



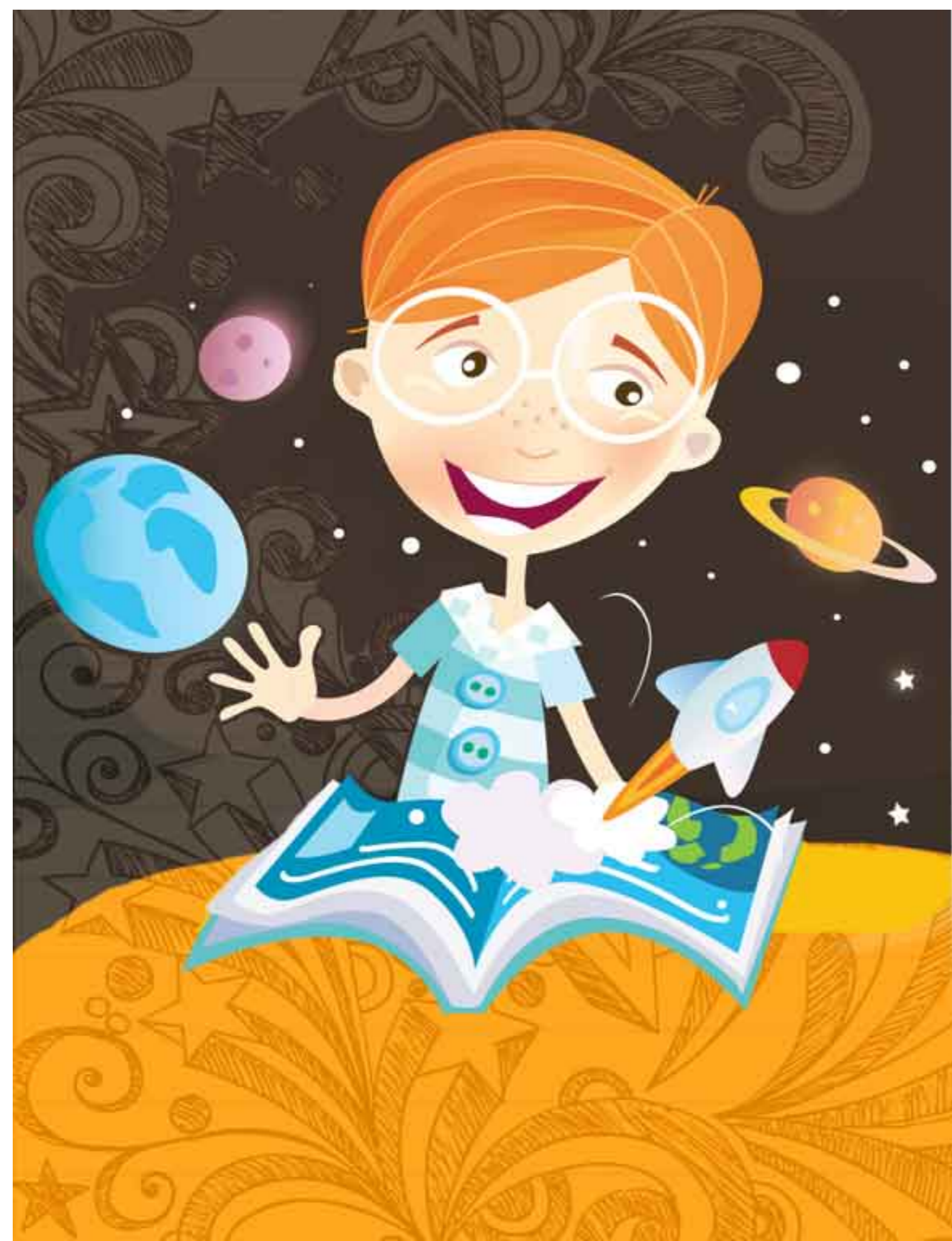
starpupilsTM

healthy eyes for healthy futures

Eye Health and Safety Program

 **Prevent
Blindness**[®]

Our Vision Is Vision[®]



Lesson 1:

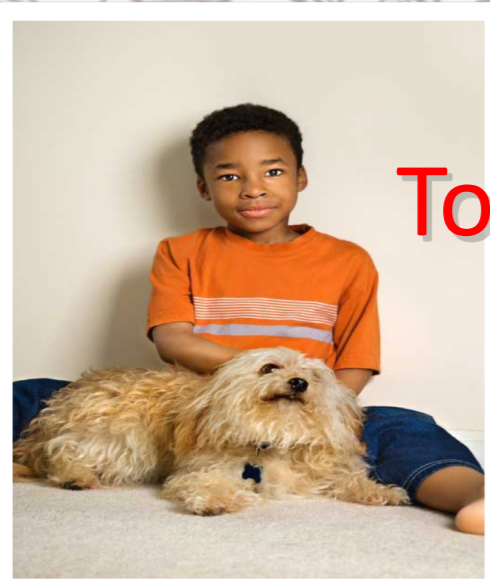
– Eyes –
Our Window
to the World

LESSON

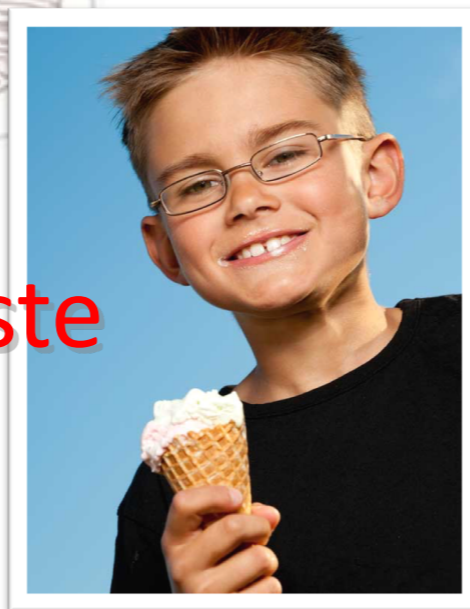
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Eyes – Our Window to the World

