

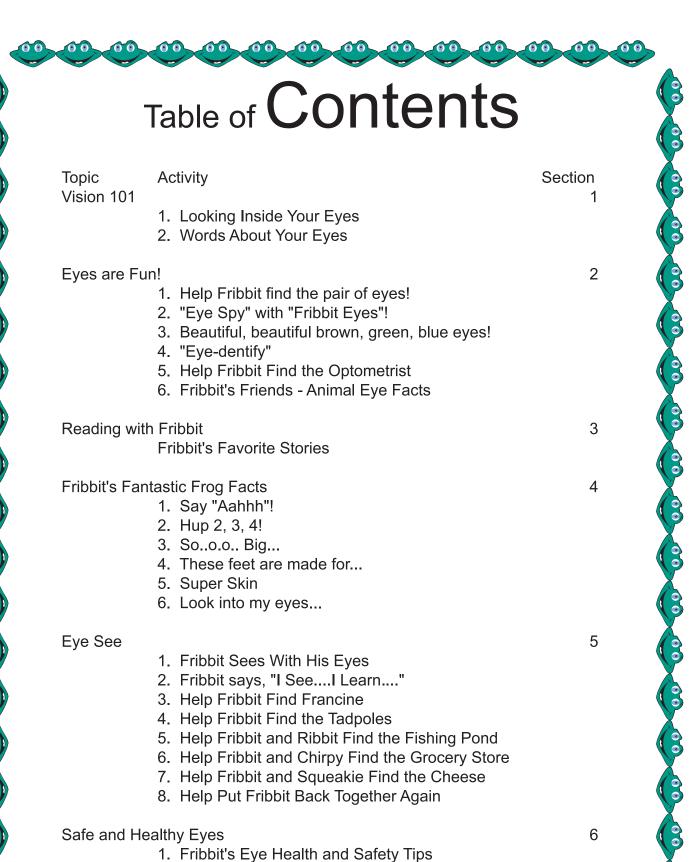
Classroom Activity Kit

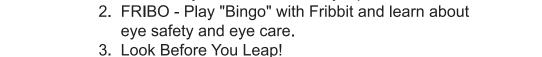
A Child's Eyes Deserve an Optometrist

The Canadian Association of Optometrists

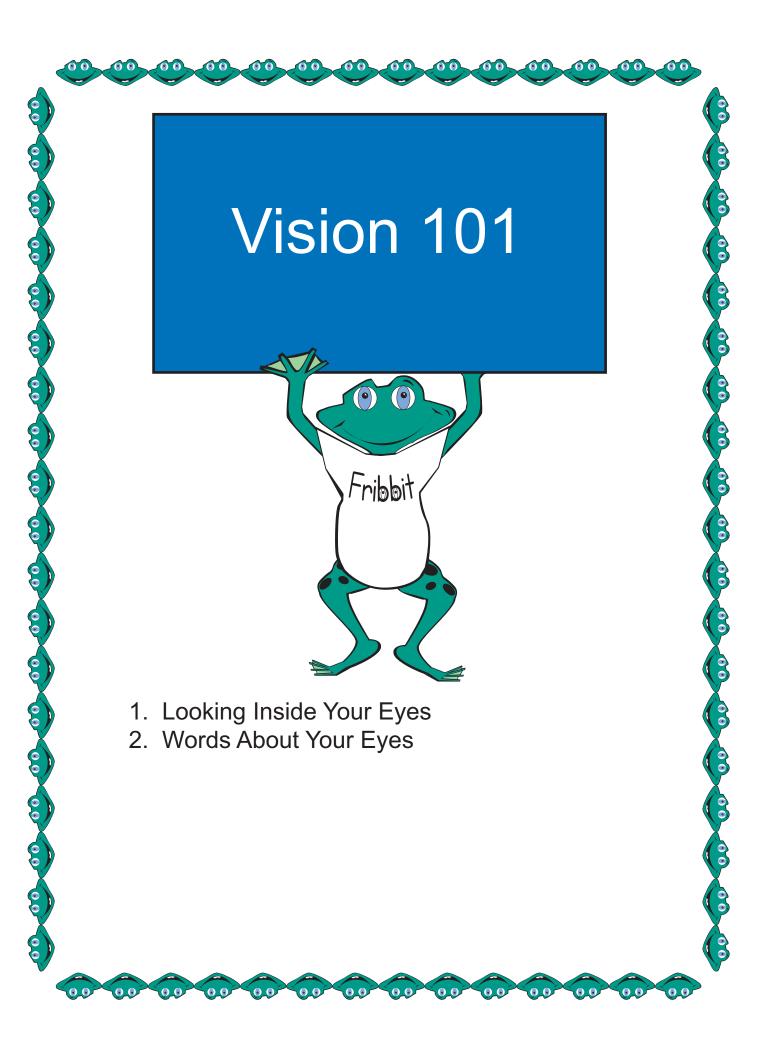


L'Association canadienne des optométristes









••••••••••• Vision 101?

Looking inside your eye

lens

cornea

pupil

iris

retina

optic

nerve

You've used a camera before, right? Well, your eyes work the same way. The **retina**, the part of the eye that lets you see, takes a picture of what you're looking at and shoots it to the brain through the optic nerve.

So, if your retina is the film of the camera, the brain is the darkroom — developing the film. Faster than you can say, "wasssup," the brain develops this information allowing you to see what you're looking at. It's really complex how your eye and your brain work, but actually the idea is really simple.

Light passes through four major spots in

the eye: the cornea, pupil, lens and retina.

The **cornea** serves as the camera. It's the front surface of the eye and is responsible for 70% of the total focusing ability. The iris is behind

the cornea. The iris is a muscle that

forms an opening called the pupil. It gets larger or smaller depending on how much light is available.

The **pupil** is the gatekeeper. It controls how much light comes in your eye by opening up in the darkness and closing in the light. The pupil is actually a hole! Behind the pupil is the lens. It shines light on the retina, which sends messages through the optic nerve to the brain. Got it?

Words about your **Eyes**

Glossary

Conjunctiva: The thin, moist tissue that lines the inner surfaces of the eyelids to help protect the eye and keep it from drying out.

Cornea: The front surface of the eye. It covers iris, pupil, and anterior chamber and is responsible for 70% of the total focusing ability.

Iris: Behind the cornea is the iris, which contains the pupil. By controlling the amount of light entering the eye, the iris adjusts the size of the pupil.

Lens: Behind the pupil is the lens of the eye. The lens focuses light on the retina, which sends messages through the optic nerve to the brain.

Optic nerve: Is made up of over a million nerve fibers that transport visual messages from the retina to your brain.

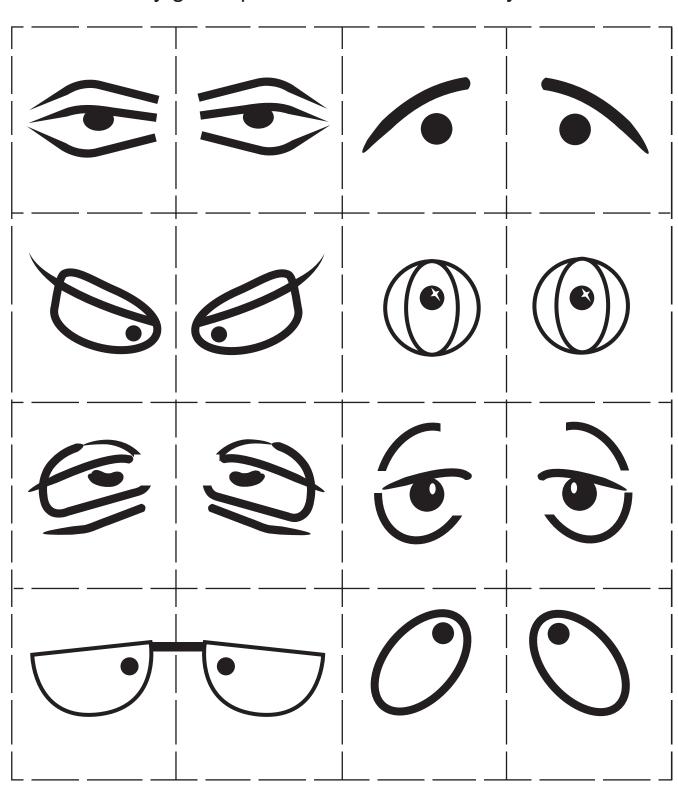
Pupil: The pupil is contained within the iris. It gets larger or smaller depending on how much light is available. It controls how much light enters the eye by opening up in the darkness and closing in the light. The pupil is actually a hole!

Retina: Located at the back of the eye, the retina receives images from the cornea and the lens and then sends those messages back to the brain.



Help Fribbit find the pair of **eyes**...

Cut out each box, and then find the 2 eyes that match to make a "ribbity good" pair! All the better to see you with!!



60 60

Instructions:

"Eye Spy" with Fribbit's **eyes**...

(C)

(©)

(a)

(©) (©)

(C)

(C)

9

0

0

(a)

(0)

• Really try and use your "Fribbit eyes" to find things that will trick your friends!

When it is your turn, put on the "Fribbit eyes" (included) and:

"Eye spy with my.....
Fribbit eyes.....
Something that is _____!'

*Discuss after the activity how our eyes helped us enjoy the game!

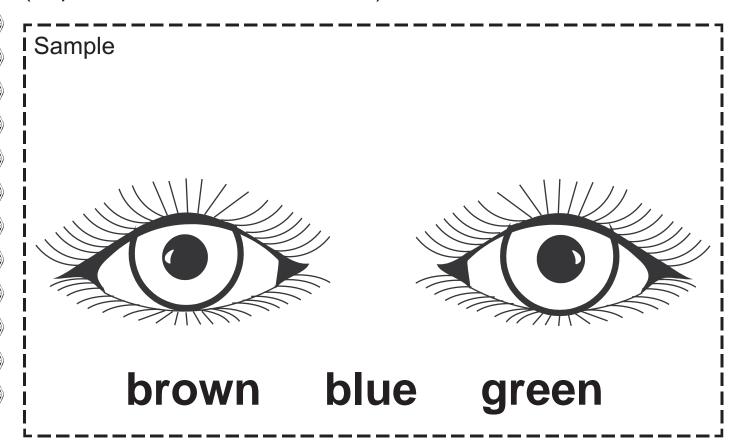
Play "Eye Spy" (with your class...



Beautiful, beautiful

brown, green, blue Eyes...

- Color those beautiful eyes (iris) the same color as your eyes.
- Circle the word that matches the color of your eyes.
- (Separate student sheet included)



00

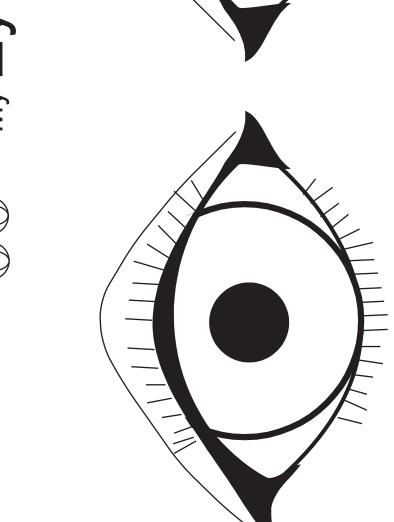
(O,O)

(O.O)

(OO)

(O.O)

My Eyes...



