Sensory Software International

Look To Learn

Activities for Eye Gaze

manual

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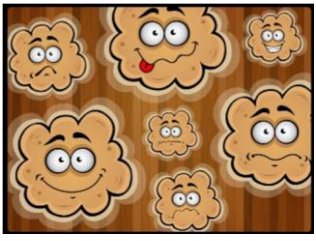
ABOUT LOOK TO LEARN

Look to Learn is a set of 40 activities for people starting out with eye gaze technology. The activities have been specially designed to provide a fun way to improve access and choice making skills.

Each activity develops a different skill, ranging from cause and effect to accurate eye gaze control. The software has been created in consultation with teachers and therapists and provides the tools needed for assessment.

Above all, Look to Learn is designed to be motivating and fun!



Please note: Look to Learn runs on Windows XP and above. You will need an eye gaze camera with cursor control to use the activities.

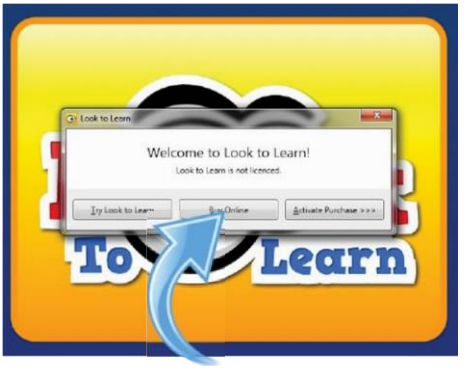
HOW TO INSTALL LOOK TO LEARN

1. Start the installation by putting the DVD into your computer's DVD drive.
2. Follow the on screen instructions to install the software.
3. Alternatively you can install Look to Learn on any computer by visiting http://installers.sensorysoftware.com.

LICENSING YOUR SOFTWARE

When you first install Look to Learn you will have access to three of the activities: Hose, Custard Pies and Dinner Time.

To unlock the remaining activities you must enter the activation code that you received when you bought Look to Learn. If you haven't yet purchased the software you can do so by clicking the 'Buy Online' button as shown below:



You will then be taken to our secure online shop where you can purchase the software and receive an activation code to unlock the remaining activities.

NB: Requires internet connection and credit card

GETTING STARTED

Setting Up

You need an eye gaze camera to use Look to Learn. You must enable Windows control so that your eyes are moving the mouse cursor.

Most of the early activities only use the mouse movement and will result in an instant reaction. Where a selection is needed, the user will need to look at the object on screen for 1-2 seconds to confirm the selection.

CALIBRATION

Your eye gaze system needs to measure your eyes to determine where you are looking on the screen. This process is called calibration.

Recording a good calibration is important for accurate eye control of Look to Learn, however it is less important for activities that use large or no targets such as Magic Mouse and Magic Squares.

When somebody is using eye gaze for the first time, it can be quite effective to use somebody else's calibration to get started.

This enables the user to begin enjoying Look to Learn without having to calibrate.

Calibration Tips and Techniques

1. Use a good set up

Each eye gaze camera works in a slightly different way, but for a standard calibration we recommend starting with the following settings:

- A dark background colour
- 5 point calibration
- Use a motivating image or a high contrast colour
- Medium speed or step-through calibration

2. Keyboard step-through

Some eye gaze cameras allow you to use a keyboard step-through calibration. This means that you are in control of when to record the calibration points. You should press the key only when the user is looking directly at the calibration target.

To do this effectively you will need to look at the user's eyes and analyse when they are looking at the calibration target.

3. Use image for calibration

A good way of encouraging users to calibrate is to use images they are familiar with. Please check if your eye gaze camera has this feature.

4. Improve points

Some eye gaze cameras allow you to recapture a reading. It is worth taking the time to try and improve failed calibration points for better accuracy.

5. Change colour contrast

A dramatic colour contrast can make it easier for some users to track the calibration point. The most effective colour contrast for visually impaired users is blue on a yellow background.

6. Things to watch out for

- Reflective frames on glasses
- Droopy eyelids or long eyelashes (try moving the screen higher to encourage eyes to open)
- Any bright light shining onto the eye gaze camera

7. Positioning setup tips

- Use the camera's track indicator to ensure the eyes are at the correct height and distance from the screen.
- Move the computer into the correct position, not the user!

8. Think about your environment

The environment in which you use eye gaze can make a big difference to its success. For the best results:

- Remove unnecessary distractions like posters, televisions and people!
- Use a quiet location
- Avoid too much light – a darker room will make the content look more attractive

LOOK TO LEARN ACTIVITIES

Sensory: Teaches cause and effect.
Explore: Encourages the user to engage with the whole screen.
Target: Helps improve accuracy of eye gaze.
Choose: Develops choice making skills.
Control: Fine tunes eye gaze access and drag and drop skills.