WE HAVE 5 SENSES



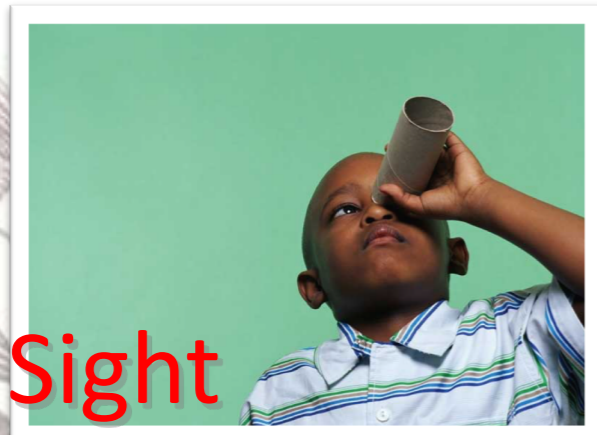
Touch



Taste



Smell



Sight

Hearing



LESSON 1

Eyes – Our Window to the World



80% of what we learn is through sight.

LESSON 1

Eyes – Our Window to the World



Our two eyes work together to form 3-D Vision. We can determine length, width and depth.

LESSON 1

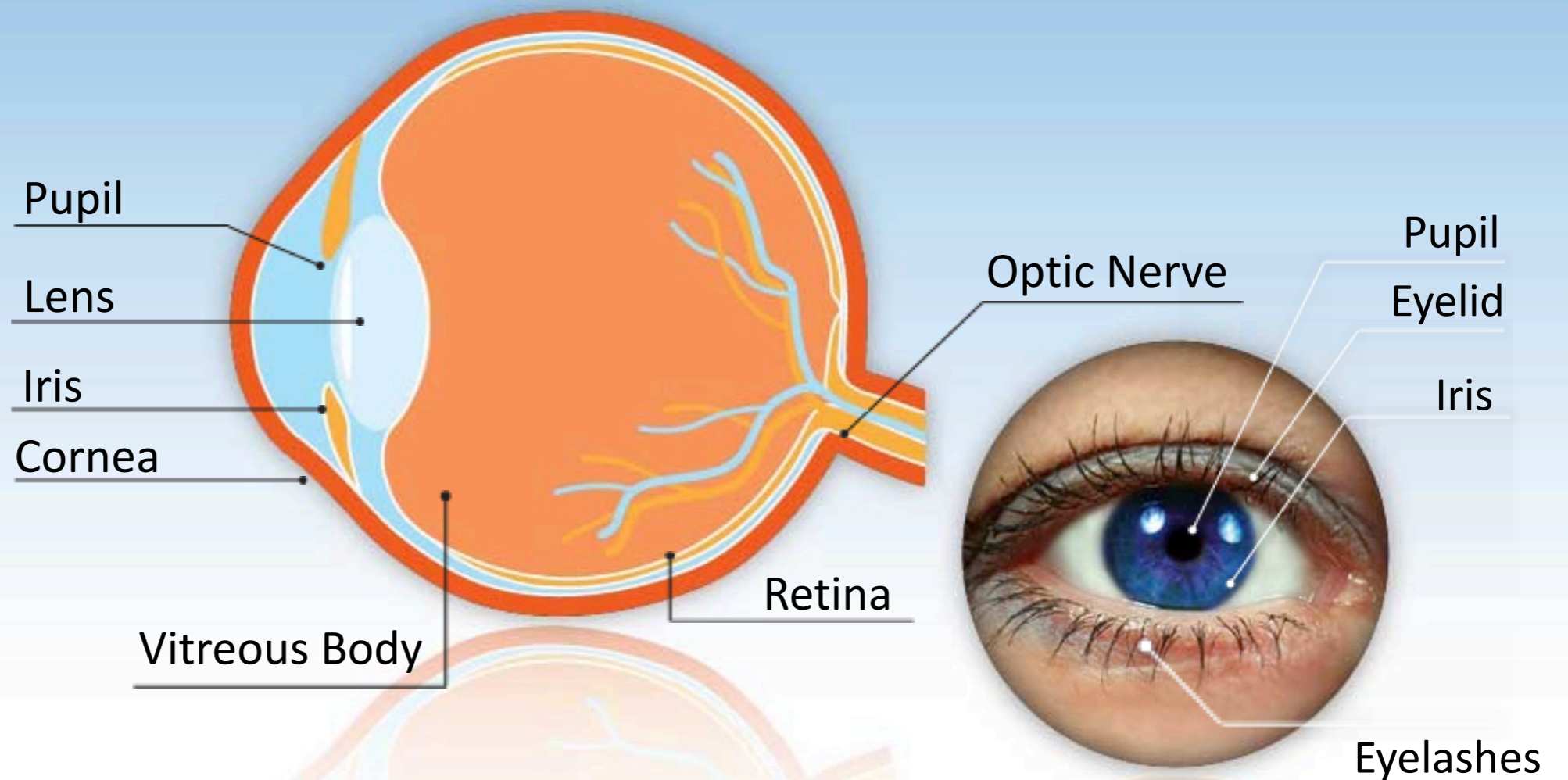
Eyes – Our Window to the World



We learn about the world around us through observation.