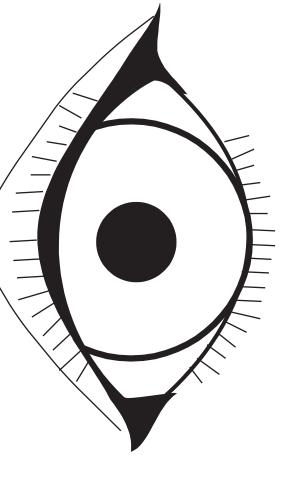
00 00 00

00

(OO)

(O_O)

(O)



blue green brown

















Fribbit will help us "eye-dentify" some parts of our eyes... Separate student sheet included.

Instructions:

Cut out the words on the bottom of the page.

As we talk about each part glue them on the line pointing at

that part of the eye.

lid

Lids help us blink and wipe tears over our eyeballs.

The tears keep our eyes moist and clean.

Our lids blink automatically when something gets close to our eye.

pupil

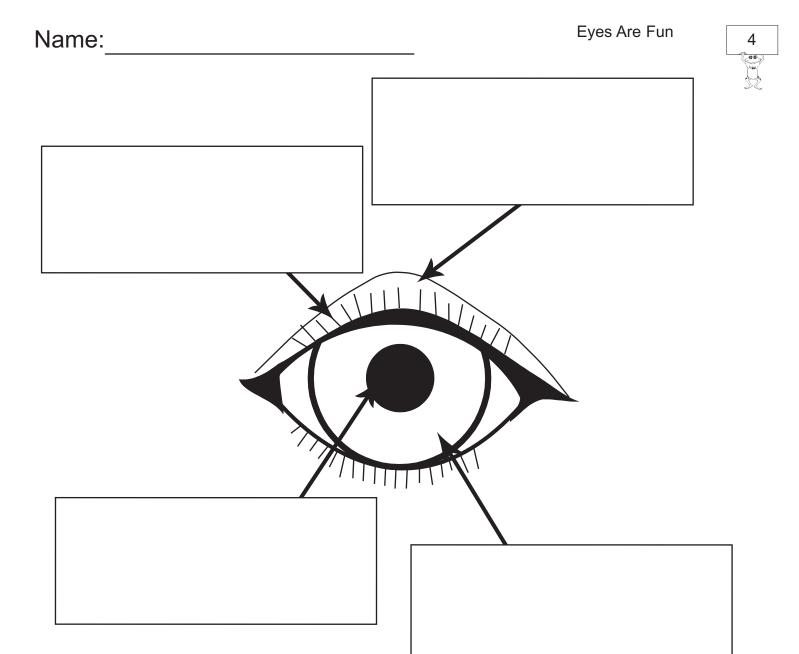
The black part on the front of our eye is called the pupil. The pupil is really a hole that we see through.

iris

Around the pupil is a colored muscle called the iris. Our eyes are blue, green or brown because that is the color of this muscle!

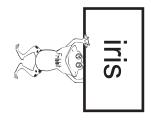
lash

Lashes help keep dust and dirt out of our eyes.



| pupil | lid |
|-------|------|
| iris | lash |

い



Around the pupil is a colored muscle called the iris. Our eyes are blue, green or brown because that is the color of this muscle!

Lids help us blink and wipe tears over our eyeballs.

The tears keep our eyes moist and clean. Our lids blink automatically when something gets close to our eye.

Lashes help keep dust and dirt out of our eyes.

The black part on the front of our eye is called the pupil. The pupil is really a hole that we see through.

pupil



Help Fribbit find

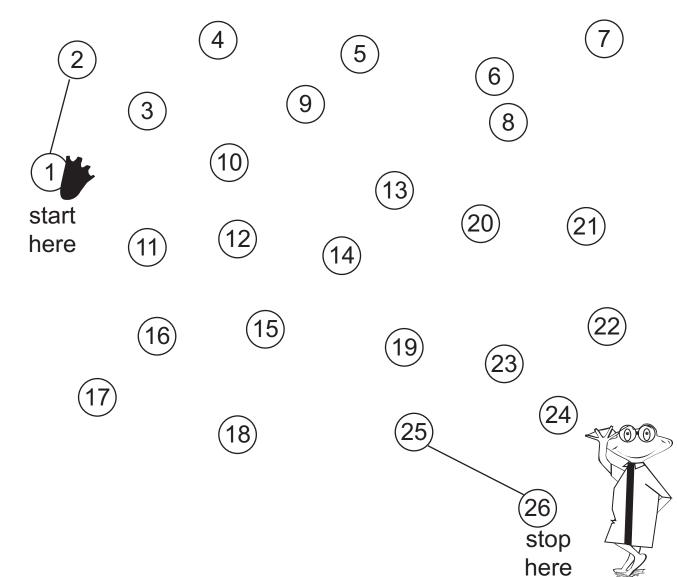
the Optometrist... Did you know?

When Fribbit the frog leaps around the yard he leaves footprints like this

Help Fribbit get to his optometrist, Dr. C. Clearly and have his eyes examined!

Follow the numbers.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26



| Eyes Are Fun | Εy | es/ | Are | Fun |
|--------------|----|-----|-----|-----|
|--------------|----|-----|-----|-----|

| _ | h |
|---|---|
| O | U |



Help Fribbit find

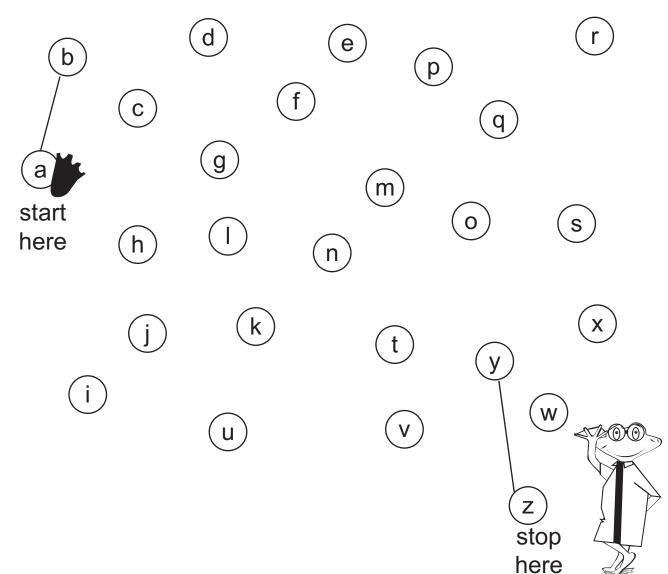
the Optometrist... Did you know?

When Fribbit the frog leaps around the yard he leaves footprints like this

Help Fribbit get to his optometrist, Dr. C. Clearly and have his eyes examined!

Follow the small letters.

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



Help Fribbit find

the Optometrist...

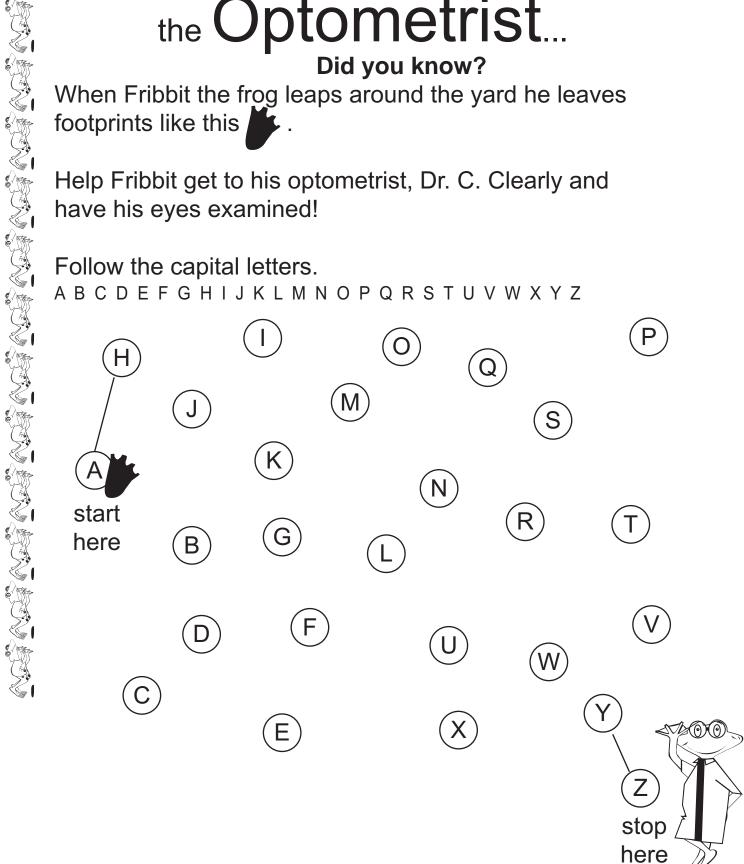
Did you know?

When Fribbit the frog leaps around the yard he leaves footprints like this

Help Fribbit get to his optometrist, Dr. C. Clearly and have his eyes examined!

Follow the capital letters.

ABCDEFGHIJKLMNOPQRSTUVWXYZ



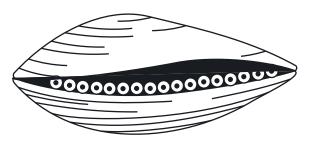


Fribbit's Friends...

Did you know?

There are many kinds of extraordinary animal eyes!

Clams have a row of eyes around their shells.



Fly eyes are made of hundreds of separate little eyes.



Eagles have the best eyesight of all animals!
An eagle's eye is larger than a human eye. They can see a rabbit more than a kilometer away!





An owl's eye is 1/3 the size of it's head. Owl's night vision is really good because their pupils are very large. An owl can see a mouse 50 meters away in the dark.



Fribbit's Friends...

Did you know?

There are many kinds of extraordinary animal eyes!

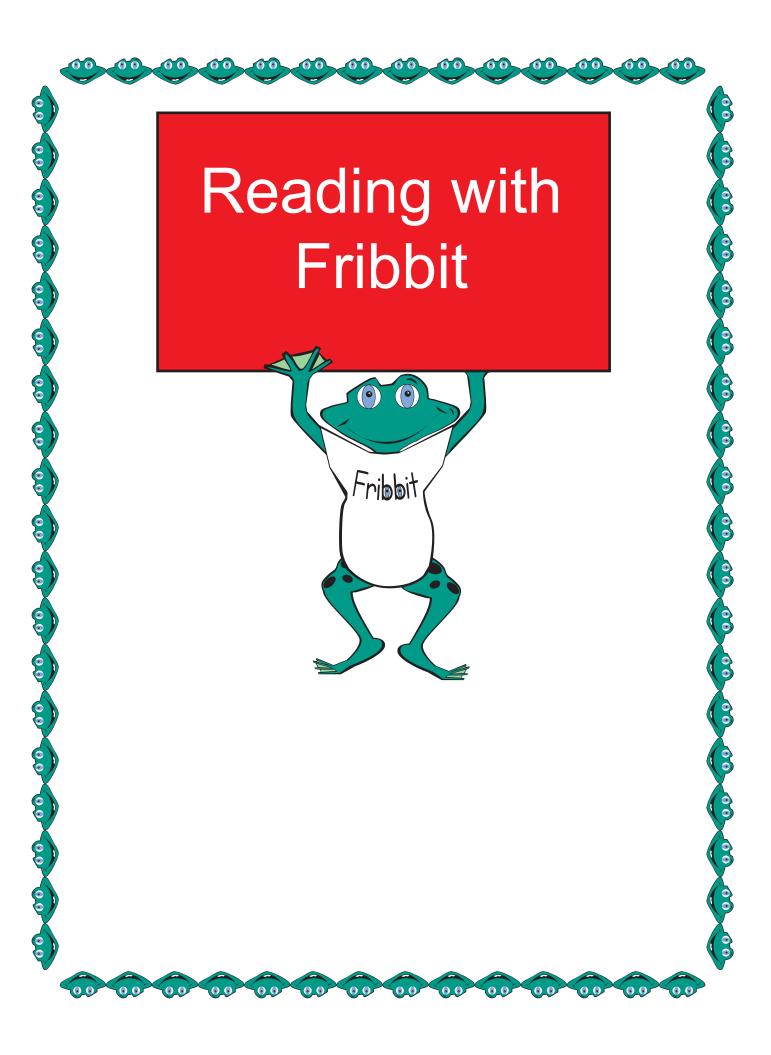
A camel's eyelashes can be as long as 8 cm. to protect their eyes from all that sand.

