30	20	15	10	7	4	1
Distance(meters)	21	18	15	12	9	6	4.5	3	2	1	.3
letter ht (mm)	31	27	22	18	13	9	7	4	3	2	1

## Shapes to be Identified Key:

Circle      Square



House      Apple

Distance vision:



Reading vision:

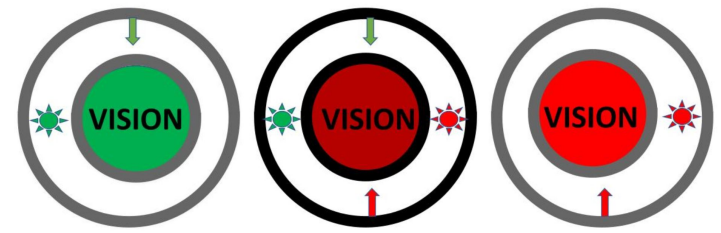


# Eye-Teaming

Purpose: To test that both eyes are working together, resulting in sustained, single, and comfortable vision.

1. Take a pen, pencil, or similar object in size in shape
2. Hold the object so that the tip of the pen is about **20cm** or **8in** from the participant's face and aligned between their eyes
3. Ask the participant to tell you when they start to see double
4. Slowly move the object towards their face and watch the eyes closely to see if one eye drifts outwards
5. Stop when the participant says they are seeing double, or when the pen is approximately **7cm** or **3in** away from the participant's face
6. *The participant **passes** if they are seeing one object with both eyes pointing towards the object at **7cm** or **3in**, they **fail** if they see double or if one eye drifts outward*

# Depth Perception



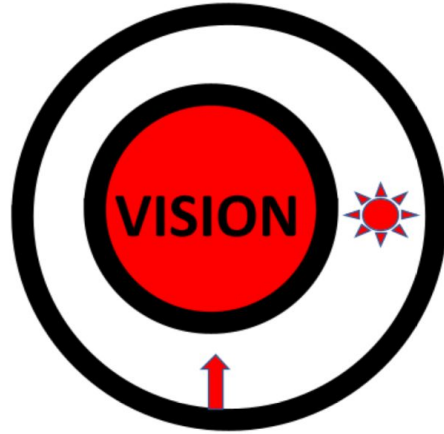
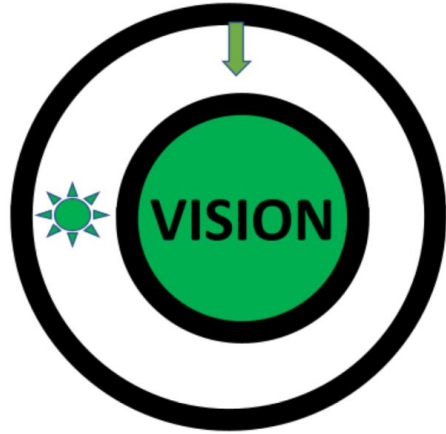
Purpose: To test how both eye work together to produce three dimensional images.

1. Hold device **0.5m** or **18in** away from the participant's face
2. Participant crosses their eyes to see the two circles overlapping in the middle
3. *The participant **passes** if they see the circles overlapping, continue if the circles do not overlap*

If the participant is having difficulty crossing eyes have the participant,

1. Place finger or pen directly in front of image
2. Participant focuses on their finger
3. Have them slowly bring their finger closer to face while staying focused on the finger
4. *The participant **passes** if they see the circles overlapping, otherwise they **fail***





# Eye Focusing

Purpose: To test how well the eyes move and work together.

1. Participant to holds the first set of numbers at a reading distance (about **40cm** or **12in**)
2. Hold the second, larger set of numbers about **3m** or **10ft** from the participant
  - Cover all but one of the numbers and ask the participant if they can see it clearly. If there is some blurriness, take a small step closer until they can see the number. Uncover the remaining numbers
3. Ask the participant to read **their** set of numbers aloud, moving from **left to right**
4. Ask the participant to read **your** set of numbers aloud in order from **left to right**
5. Ask the participant to read **their** set of numbers aloud in order from **right to left** (backwards)
6. Ask the participant to read **your** set of numbers aloud in order from **right to left** (backwards)
7. Repeat steps 4-7 one more time
8. Ask the following questions to the participant and take note of their answers
  - Did it get harder to read the numbers?
  - Did you notice your vision becoming blurry as you kept reading the numbers?
  - Do you feel dizzy or like you have a headache?
9. *The participant has **passed** this test if all of the following is true:*
  - They answered no to all of the questions above
  - You did not notice them struggling to adjust between the distances
  - The difficulty of the test did not seem to increase for the participant over time
  - The participant had no more than 3 errors

Hand to the participant

29374681

**5 1 8 0 3 6 2 9**

# Eye-Tracking \*Timer Required\*

Purpose: To test the movement of the eyes when doing activities such as reading.

1. Participant reads the numbers in each line from left to right from **40cm** or **12in** away as quickly as possible, but without making any errors
2. Record the time the participant takes to complete the test
3. Record number of errors
  - Misspeaks on numbers are recorded as errors only if they are not immediately corrected before going on to the next number
4. *The participant **passes** if they complete the test within 30 seconds and with no more than 2 errors, otherwise they **fail***

5		9		7		3			1
2		0			8		4		5
6			3		2	9			7
0	1			4			6	8	3

# Color Vision

Purpose: To test for colorblindness.

1. Participant reads off the 5 shapes seen within the dot pattern
  - If the participant can not verbally identify the shape they can trace the shape or draw the shape in the air and that would still be a correct answer
2. Give about 5 seconds for the participant to answer for each image
3. Compare the participant's answers with the answer key below
4. *The participant **passes** is if they correctly answer at least 4 out of 5 correct without significant struggling, otherwise they **fail***

Answers:

**Row 1: Square, Triangle, Circle**

**Row 2: Circle, Square**