LESSON 1

Eyes – Our Window to the World

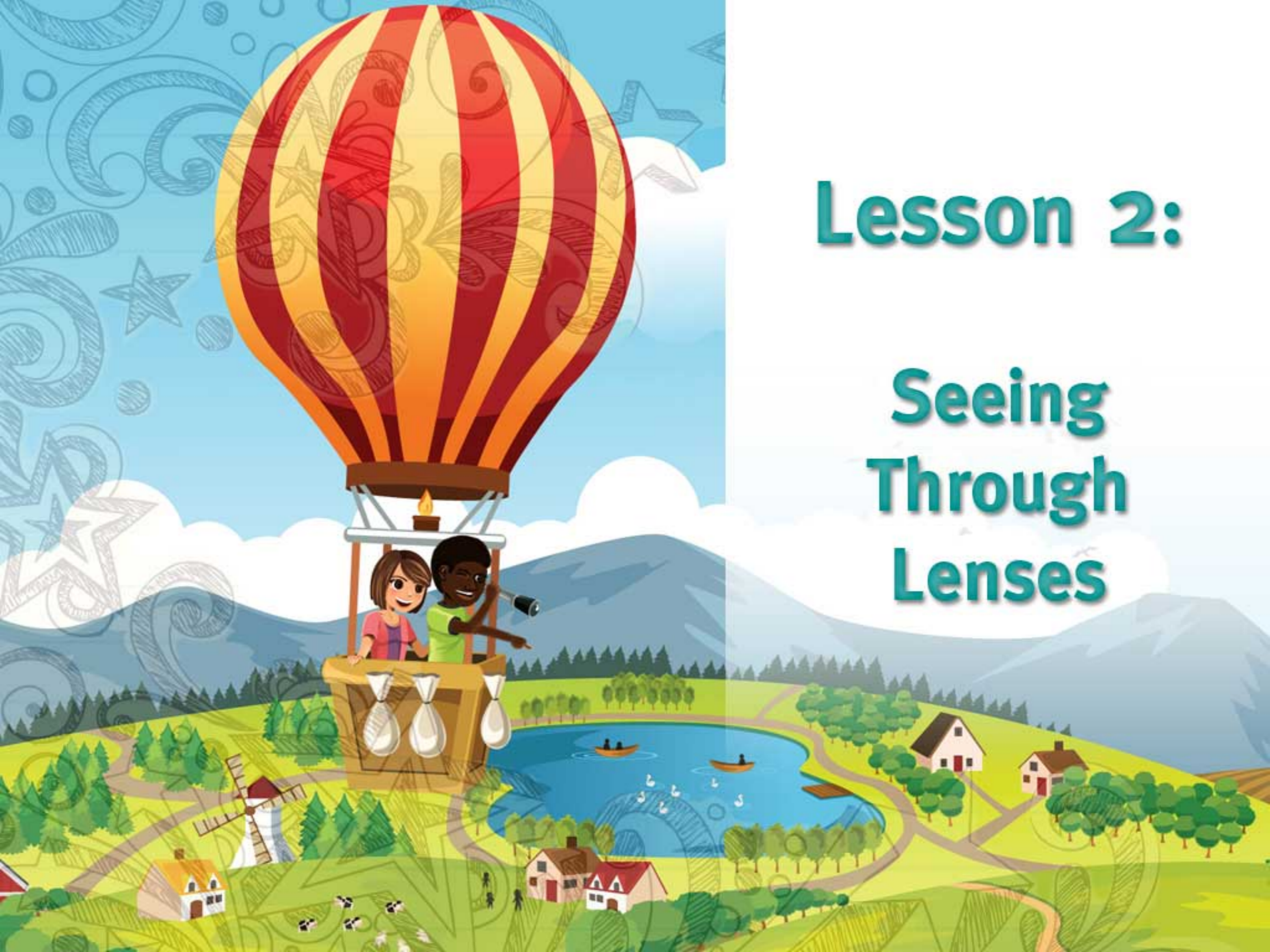


LESSON 1

Eyes – Our Window to the World



The human eye works like a camera.



Lesson 2:

Seeing Through Lenses

LESSON 2

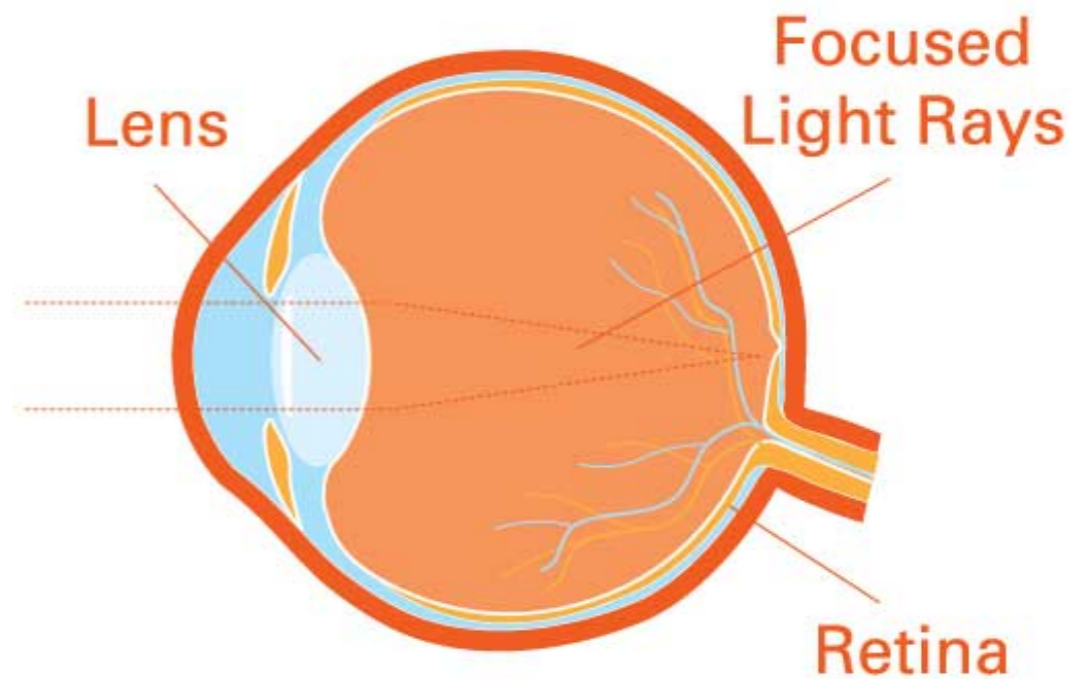
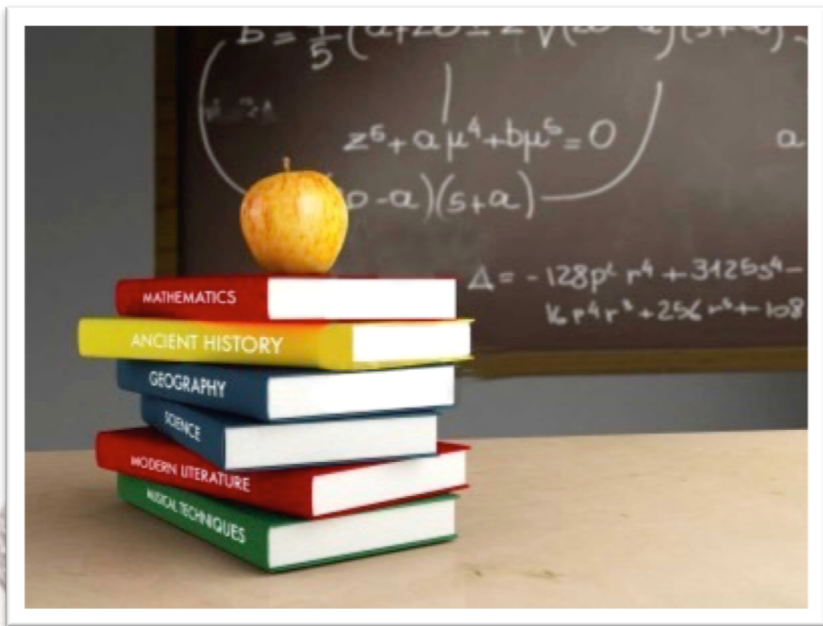
Seeing Through Lenses