A cat's eyes glow in the dark because of silvery mirrors at the back of their eyes. The mirrors reflect light and make it easier for them to see in the dark.

Horses have horizontal pupils to see sideways while they are eating on the ground. Did you know horses are color blind?

Dogs have round pupils like humans but they do not see color.

Did you know dogs are color blind too?





Reading with Fribbit...

Read, "Brown Bear, Brown Bear What Do You See", or any of the other favorite Fribbit books listed below.

Why not write another eye story about "Fribbit the Frog"! Maybe write a story about what he sees in the pond while he is leaping from spot to spot.

Why not a "See While I Walk" story. Walk around the classroom or maybe outside in the playground. Use your eyes, what do you see? Write a story about what you saw while you were on your walk!



(Storybooks focused on eye issues)

Brown Bear Brown Bear What Do You See, Bill Martin

The Eye Book, Theo LeSieg

Glasses - Who Needs em?, Lane Smith

All the Better to See You With, Margaret Wild

Arthur's Eyes, Marc Brown

Look! Look! Look!, Tana Hoban

Magenta Gets Glasses, Deborah Reber

Luna and the Big Blur, Shirley Day



Fantastic Fribbit Frog Facts



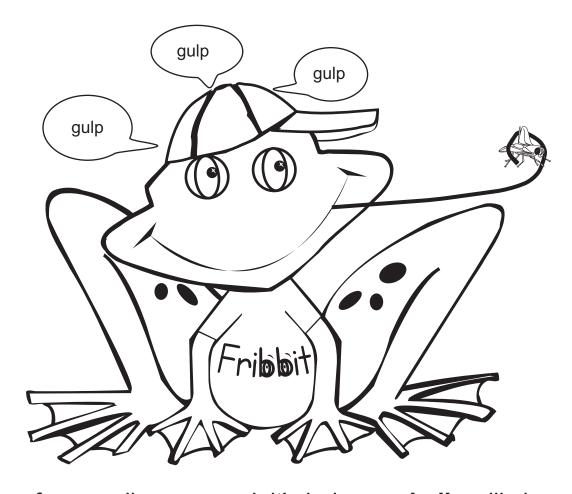
- 1. Say "Aahhh"!
- 2. Hup 2, 3, 4!
- 3. So..o.o.. Big...
- 4. These feet are made for...
- 5. Super Skin
- 6. Look into my eyes...

Say Aaahhh!

Did you know?

Some frogs have **tongues** that are long and sticky that can be used to catch bugs.

These roll out like an **upside-down** party horn and snap at the bug! YUMMY! (Try this with the party horn Fribbit sent you!)



When a frog swallows a meal, it's bulgy eyeballs will close and go down into it's head! This is because the eyeballs apply pressure and actually push a frog's meal down it's throat!

> However.....there are between 6 and 14 different kinds of tongueless African frogs.

•••••• Hup 2..3..4!

Did you know?

A group of fish is called a *School of Fish*.

A group of geese is called a *Gaggle of Geese*.

A group of seagulls is called a *Flock of Seagulls*.



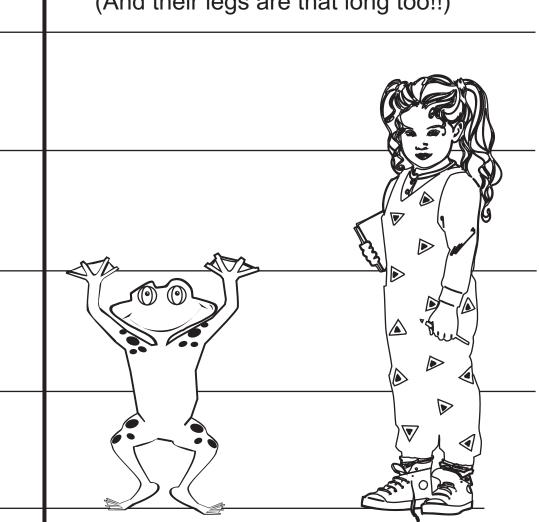
A group of frogs is called an *Army of Frogs*! Hup 2..3..4!

so.o.o...Big...

Did you know?

The biggest kind of frog is the Goliath Frog.
They come from Cameroon in West Africa
Their bodies can reach 30 cm. long.

(And their legs are that long too!!)



This picture is one beside a 5 year old!

Try this...

- 1. Have a buddy measure how tall you are and mark it on a growth or height chart...How tall are you?
- 2. Find 60 cm. on the same chart and mark that height on the chart. WOW! Look how tall a Goliath frog is when it is standing up!!

These **feet** are made for...

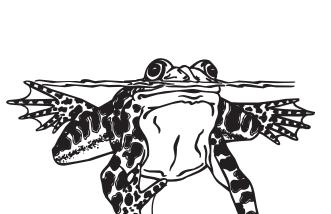
Did you know?

Frog feet are very interesting too!

Feet for climbing -

Tree frogs have sucker-like adhesive disks, or pads on the tips of their fingers and toes.

These sticky pads help with climbing.



Feet for *swimming* - Some frogs have webbing between their toes that help in swimming.

Try this...

- 1. Spread your fingers and run them through a basin of water.
- 2. Then, get a plastic sandwich bag and put it over your hand.
- 3. Spread your fingers and NOW ...try running your hand through the water again. This adds a lot of swimming power!

These **feet** are made for...

Feet for digging -

Some frogs burrow into the sand with their stubby claw-like fingers. They do this to keep moist in the



Feet for flying -

Some frogs even have parachute-like webbing on their hands and feet which act as an air-brake when they glide from tree to tree or leaf to leaf. These frogs are known as "Flying Frogs".



1. Take 2 pieces of paper, both the same size.

2. Spread out 1 paper flat and drop it.

Notice how it takes a while to float to the floor.

3. Take the other piece of paper and crumple it into a ball. Drop the crumpled paper from the same height as the first paper. *Notice* how much faster it falls.

Without the extra webbing, a falling frog would go 'SPLAT'!



Super Skin...

Did you know?

Frogs have very special skin! They don't just wear it, they drink and breathe through it!

Frogs don't usually swallow water like we do. Instead they absorb most of the moisture they need through their skin. Not only that, but frogs also rely on getting oxygen from the water by absorbing it through their skin. So... they have to take care of their skin or they might suffocate.



Some frogs are slimy because they secrete a mucus that helps keep them moist. Even with their slimy skin they still need to stay near water.



Frogs can also get moisture from dew, or they burrow underground in moist soil.



Frogs shed their skin regularly to keep it healthy. Some frogs shed their skin weekly, others as often as every day. This looks pretty yucky... they start to twist and turn and act like they have the hiccups. They do this to stretch themselves out of their old skin! Finally the frog pulls the skin off over it's head, like a sweater, and then (oooh GROSS) the frog eats it! (EEEWWW!!)



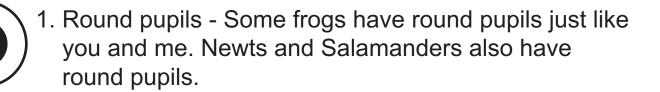


Did you know?

Frogs have many kinds of eye types!

The colored part of the eye is called the "**iris**" (eye-riss). On a frog they can be brown, green, silver, red, bronze, and even gold.

The "pupil" is the black part of the front of the eye. It is really a hole we see through. The pupils come in all kinds of shapes too!



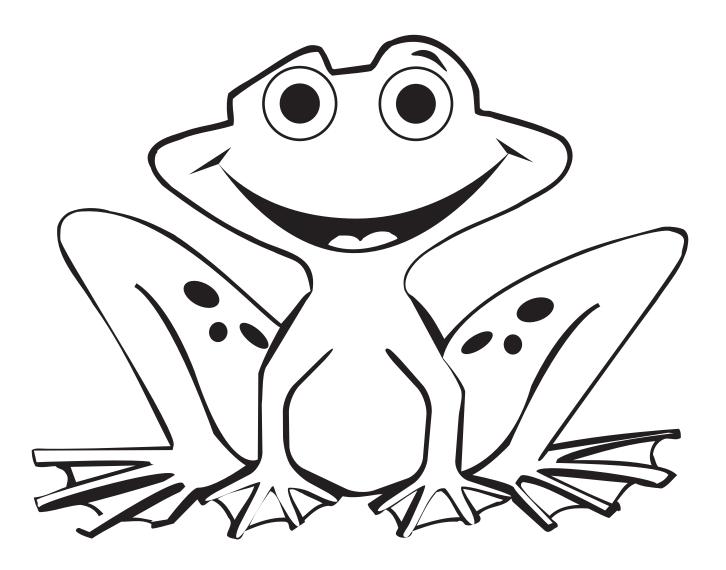
2. Vertical pupils - Vertical pupils that look like cats eye are really good for night vision and respond quickly to changes in light.

3. Horizontal-shaped pupils - These are the more common pupil and are good for normal day-vision.

4. Heart-shaped pupils - I'm not sure if it serves a purpose, but it sure looks neat! Oriental Fire-Bellied Toads have this type of pupil.

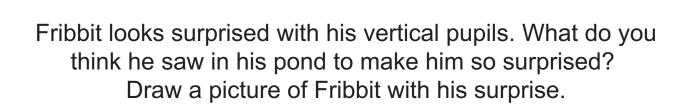
Some frogs have triangular pupils (), and some even have star-shaped pupils ()!

Round pupils

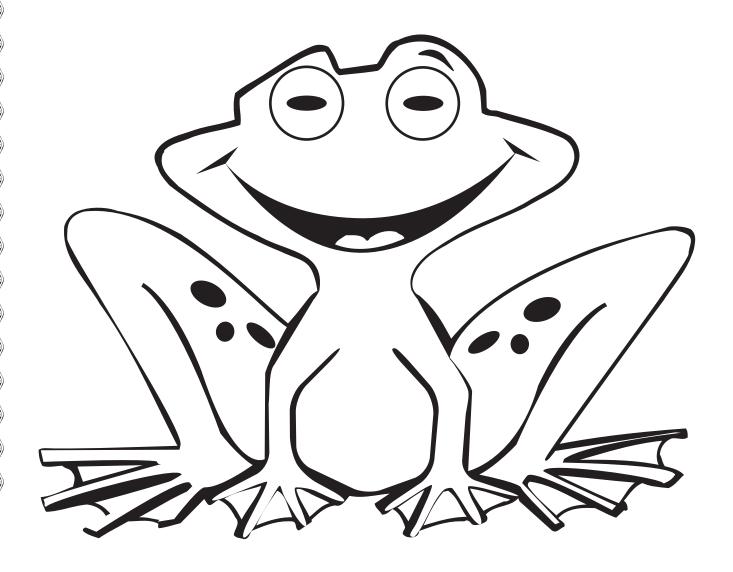


Look around the room.
What can your "Big Round Eyes Spy" that is round?