SENSORY	EXPLORE	TARGET	CHOOSE	CONTROL
Custard pies	Bottles	Hose	Dinner time	Darts
Magic mouse	Magic squares	Bubbles	Javelin	Wizard's potion
Egg	Graffiti	Shoot	Snowman	Penalty
Cannon	Fart clouds	Video wall x2	Tyres	Jungle
Reveal shapes	Face splat	Video wall x4	Drummer	Dinosaurs
Reveal blocks	Scratch card	Video wall x6	Opinions	Bugs
Farmyard	Park life	Fruit punch	Monster factory	Underwater
Music squares	Classroom	Snowflake	Paper, scissors, stone	Woodland

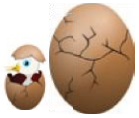
SENSORY

Custard pies

Look at each photo as it appears on the screen to throw a custard pie. We have included 6 photos but you can change these to your own photos (see p.18). This activity is great for analysing responses to content appearing in different areas of the screen.

Magic mouse

A good activity to start using eye gaze for the first time. Wherever you look on the screen you will create a special effect along with a sound effect. When the star appears you can look at this to move on to the next effect.



Egg

Look at the egg to break the shell and see which animal is inside. It takes 5 seconds for the animal to emerge. The egg activity encourages you to focus on a particular area of the screen.

Cannon

Splat paint all over the brick wall by looking at different areas. The cannon fi res automatically so this is one of the easier activities.

Reveal shapes

An image is hidden behind the shapes. Look at the shapes and they will disappear to reveal the image. Changing the image to a familiar photo may help with motivation (see p.18).

Reveal blocks

Reveal blocks works in the same way as Reveal shapes, but there is less visual distraction. It leads nicely towards alternative

communication software such as The Grid 2 (also from Sensory Software).

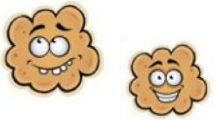
Farmyard

Look at the barn door for 3 seconds for it to open and reveal one of the animals.

Music squares

Look at each instrument to hear it play. All the instruments are playing the same tune so see if you can hear the whole band by looking at each instrument. Look at an instrument again to make it stop playing.

EXPLORE



Bottles

The aim of Bottles is to smash as many bottles as you can. Look at a bottle to smash it and see if you can get them all.

Magic squares

As you look around the screen you will make the musical squares appear. If you look at the same one more than once it will change colour and play a different sound.

Graffiti

Spray paint over the wall by looking around the screen. Look at the different colours to change your paint or at the circles to change the size of the spray. Look at the bottom right-hand corner to clear the screen.

Fart clouds

For people with a certain sense of humour! Look at the fart clouds to make them fart.

Face splat

Throw a custard pie at each of the characters by looking at them. This activity is really rewarding, even for people who are not able to access small targets.

Scratch card

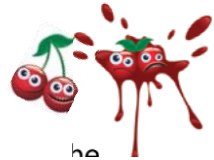
Look around the screen to scratch away each of the special textures to reveal an image. You can change the images to increase motivation.

Park life

Explore this interactive visual scene and make it come to life.

Classroom Look at the objects around this interactive visual scene to make the classroom come to life.

TARGET



Hose

Clean the car, put out the fires, water the plants, squirt the bugs and scare the birds – using the giant hose pipe. Look at the objects to fi re the hose and complete the level.

Bubbles

By looking at the bubbles you will pop them and make them split into smaller and smaller bubbles.

Shoot

As you work through the levels you will need to shoot more targets. For this activity you are up against the clock. Why not try and set a high score?

Video wall x2, x4 and x6

The video wall activities allows you to display 2, 4 or 6 videos on the screen. When you look at a picture it will play a video. As soon as you look away it will stop.

Please note: you can use your own videos in Look to Learn but they must be in flash (.flv) format (refer to p.18).

Fruit punch

Flatten the crazy fruit faces with the giant boxing glove. To do this you need to look at each piece of fruit as it floats across the screen. Squash 20 pieces of fruit to complete the activity.

Snowflake

By looking at the snowflakes as they fall you will be able to build a snowman. If you manage to get 25 snowflakes you complete the activity and the snowman will come to life.

CHOOSE

To make selections in the Choose activities, you need to look at them for 1-2 seconds.

Dinner time

Choose what the man is going to eat for his dinner from the right hand side of the screen.