Everyone's eyes are a little different from one another.

LESSON 2

Seeing Through Lenses

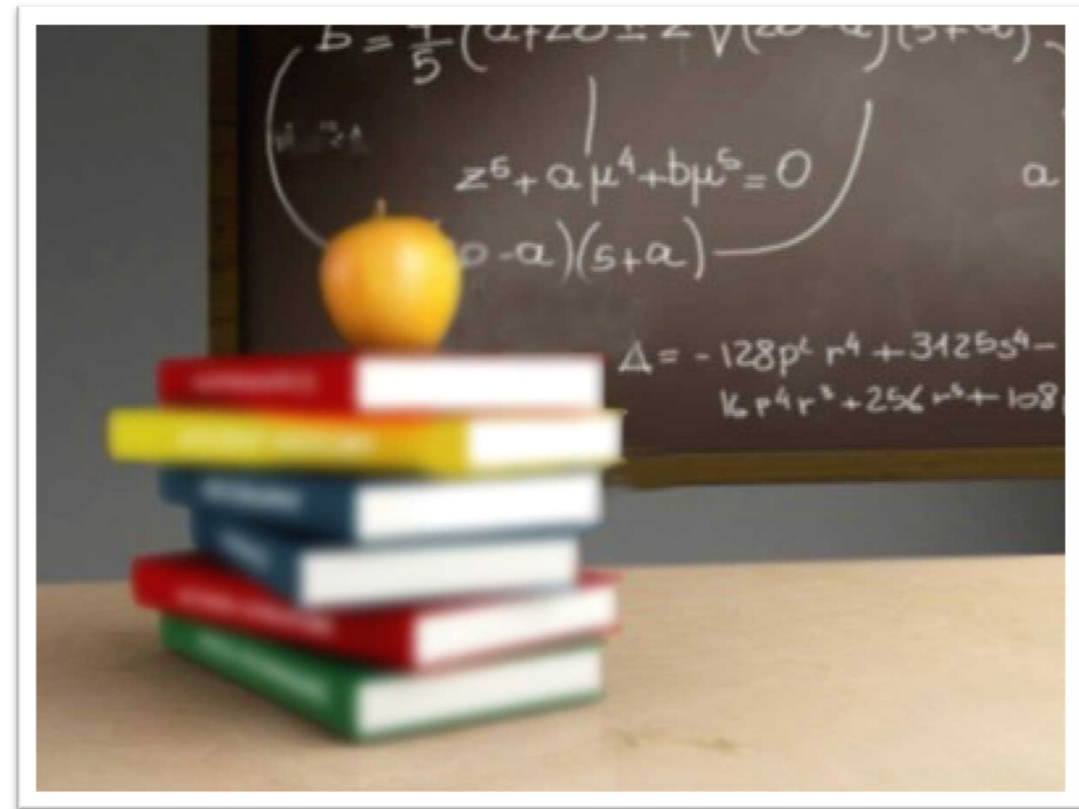


To see well, light rays need to focus on the retina.

LESSON 2

Seeing Through Lenses

HYPEROPIA



Some people are farsighted and have trouble seeing close-up. This is also called Hyperopia.