Vertical pupils



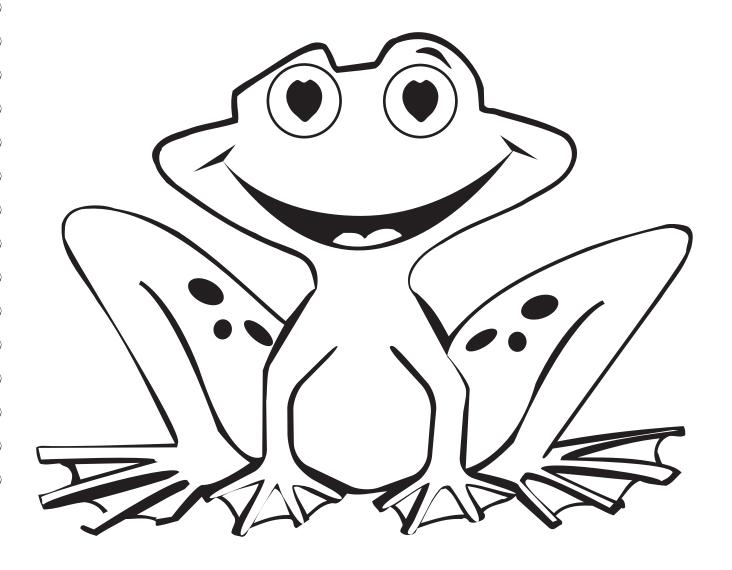
Horizontal-shaped pupils



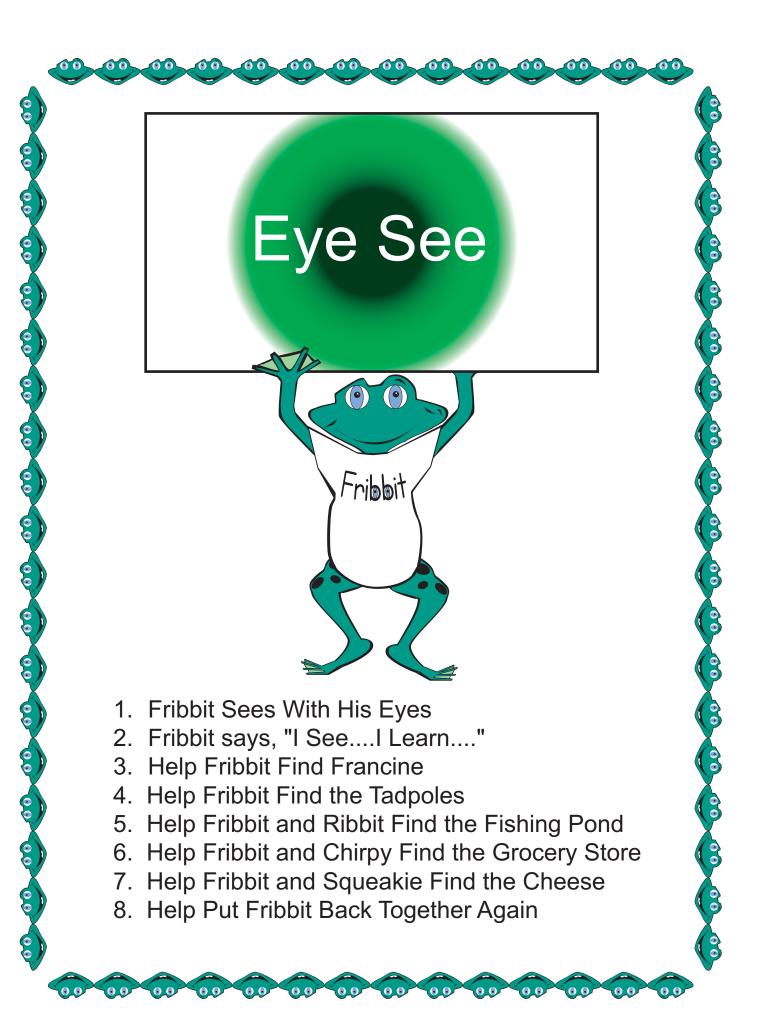
Why do they call the place where the land meets the sky the "horizon line"?

Can you tell by looking at Fribbit's horizontal pupils?

Heart-shaped pupils



Hearts make Fribbit think of all the things he loves. What do you think a frog like Fribbit would love?



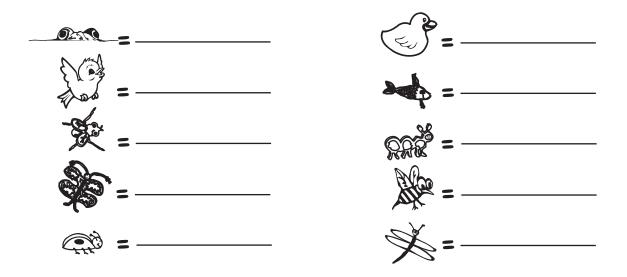


Fribbit sees with his eyes!





Circle the things Fribbit can see!



How many of each can Fribbit see?

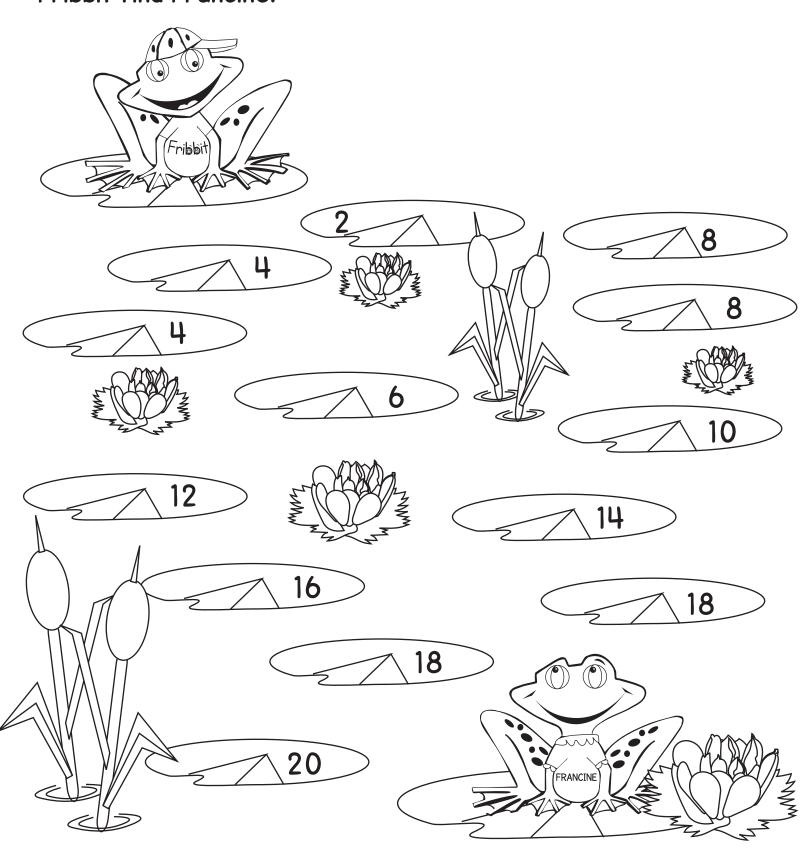
Fribbit says, "Eye See.....Eye Learn.

Color Fribbit using the colors:

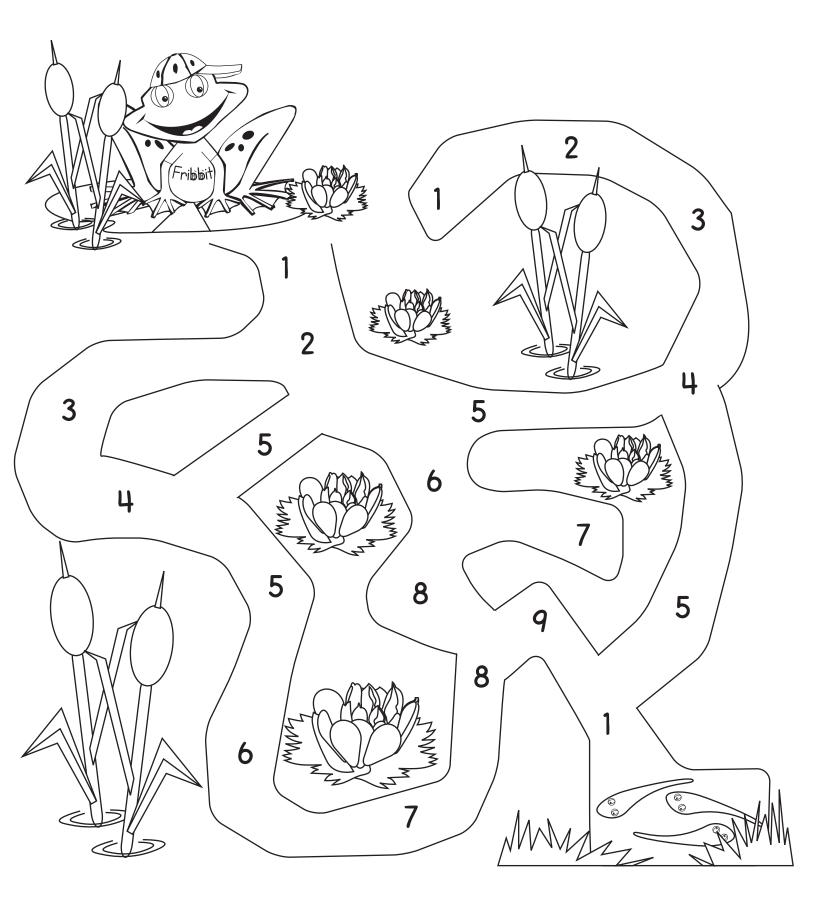


Help Fribbit find Francine

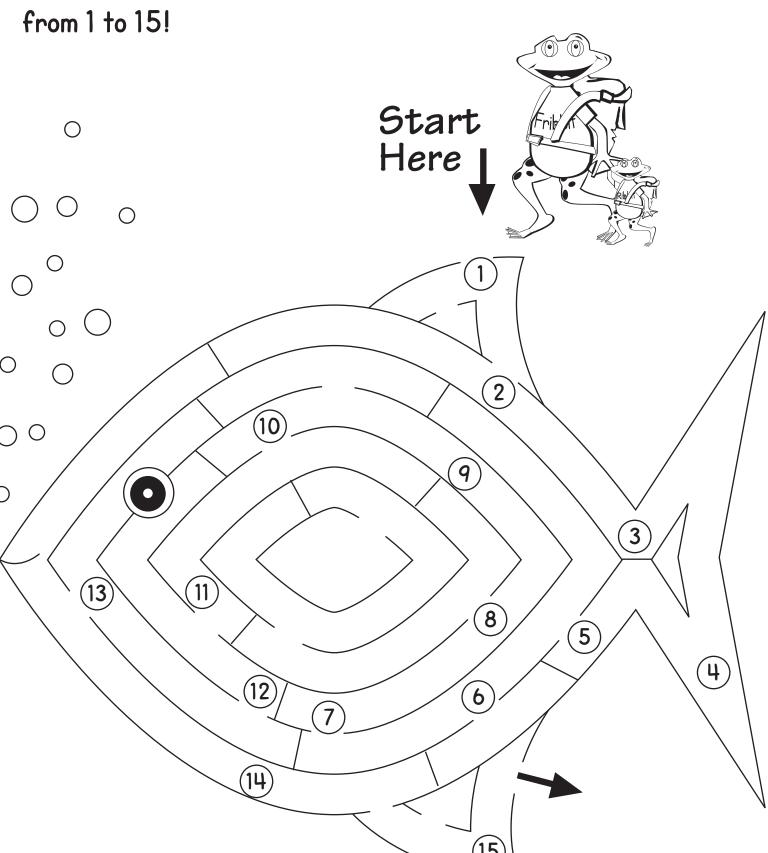
Count by 2's starting at 2. Color the lily pads in order and help Fribbit find Francine!