Javelin

Choose which object the athlete will throw. Look at the option you wish to choose on the left-hand side of the screen.

Snowman

Choose how you are going to help the snowman. Look at the options on the right-hand side of the screen.

Tyres

Choose which tyres to give to Colin the Car. Look at the options on the left-hand side of the screen.

Drummer

Choose which drumsticks Diego the Drummer should use. Look at the options on the right-hand side of the screen.

Opinions

Have a look at the image in the centre of the screen before deciding if you LOVE or HATE it! If you love it then look at the green happy face. If you hate it then look at the red angry face.

This is a good activity for transition towards alternative communication and choice making.

Monster factory

Create your own scary monster at the Look to Learn Monster Factory! Look at your choice of mouth, eyes, accessory and body.

Paper, scissors, stone

A classic activity of Paper, scissors, stone.

- Paper beats stone by wrapping it;
- Stone beats scissors by blunting them;
- Scissors beats paper by cutting it.

This activity is best of 3. It helps develop targeting and choice making skills.

CONTROL

Darts

Look at the pub scene to start the activity. Click as close to the bull's eye target as you can. Darts in outer rings earn 10 points, 50 in the blue ring and 100 if you can get the bull's eye.

Wizard's potion

The Wizard is making a magic potion using 4 special ingredients. You have to watch carefully as he adds them to the cauldron and then copy his recipe exactly. Select each of the coloured ingredients in the correct order. See how many steps you can remember.

Penalty

This activity is a penalty shoot-out. You and Molly the Monster take it in turns to have 5 attempts to score a goal.

Begin the activity by looking at the football. You can now choose your player and the colour of kit you want to wear.

To take a penalty, choose the area of the goal that you want to shoot for and look at it. The player will then take a shot and Molly the Monster will try and save it.

Choose the swap symbol to play as the goalkeeper; look at the area of the goal you wish to dive into.

Jungle

Create a jungle scene: look at an animal to select it then look at one of the stars to place it in the scene.

Dinosaurs

Create a pre-historic scene: look at a dinosaur to select it then look at one of the stars to place it in the scene.

Bugs

Create a scene of creepy crawlies: look at a bug to select it then look at one of the stars to place it in the scene.

Underwater

Create a underwater scene: look at an animal to select it then look wherever you want to place it in the scene.

Woodland

Create a woodland scene: look at an animal to select it then look wherever you want to place it in the scene.

ANALYSING ACTIVITIES

Look to Learn includes a built-in gaze analysis tool that will tell you where somebody has looked during an activity. It can also be used to analyse the range of access to the screen, the relevance of what the user is looking at and to measure progress.

Using the Analysis Tool

Once the user has completed an activity, click on 'Analysis'.

This will then display a screen that looks like this:

- The coloured lines indicate where the user has looked
- The longer you look at certain parts of the screen the colour of feedback will change from blue > green > yellow > red
- Time taken shows the total time the activity was open
- Click on the disk to save the heat map as an image. You can then print this for the user's records.

Please note: for activities without a static background, the heat map is overlaid on a generic screenshot.

It is important to interpret these results carefully when analysing if somebody is looking at relevant content.

CHANGING PICTURES

Many activities allow you to change the pictures. Click on ‘change pictures’ at the start of the activity. Click a picture to choose a new image.

To reset back to the default images click the green arrow in the top right hand corner.

CHANGING VIDEOS

The Video wall activities allow you to use your own videos. Videos need to be in flash (.flv) format before you can upload them. We have found 2 easy ways to convert any video file to .flv:

1. Any Video Converter

(http://www.any-video-converter.com) is a downloadable application that is easy to use and will convert all types of video. The free evaluation version works with videos that are up to 3 minutes in length.

2. SaveTube

(http://www.savetube.com/) enables you to save any video from YouTube in .flv format:

a. Find the video you wish to use from YouTube
b. Copy the URL
c. Go to the website http://www.savetube.com/
d. Paste in the URL
e. Choose to save the video as .fl v format
f. Windows will automatically save to your downloads folder - you may wish to move the fi les to My Videos

KEYBOARD SHORTCUTS

Use these keyboard shortcuts to navigate Look to Learn without a mouse or touch screen:

A	loads analysis tool
D	restores default pictures or videos
P or V	changes pictures / changes videos
S	starts Look to Learn / starts an activity / saves heat map
1-9	loads the corresponding activity on the screen / changes corresponding images or videos
Enter	on home screen will start Look to Learn
Backspace	takes you to previous screen
Escape	takes you to previous screen / exits an activity

Sensory Software International

www.sensorysoftware.com