LESSON 2

Seeing Through Lenses

MYOPIA

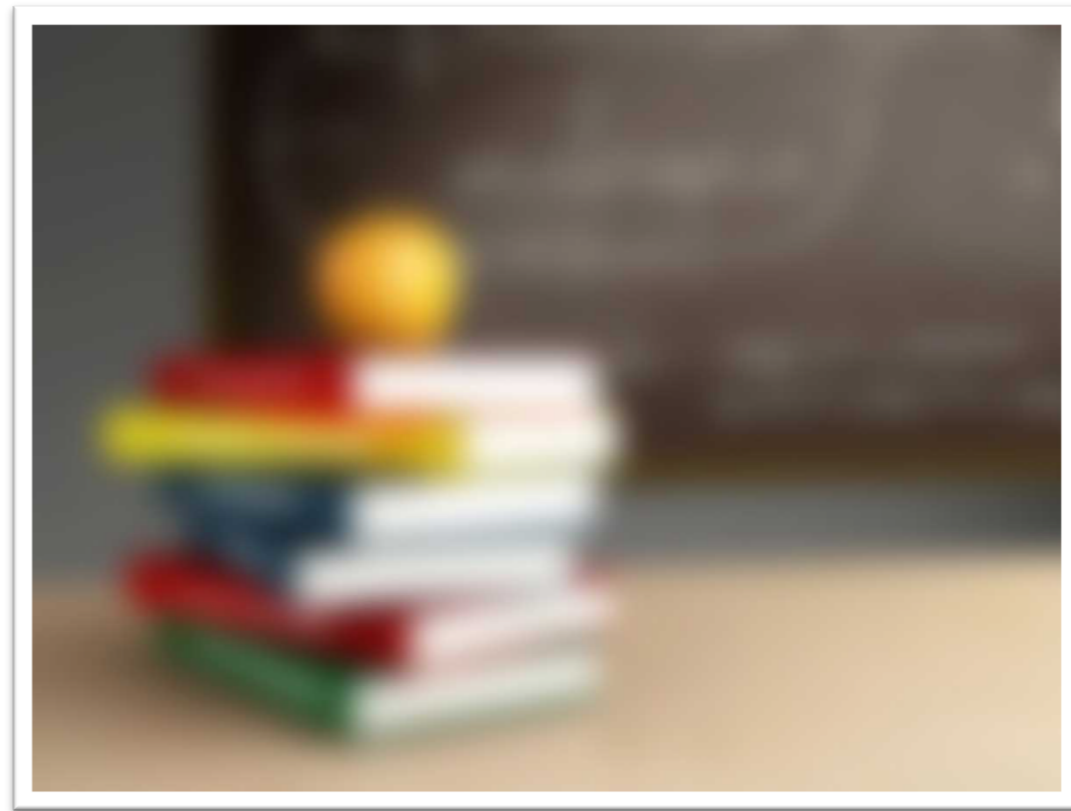


Some people are nearsighted and have trouble seeing things that are far away. This is also called Myopia.

LESSON 2

Seeing Through Lenses

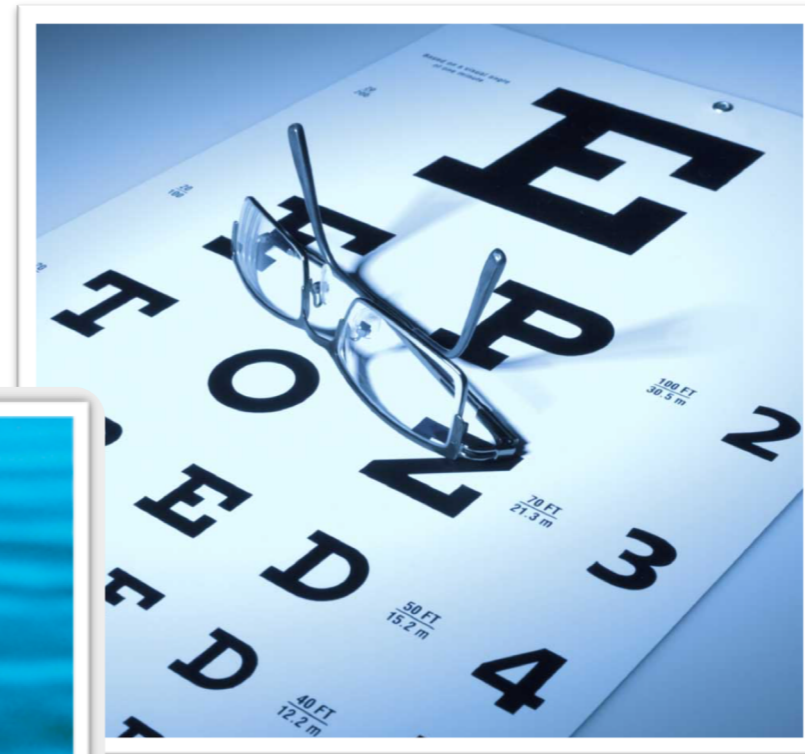
ASTIGMATISM



Some people have an irregular curved cornea and the light rays don't focus on one spot on the retina. This causes wavy vision, which is called Astigmatism.

LESSON 2

Seeing Through Lenses



Glasses or contact lenses can bend the light entering eyes to help people see more clearly.

LESSON 2

Seeing Through Lenses



Other glasses are used to protect the eyes from injury or from the sun.

LESSON 2

Seeing Through Lenses

WE HAVE CREATED DIFFERENT TYPES OF LENSES AS TOOLS TO HELP US LEARN MORE ABOUT THE WORLD.



Magnifying glass helps us view small objects in more detail.