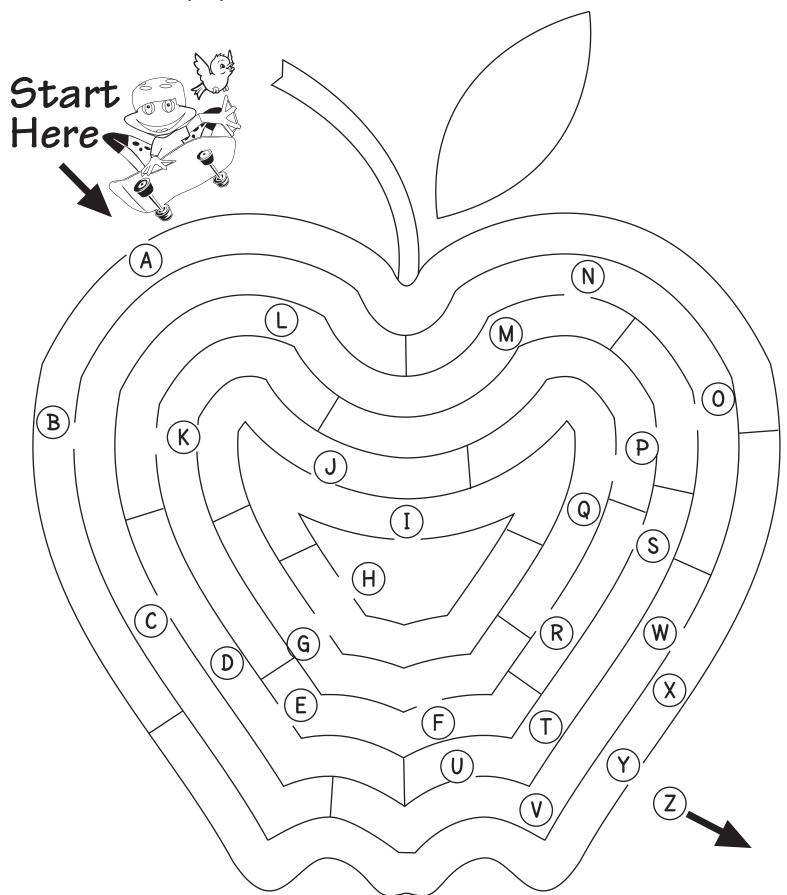


Help Fribbit find his little brother and sister tadpoles! Color the path from the smallest to the biggest number.



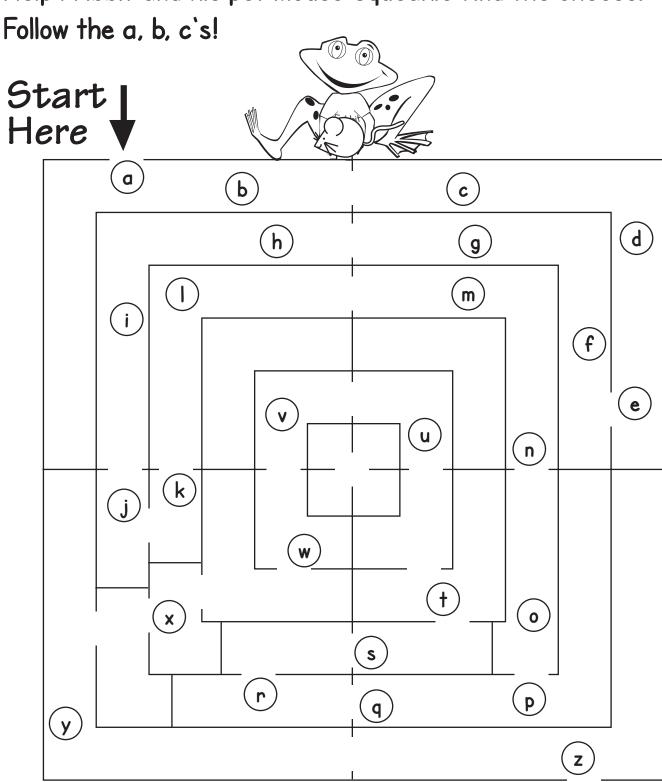
Help Fribbit and his little brother Ribbit find their way to their favorite fishing pond. Color the path through the maze

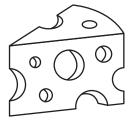




7

Help Fribbit and his pet mouse Squeakie find the cheese.





Oh no! Did you see Fribbit fall?

Help put Fribbit back together again.

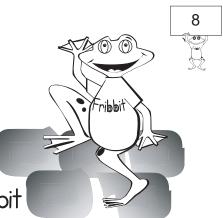
Cut out each piece on the next page.

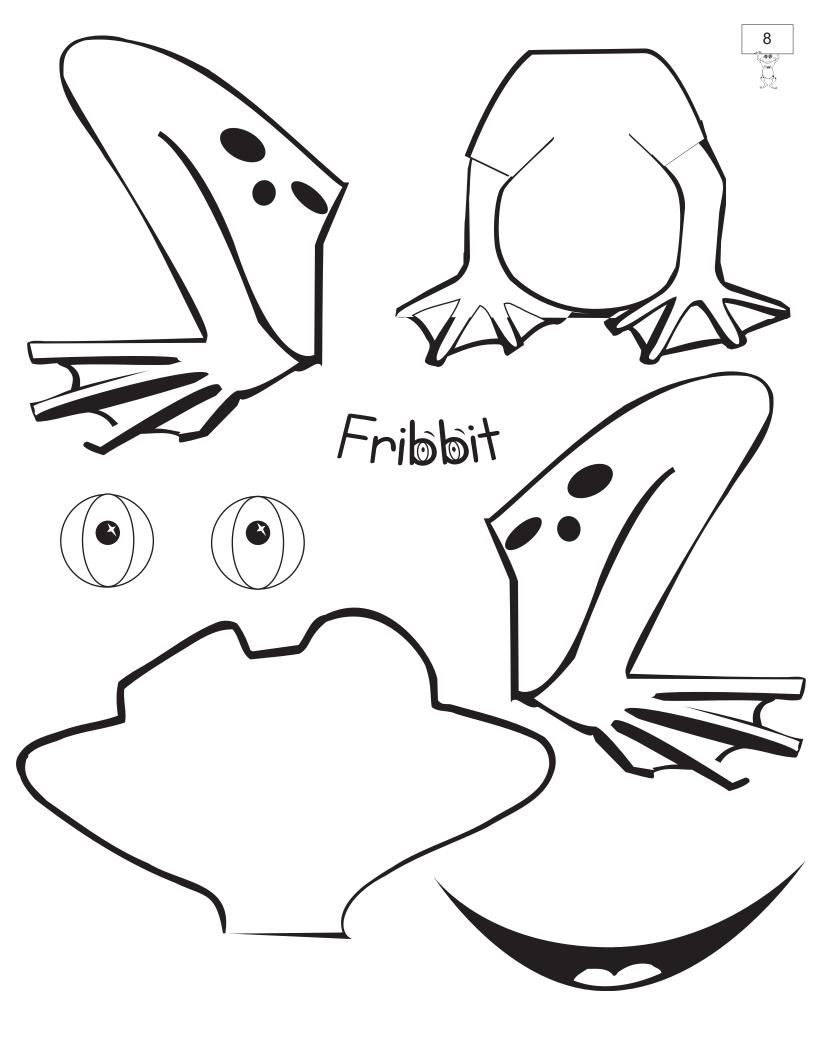
On a new piece of paper use your glue and put Fribbit

back together again!



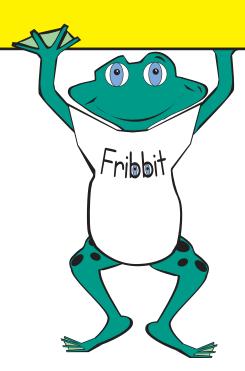
This is what Fribbit looks like!







Safe and Healthy Eyes



- 1. Fribbit's Eye Health and Safety Tips
- 2. FRIBO Play "Bingo" with Fribbit and learn about eye safety and eye care.
- 3. Look Before You Leap!

Fribbit's EYE Health and Safety Tips



EYE SAFETY — Taking Care of Vision



Of the thousands of eye injuries that occur every day, about 90% could be prevented by wearing proper eye protection or following safety rules. This section will discuss several ways that eyes can be injured and ways to prevent such injuries.



Eye injuries can happen at home, on the playground, in the classroom, at the park or the beach, and even out in the sun. Knowing what the dangers are, being prepared, and understanding what to do when eyes are injured can help avoid serious and permanent damage.



BUILT IN PROTECTION



The location of our eyes, their surrounding features, and internal functions help protect vision. Eyes sit in bony sockets that act like hard frames around the eyeball and help prevent bruising and scratching of the eye. Eyelids and eyelashes help to keep unwanted materials, like dust, out of the eyes. Eyebrows help shade eyes from light. Tears act like sprinklers to keep eyes moist or wash away anything that might irritate the eye.



EYE SPY DANGER TO MY EYE!



There are many potential dangers to the eyes. Some of the most common ones are getting poked in the eye with a pointed object; being hit in the eye while playing sports like baseball or basketball; having soap or other chemicals get into the eye; spending too much time in bright sunlight; and spending long hours in front of a computer screen.



Pointed objects include things like fingers, pencils, and straws. When a person gets poked in the eye with a pointed object, part of the eye can be punctured or torn. Even if the pointed object isn't very sharp, germs or bacteria on the object can infect the eye, causing pain and affecting vision. The best protection against being poked in the eye is to make sure pointed objects are carried with the point down. Also, never throw a pointed object at another person, especially when playing.



Getting hit in the eye while playing sports can damage the eyeball and the bony eye socket that protects the eye. Sport eye injuries include:



Scratches on the cornea Inflammation inside the eye Bleeding into the eye Traumatic cataract

Fracture of the eye socket Swollen or detached retina

These kinds of injuries can result in blurry vision, headaches, and blindness. To prevent injuries like this and for general eye protection, face and eye guards or masks should be worn when playing sports where balls and/or other equipment are thrown.



Chemical substances like soap, kitchen and bathroom cleaners, gasoline, fertilizer or pesticides can splash or spray into eyes causing mild to severe pain and irritation. If not flushed or washed out with water immediately, partial or complete blindness can occur. Protect eyes from splashes by wearing goggles or eye guards when around or using chemical substances. Also, before working with such substances, read the label for instructions on what to do if this substance gets in the eyes.

Ultraviolet radiation, or "UV" is a kind of light that is needed for vision. Just like skin, if eyes are exposed to UV light for too long they can get "sunburned." Sunburned eyes can lead to cataracts. Anyone who spends a lot of time in the sun without eye protection may be causing damage to their eyes.

Protecting the eyes against UV damage is as easy as putting on a hat! A hat with a wide-brim can block out as much as 50% of UV radiation. Many styles of sunglasses offer "UV protection." Avoiding long-term exposure to direct sunlight by staying in shady areas will also reduce the chance of UV damage.

Long hours in front of a computer screen playing games or searching the Internet can result in a number of uncomfortable eye conditions including irritated eyes, excessive blinking, headaches, and pain in the muscles surrounding the eye. Dry Eyes can result from staring at a computer screen for a long period of time and not blinking. Blinking cleans and refreshes our eyes, and provides protection against unwanted bacteria. The average rate of blinking is 12 to 15 times per minute, or about one blink every five seconds!

Visual fatigue happens when a person spends too much time working at a computer screen without taking breaks. Just like with physical exercise, it's important to take short breaks from the computer to allow muscles and organs to recover from intense work. Depending on the individual and the task, breaks should be taken from the computer every 20 minutes. During a break from the computer, look out the window or down a long hallway to relax the eye muscles you use to focus up close. Remember the 20-20-20 Rule: After 20 minutes of computer work, take 20 seconds and look 20 feet away!"

EXPERT EYES

The best way to maintain strong vision throughout life is to take good care of your eyes. Protect eyes, eat healthy foods, get enough rest and exercise. Research has found that vitamins and protein are essential to healthy eyes.

While knowing a lot about the eyes and how they work will help someone keep their own eyes healthy, there is no substitute for an expert opinion. Regular eye exams by an Optometrist / Ophthalmologist are essential, especially if there is any concern about eyecare or health.



















FRIBO



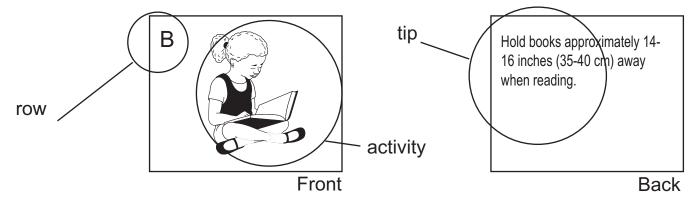
Eye Safety — a Game You Learn To Play and Play To Learn...

Your students will be exposed to Fribbit's Eye Health and Safety Tips by playing FRIBO!

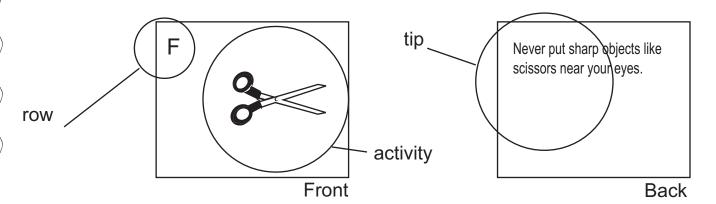
FRIBO is Fribbit's Version of "Bingo" and (with the cards and templates included) can be played with as many as 5 students at one time!

As you play the game it will be important to review the eye health safety tips which are on the back of each card.

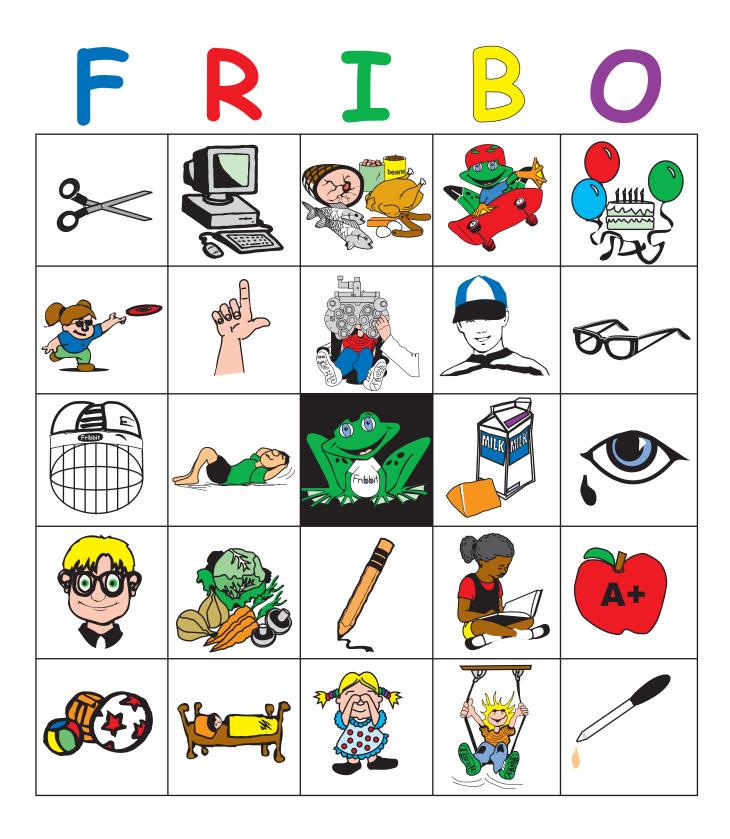
Sample cards:

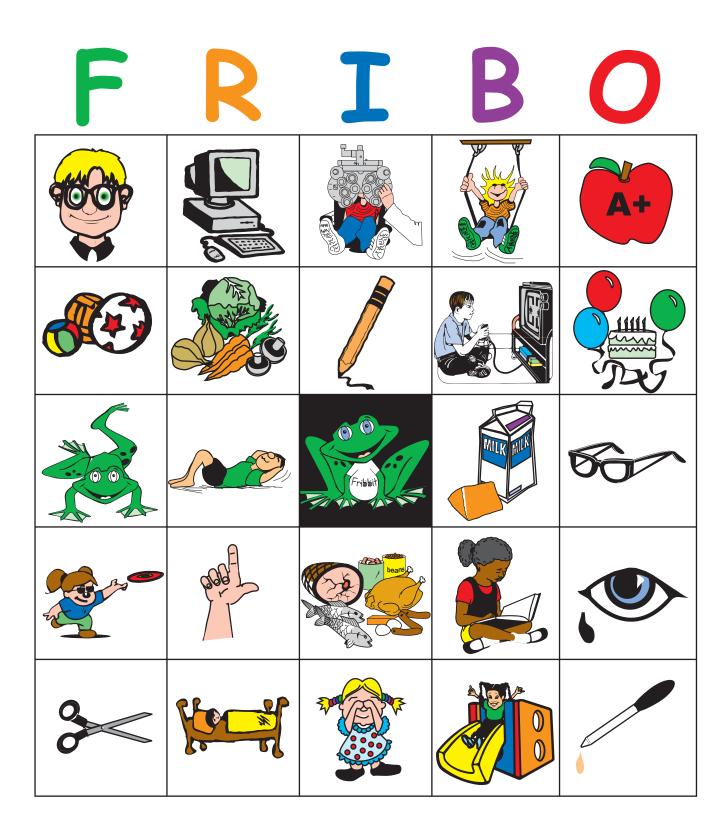


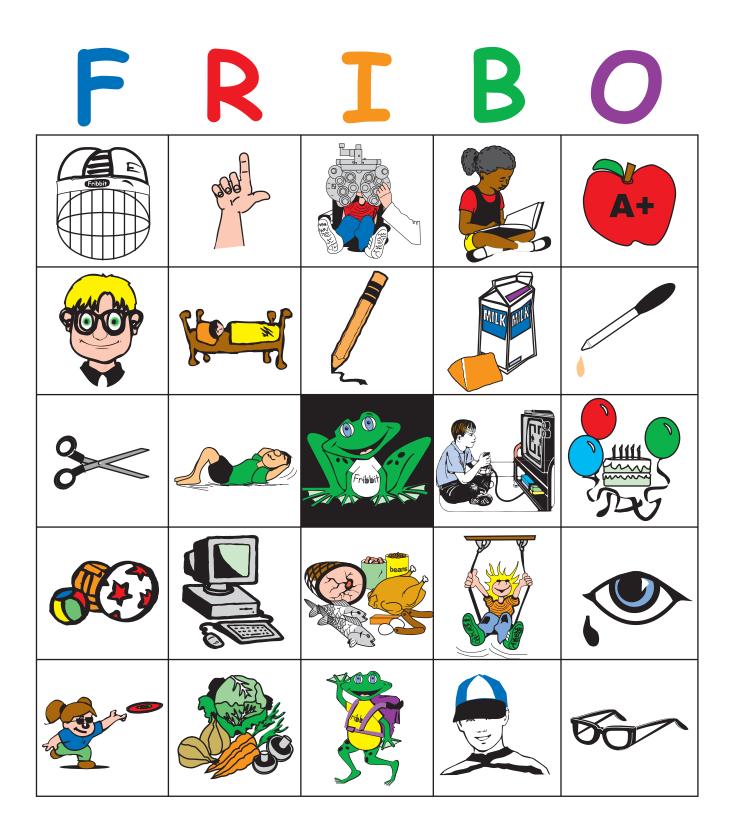
"Under the "B" a little girl reading!" Remember...hold books approximately 14-16 inches (35-40 cm) away when reading.