LESSON 2

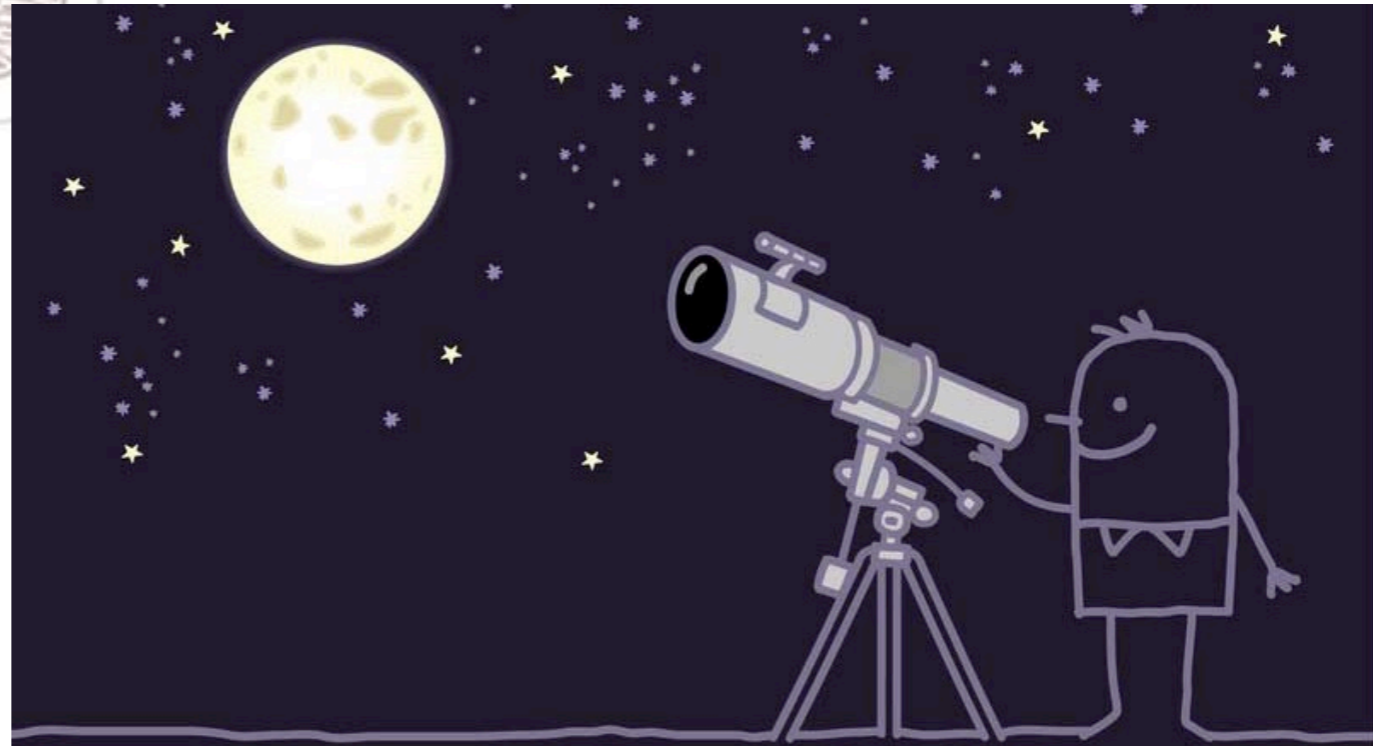
Seeing Through Lenses



Microscopes allow us to observe very small things we cannot see with our eyes alone.

LESSON 2

Seeing Through Lenses



Telescopes allow us to see things that are far away and into outer space.



Lesson 3:

A World Without Sight



LESSON

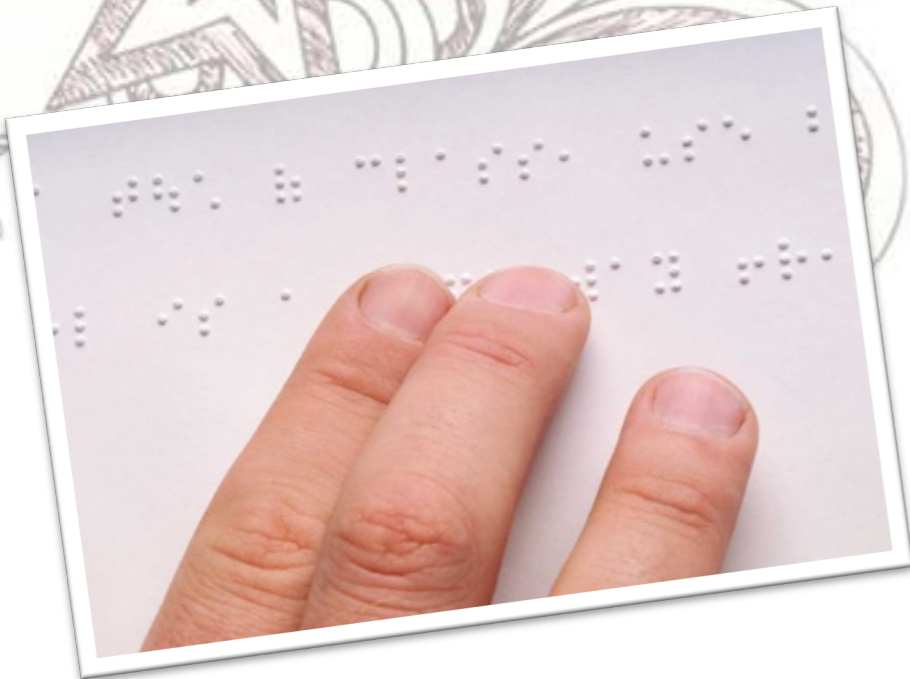
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A World Without Sight

- ★ **Some people have vision problems that can't be corrected with glasses or contact lenses.**
- ★ **Some people are considered “legally blind”, while others have low vision.**

LESSON 3

A World Without Sight



a	b	c	d	e	f	g	h	i	j
•	••	••	••	••	••	••	••	••	••
k	l	m	n	o	p	q	r	s	t
••	••	••	••	••	••	••	••	••	••
u	v	w	x	y	z				
••	••	••	••	••	••				

Braille is a language of dot patterns.

There are many tools to assist blind and visually impaired people.

LESSON 3

A World Without Sight



Low vision aids help with daily tasks.



Guide dogs and canes help people navigate beyond their own homes.

INTERACTING WITH VISUALLY IMPAIRED PEOPLE

- ★ **Never distract a guide dog**
- ★ **Identify yourself and others; let the person know if others enter or leave the room**
- ★ **Speak in a normal tone, don't shout**
- ★ **It's okay to offer assistance**



Lesson 4:

Timeline of Clear Vision

LESSON

4

Timeline of Clear Vision



Late 13th Century:
The first eyeglasses were invented in Italy.



Early 17th Century:

The first graded lenses of varying strength were invented in Spain, allowing people to select different lenses based on their particular vision problem.



1936:
Dr. William Feinbloom introduces plastic contact lenses that are more flexible and lightweight.



60 A.D.:
Roman Emperor Nero wears lenses made of emerald to view the gladiator games.

1000 A.D.:
An early version of the magnifying glass called a "reading stone" is developed.



1730:
London optician Edward Scarlett adds sidepieces to frames, allowing them to rest atop the ears.

1966:
The first photochromic lenses are introduced.



2012



Lesson 5:

Taking Care of Your Eyes

LESSON

5

Taking Care of Your Eyes

**THE WORLD CAN BE A
DANGEROUS PLACE FOR
YOUR EYES**

Each year there are

125,000 eye injuries from
common household objects

43% of eye injuries are to
children ages 14 and younger

Every **13** minutes an emergency room
treats a sports related eye injury

LESSON

5

Taking Care of Your Eyes

HAZARDS ARE EVERYWHERE
BUT 90% OF EYE INJURIES CAN BE PREVENTED.