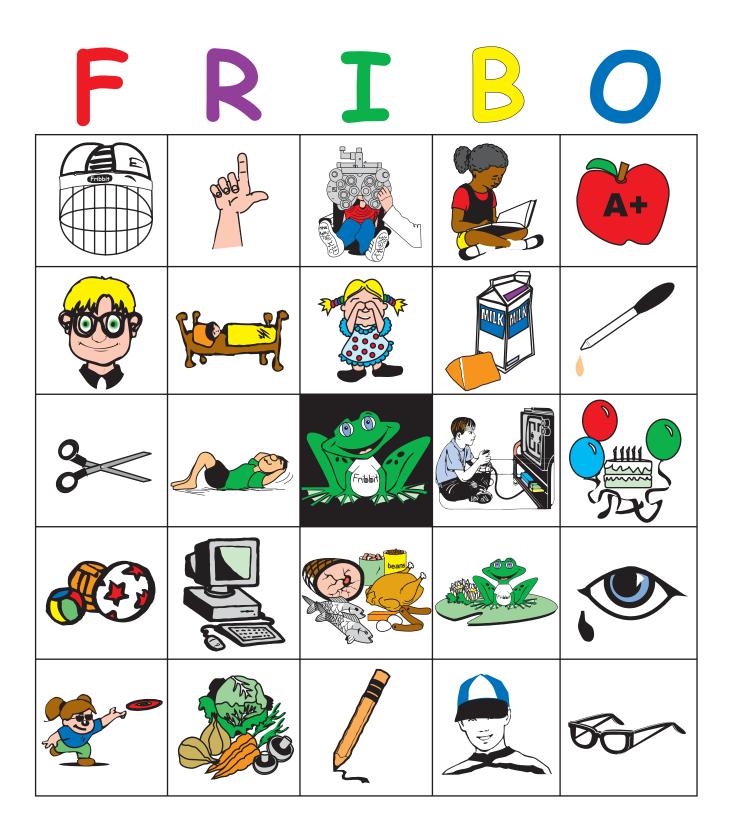


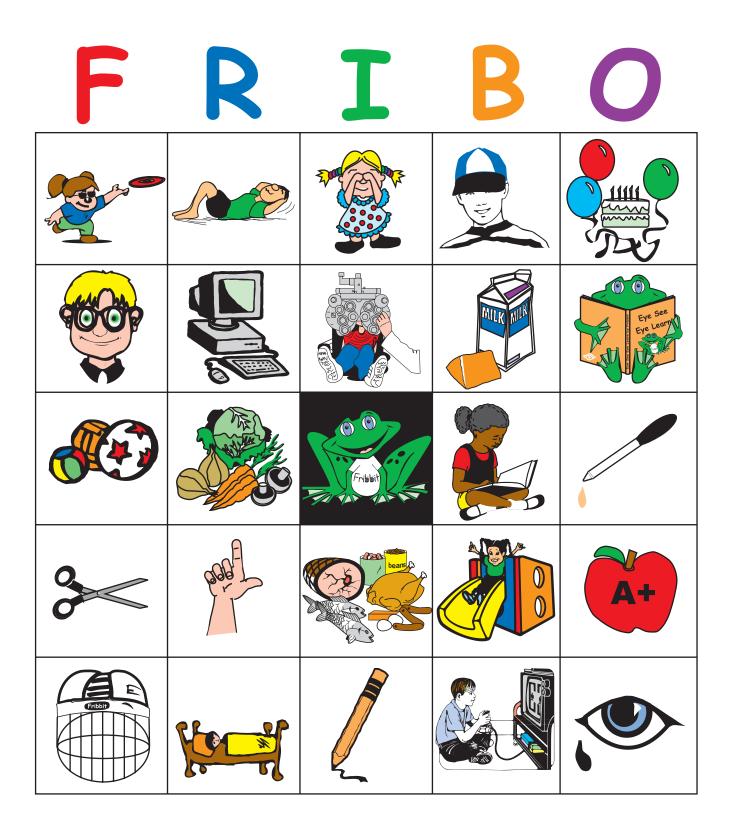
"Under the "F" a pair of scissors!" Remember...never put sharp objects like scissors near your eyes.











LOOK Before You Leap...



Eye Safety — Look Before You Leap

This activity is designed to help students learn how to care for their eyes and prevent eye injuries.



Suggestions:



Working in teams, ask students to search the classroom or school for as many eye hazards as they can find. They should record their observations on a sheet of paper to share with the class. For non writers have them remember 1-3 each and identify the hazards in a sharing circle.

As a class, share the different hazards discovered and discuss why they are hazardous. Review the information about eye hazards included on the next two pages and search for additional hazards that students might have missed. Once students have identified different hazards, ask them to brainstorm what can they do to make the classroom or school a safer place.

or:

Have students search for eye hazards at home. Once students discover and record different eye hazards, discuss or record ways to address each hazard.





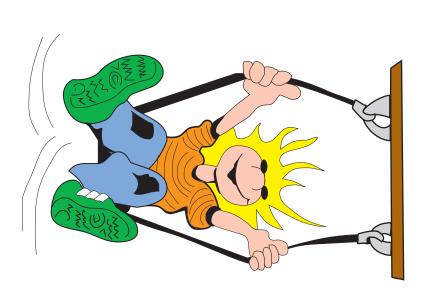


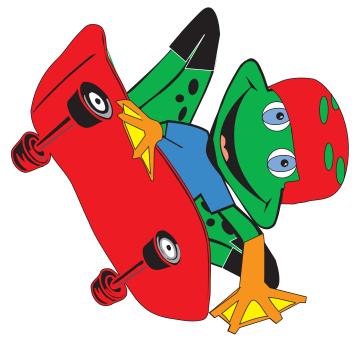


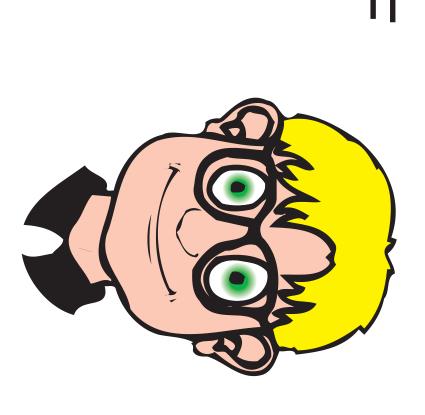


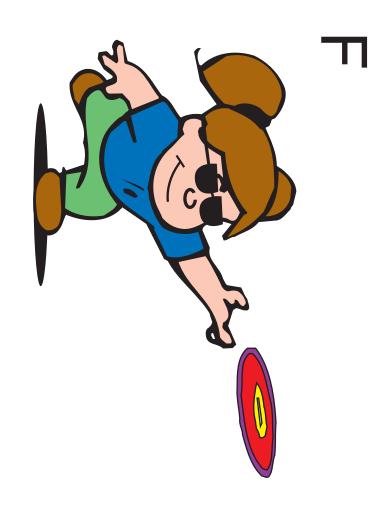










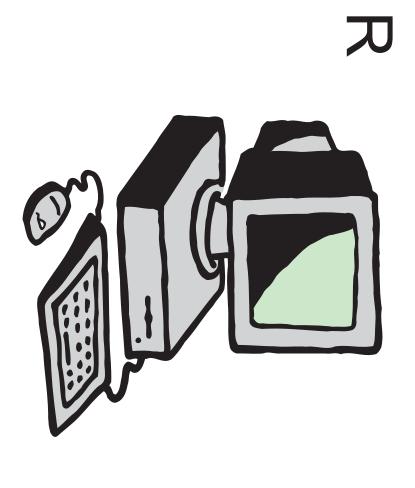


Be careful when throwing objects and always wear sunglasses when you are outside.

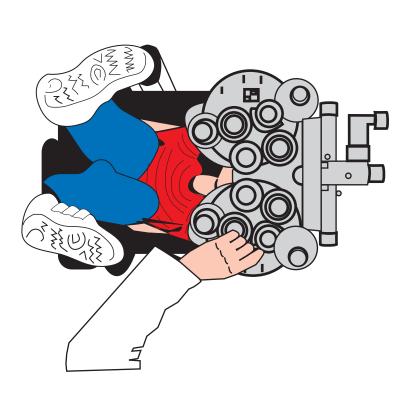
Exercise your body and your eyes!

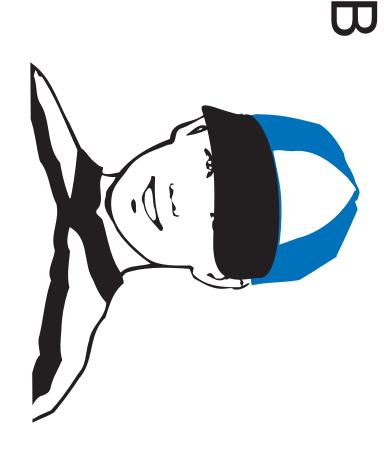
If you have glasses, wear them when you should.

When playing in the sun always wear sunglasses.









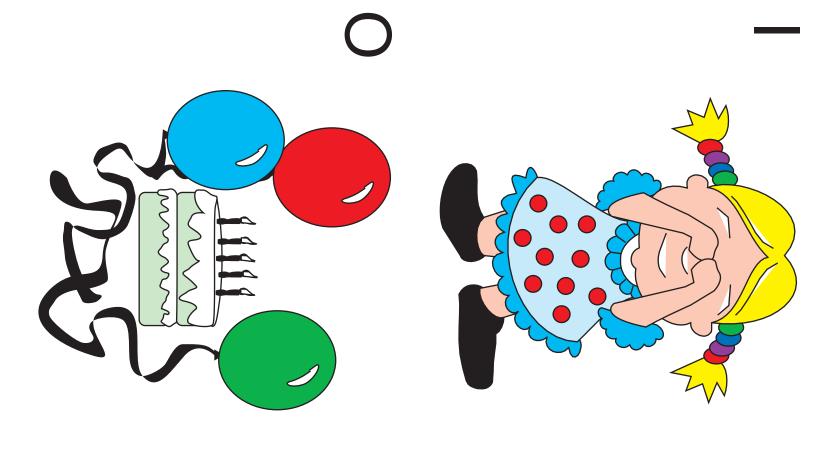
Wear a large brimmed hat to protect your eyes from the sun.

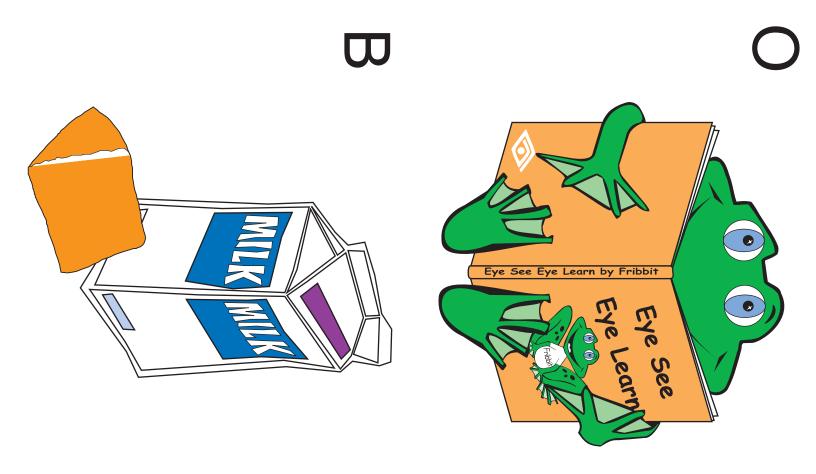
Healthy bodies help keep your eyes healthy.

Have your health and vision checked regularly.

Remember the 20-20-20 rule!

After working or playing on a computer for 20 minutes, take 20 seconds to look 20 feet away. This helps rest your eyes.



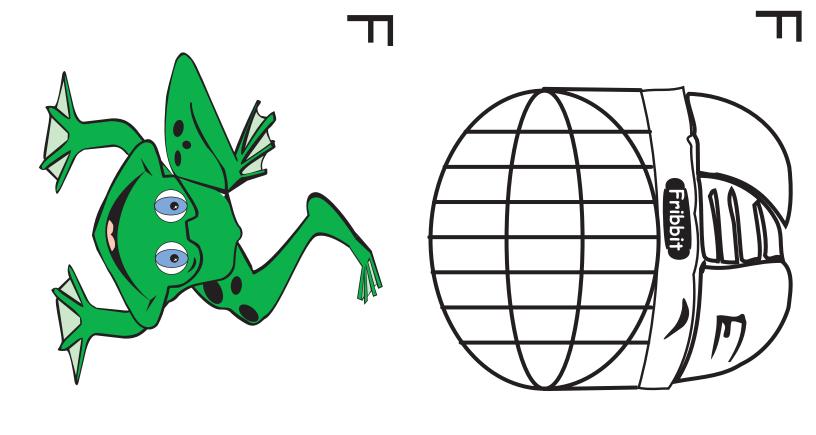


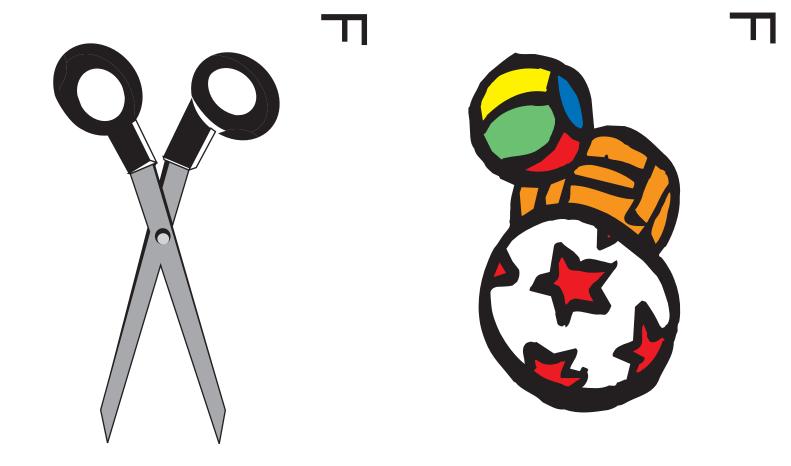
Reading is fun when your eyes are working well.

If your eyes are sore or something is in your eye - DO NOT RUB them.

Dairy
Healthy Food = Healthy Eyes
Eat foods that will keep your
eyes healthy and seeing well.

You should have your eyes checked before your first birthday and every year after that.



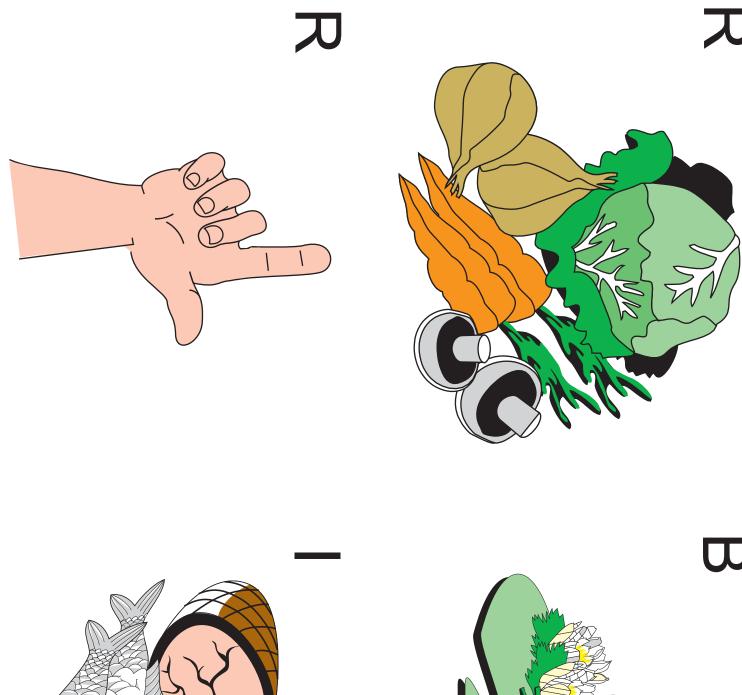


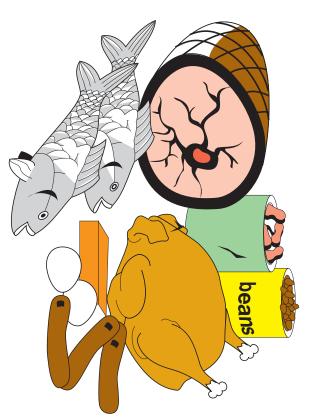
When playing sports like soccer, basketball or baseball you should wear protective eye wear.

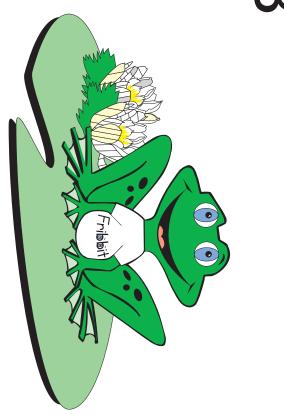
When you are playing hockey, always wear a helmet that protects your eyes.

Never put sharp objects like scissors near your eyes.

Look before you Leap...Protect your eyes.







Fribbit says your Optometrist is your friend!

Vegetables
Healthy food = healthy eyes.
Eat foods that will keep your
eyes healthy and seeing well.

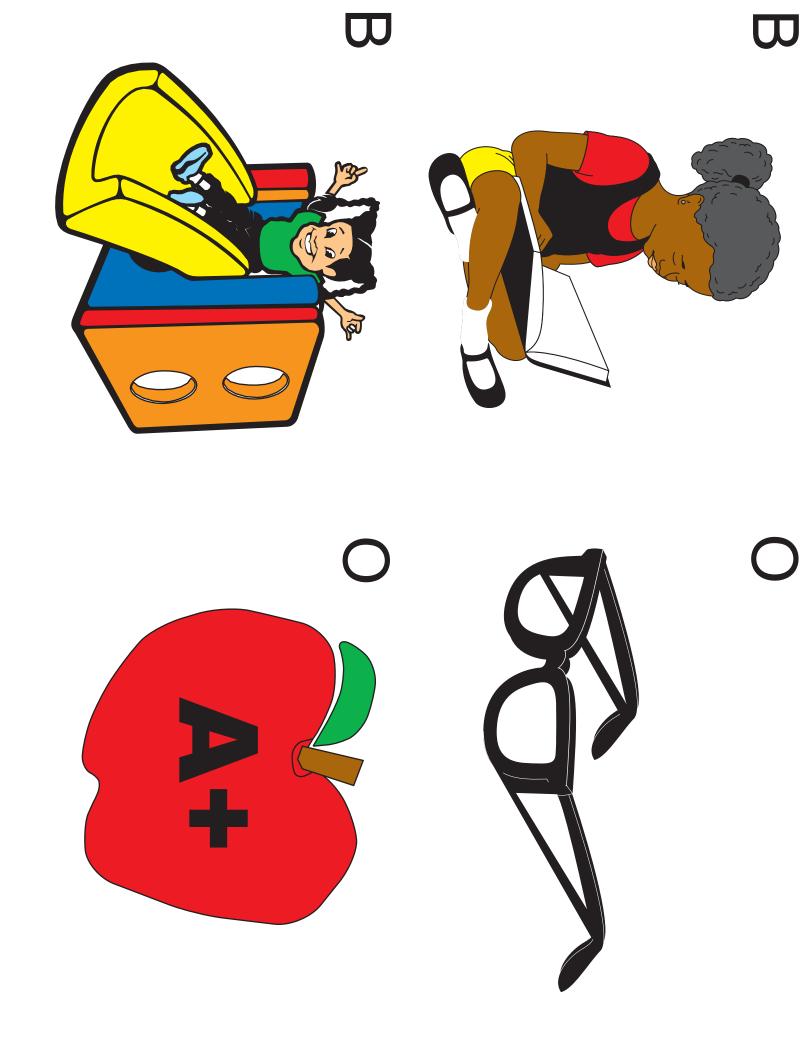
Protein

Healthy food = healthy eyes.

Eat foods that will keep your

eyes healthy and seeing well.

Keep your hands clean and your fingers away from your eyes.

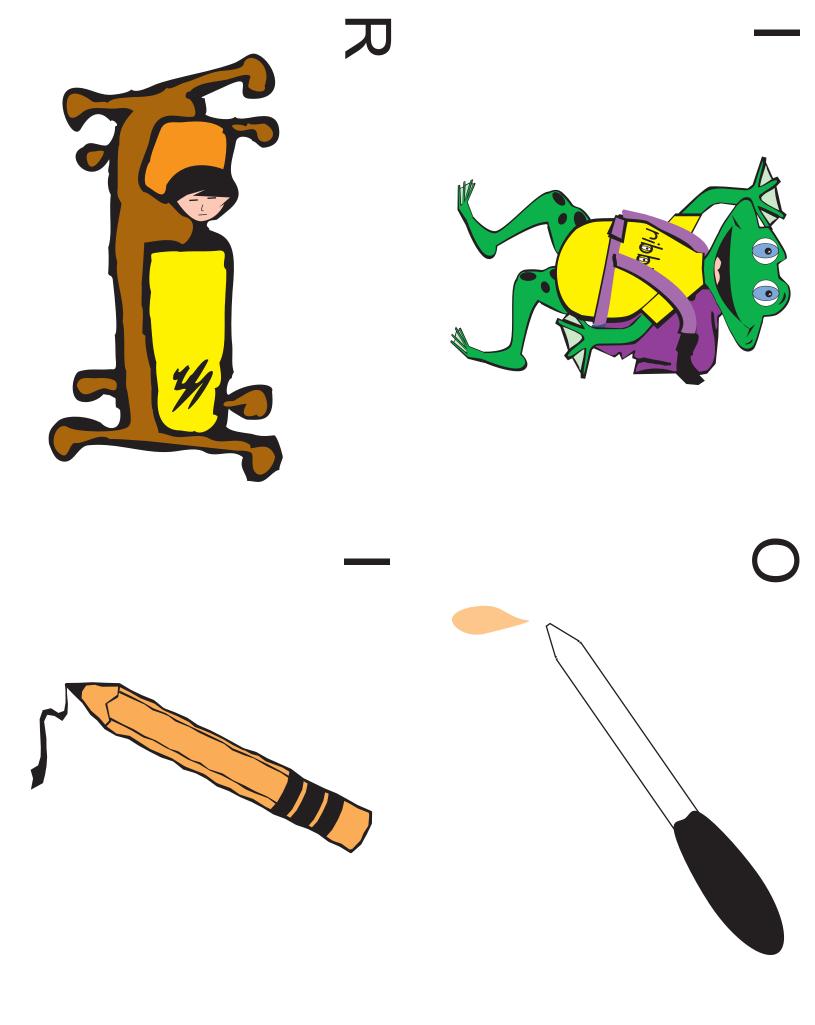


When your eyes may be in danger, wear safety glasses.

Hold books approximately 14-16 inches (35-40 cm) away when reading.

When your eyes are healthy and your vision is good, school is fun!

Play Safe, stay away from sharp objects.

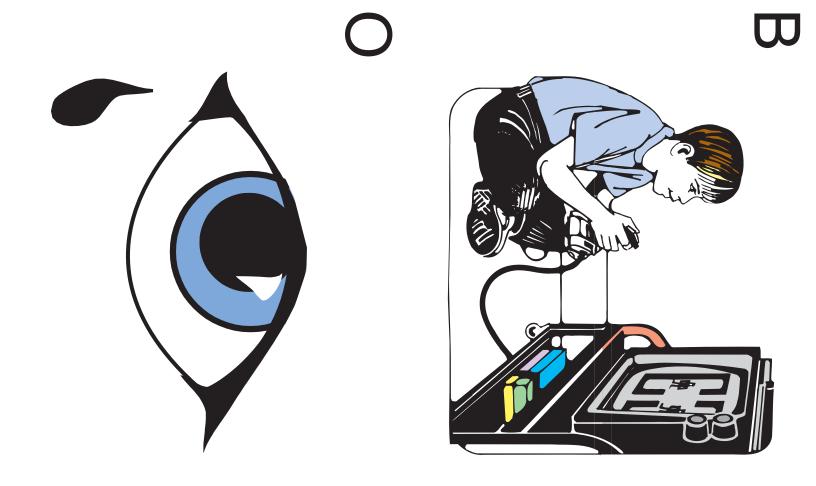


Only use medicine for your eyes that your optometrist says is OK.

Before you start school make sure your eyes are ready to learn...Make your first test an eye exam.

Be careful when holding sharp objects such as a pencil.

Get the proper amount of sleep every night. Your eyes need a rest too!



Playing video games is alright as long as it is not all day. Remember the 20-20-20 rule! After playing video games for 20 minutes, take 20 seconds to look 20 feet away. This helps rest your eyes.

Take care of your eyes, you would be lost without them.