LESSON 5

Taking Care of Your Eyes

Household Hazards



- ★ Toys
- ★ Cleaning Products
- ★ Furniture
- ★ Tools
- ★ Utensils



LESSON 5

Taking Care of Your Eyes

Classroom Hazards



★ Pens and pencils

★ Scissors

★ Paper and cardboard

LESSON 5

Taking Care of Your Eyes

Playground and Outdoor Hazards



★ Toy weapons

★ Propelled toys

★ Skateboards, scooters and bikes

★ Trampolines



LESSON

5

Taking Care of Your Eyes

Sports Where Eye Injuries are Most Common



- ★ Basketball
- ★ Water and pool activities
- ★ Softball
- ★ Football
- ★ Bicycling
- ★ Winter sports
- ★ Soccer



LESSON 5

Taking Care of Your Eyes



Fireworks are **VERY DANGEROUS** to your eyes!

Safety Precautions Include:

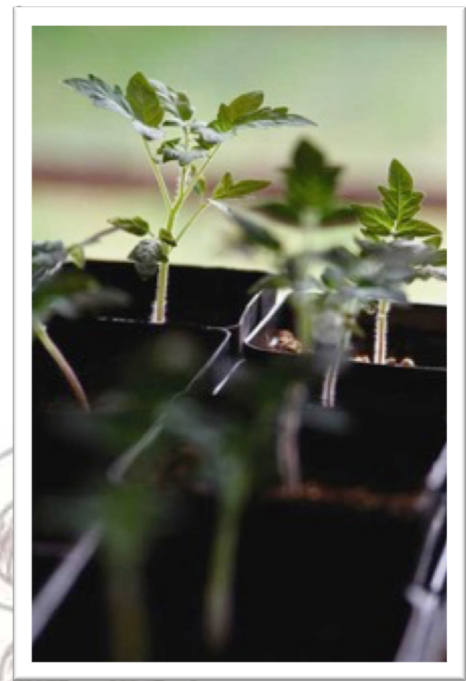
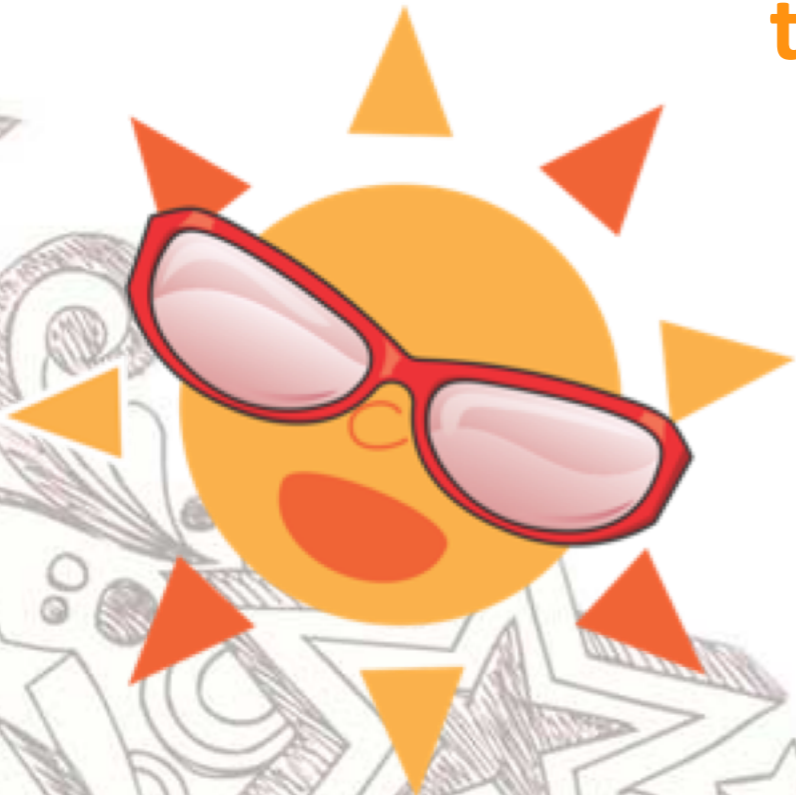
- ★ Wear safety eyewear when playing sports
- ★ Don't run with sharp objects
- ★ Keep toys and all objects away from your eyes
- ★ Don't wave objects in front of other peoples' eyes

LESSON 5

Taking Care of Your Eyes

Why Do We Need the Sun?

- ★ It warms our planet
- ★ It provides energy for plants which turns into oxygen that we breathe



LESSON

5

Taking Care of Your Eyes



The sun emits visible and invisible light.
Invisible light is known as **UV RADIATION**.

Although we can't see them, UV rays hit the earth every day, *including on cloudy and rainy days.*

LESSON 5

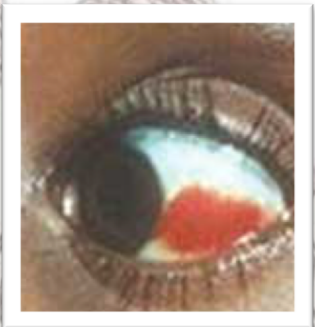
Taking Care of Your Eyes

LONG HOURS IN THE SUN WITHOUT PROPER PROTECTION CAN CAUSE SERIOUS HEALTH PROBLEMS.

Sunburn

Skin disorders

Damage to the eyes including corneal sunburn, cataract and vision loss



Taking Care of Your Eyes



THERE ARE TWO TYPES OF UV RAYS:

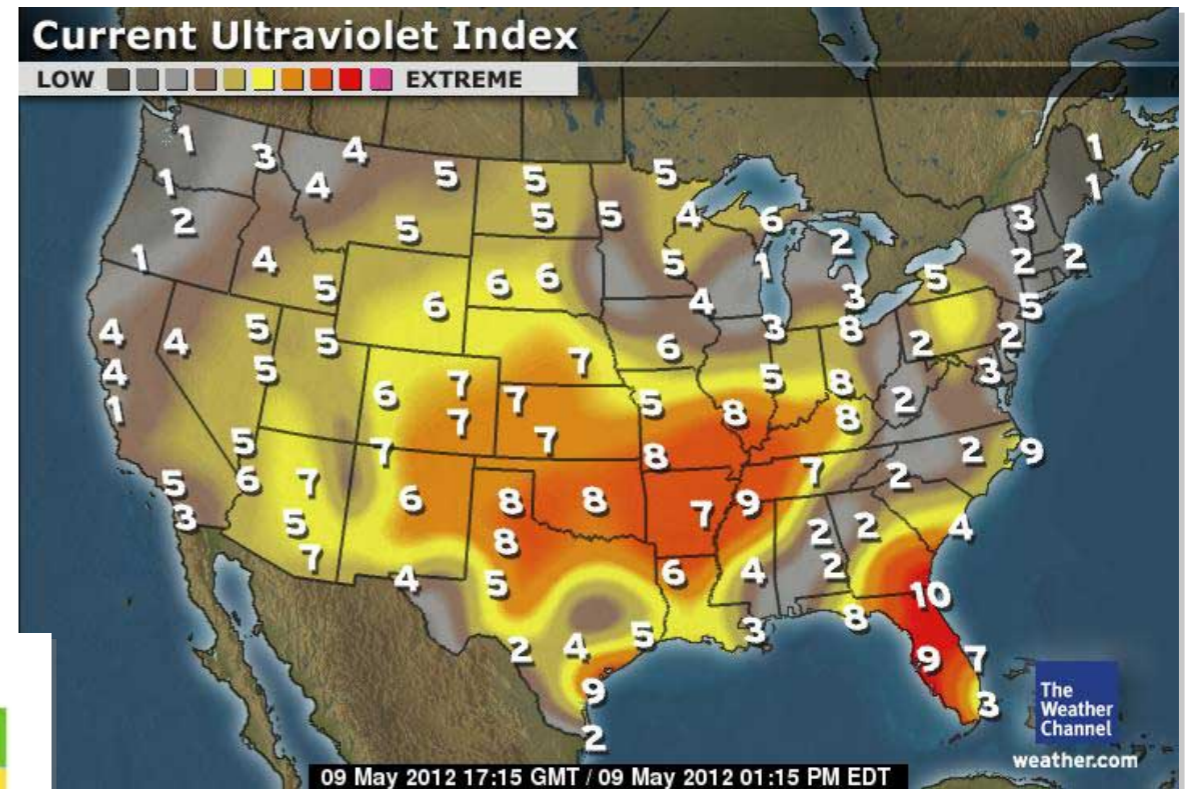
UV-A can hurt your central vision. It can damage part of the retina in the back of your eye.

UV-B the front of your eye absorbs the most UV-B rays but these may cause damage to the cornea and lens.

LESSON 5

Taking Care of Your Eyes

UV Index Number	Exposure Level
2 or less	Low
3 to 5	Moderate
6 to 8	High
8 to 10	Very High
11+	Extreme



Scientists have developed a UV index to evaluate the levels of UV radiation that reaches the earth each day.

Taking Care of Your Eyes

PROTECT YOUR EYES FROM UV RADIATION

- ★ NEVER look directly at the sun
- ★ Limit your exposure to the sun in the middle of the day when rays are strongest
- ★ Wear a hat or visor with large brim to cover your face and eyes
- ★ Wear sunglasses that block 100% of UV rays



Taking Care of Your Eyes

OTHER WAYS TO KEEP YOUR EYES HEALTHY AND SAFE:

- ★ Prevent infections and pink eye by washing your hands often and avoid touching and rubbing your eyes
- ★ Not wearing your glasses, or wearing other people's glasses, can cause headaches, cause you to rub your eyes or to be sleepy



LESSON 5

Taking Care of Your Eyes



If your eyes get dry, they might not be getting enough moisture. It's important to drink lots of water.

Taking Care of Your Eyes

IF DIRT, AN OBJECT OR LIQUID GETS IN YOUR EYE:

- ★ Tell an adult right away!
- ★ Don't rub or scratch your eye
- ★ An adult will wash the object out of your eye and get medical help



EAT NUTRITIOUS FOODS!



- ★ Fruits and vegetables contain the vitamins and minerals your eyes need to stay healthy
- ★ Vitamin A, found in vegetables, is vital for good vision, especially in children
- ★ In poor countries malnutrition is a major cause of blindness

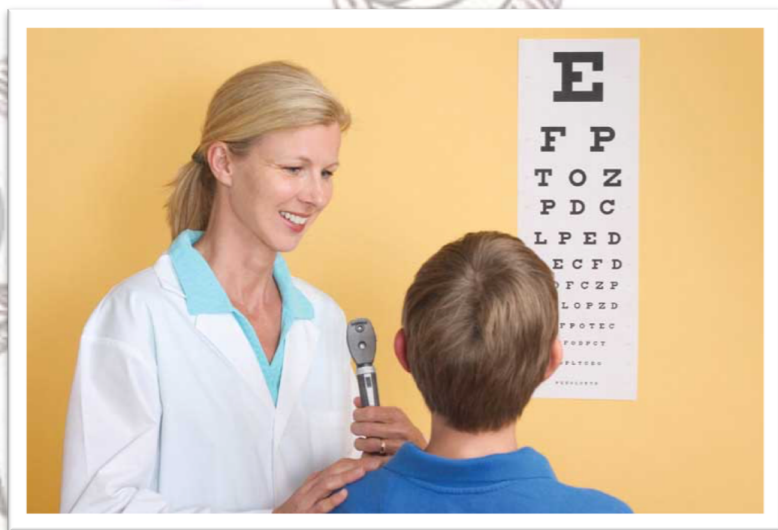
Taking Care of Your Eyes

SEE AN EYE DOCTOR REGULARLY

Your eyes change as you grow so it's important to see an eye doctor on a regular basis.

If you have trouble seeing close up, at a distance or if your vision is a little fuzzy all the time, tell an adult.

An eye doctor can check your vision and let you know if your eyes are healthy.





starpupils[™]

healthy eyes for healthy futures

Eye Health and Safety Program



**Prevent
Blindness**[®]

Our Vision Is Vision[®]

Thank you!