Visio

# SeeSaw

## Methodical Observation of basic visual skills

# Manual

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**SeeSaw**
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(translation by Marieke Steendam, 2014)

# 1. Introduction

SeeSaw is based on the long professional experience of early development specialists and occupational therapists, Ellen Eelman, Marjolein Kuiper and Marieke Steendam at Royal Dutch Visio in the Netherlands. The first version was a limited edition in 2003, used only by Visio professionals in the regions of Leiden and The Hague in the Netherlands. In 2008 the formal version was edited, receiving the name of "ZieZo" and a limited number of ZieZo-kits (including the materials) was issued by Visio and made available to Dutch and Flemish professionals. When Marieke Steendam was contributing to the book: "Impairment of Vision due to disorders of the visual brain in childhood: A practical approach" edited by A.Hall Lueck & G.N. Dutton (in press) she mentioned "ZieZo" as a tool. This lead to translating it into English, naming it "SeeSaw", and Visio is facilitating by making the methodical observation digitally available to English speaking professionals without costs. www.visio.org/SeeSaw

The methodical observation SeeSaw is used most frequently by the staff of the teams for children with multiple disabilities and visual impairments (MDVI). The materials and observation forms used previously at random were compiled to become SeeSaw. This has lead to an efficient and effective way to observe children with MDVI.
SeeSaw is not a standardized test and the material is not validated. It is a standardized methodical observation, based on best practice. The observation offers a starting point to continue intervention. The data about the way the child uses its visual possibilities offer information on how to approach the child and form the basis for vision intervention.

## 1.1 Aim

SeeSaw is a methodical observation which enables the professional to record a child's visual and non-visual reactions to visual stimuli. The observation is aimed at the basic visual skills of attention, fixation and pursuit.
SeeSaw is designed to observe young, severely visually impaired children and persons with multiple disabilities up to a developmental age of approximately 18 months. In this manual the term "the child" will be used when speaking about the person being observed.

The observation gives you insight in the visual possibilities and restrictions of the child. It can also be used as a starting point for vision intervention. It is recommendable to repeat the observation after a period of vision intervention in order to be able to record the changes.

### 1.2 Users

Seesaw is a tool for professionals working with young children with a visual impairment and/or persons with multiple disabilities. These professionals can be occupational therapists, teachers of the visually impaired, early development specialists, orthoptists and other specialized care workers. To be able to interpret the reactions of the child properly, some experience in observing children with a visual impairment is necessary.

### 1.3 Content

This manual, the forms and the black and white material are ready for use as pdf-documents on www.visio.org/SeeSaw. These can be printed from this digital storage and photocopied for ready use. The quality of the black and white patterns remains highest when printed, rather than photocopied.
The other materials have to be collected by the user, according to the shopping list in appendix A.

The overall cost of the materials is not high at all, it is more a matter of taking time to gather the different materials. The season will play a serious role for obtaining the Christmas material. Alternative shiny objects, like coasters of the same size may be used as well. The original materials can be seen on some photographs in appendix A.

## 2. Foundations

The methodical observation is based on the 3 stages of normal visual development of children:

1. Attention: The child becomes aware there is a visual stimulus
2. Fixation: The child starts to focus its eyes to a stimulus, for example the mothers face
3. Pursuit: The child starts to follow the stimulus when it moves

Later on the child will reach and grasp whatever it can see. This stage is not included in this methodical observation, as reaching and grasping are higher and more complex skills. SeeSaw is limited to the basic skills of attention, fixation and pursuit.

The developmental stages in visual functioning are also characterized by the objects/surfaces a child looks at:

1. Light
2. Shiny material
3. Black and white
4. Fluoresent colors
5. Primary colors

# 3. Manual

## 3.1 Instructions

### 3.1.1 In general:

- Read through the manual and observation forms.
- Start the observation in a room with normal lighting conditions, that is also prepared to be changed into semi-dark and dark conditions.
- Use all categories for the first assessment of a child. When repeating SeeSaw some items may be skipped if they were too easy the first time.
- Show the visual stimuli in different ways and observe the reaction of the child.
- Fill your observations in during or after the assessment.
- Videotaping the observation is recommended, as it is easier to look back and fill in the forms more accurately. Also will it be easier to compare when the assessment is repeated. Quality of reactions cannot always be put into words, but may be clarified by images.

### 3.1.2 Visual Stimuli

- Light
    - Turn roomlight on/off.
    - Use the torch without and with coloured cellophane, moving and standing still.
    - Elicit fixation with the torch in different quadrants of the visual field, both still and a slightly moving light. Reposition the torch a few times to check fixation.
    - Elicit pursuit by slowly moving the torch in different directions. The torch can be slightly shaken while moving, to enhance the visual stimulus.

- Shiny Material
    - Shiny sheets on cardboard at A4 or Folio size in silver, gold, red, green and blue. Christmas balls (appr. 7 cm in diameter) and Christmas lametta/streamers: Present standing still/moving, with or without the torch shining on the material.
    - Elicit fixation with the material in different quadrants of the visual field, both still and slightly moving. Reposition the material a few times to check fixation.
    - Elicit pursuit by slowly moving the material in different directions. The material can be slightly shaken while moving, to enhance the visual stimulus. Be aware of the sound the Christmas lametta/streamers makes when shaken.

- Black and White material
    - Black and white sheets with different patterns, stripy, chequered, circle and face. A4/folio size and smaller ones (10 cm in diameter) on lollipop sticks. Present standing still/moving, with or without the torch shining on the material. With the small material quickly turning the "lollipops" can give extra effect.

- Elicit fixation with the material in different quadrants of the visual field, both still and slightly moving. Repositioning the material can help to attract visual attention
- Elicit pursuit by slowly moving the material in different directions. The material can be slightly shaken while moving, to enhance the visual stimulus.

- Fluorescent material
  - Sheets and sticks in different fluorescent colors. Present standing still/moving, with or without the torch or the blacklight lamp(*) shining onto the material.
  - Elicit fixation with the material in different quadrants of the visual field, both still and slightly moving. Repositioning the material can help to attract visual attention
  - Elicit pursuit by slowly moving the material in different directions. The material can be slightly shaken while moving, to enhance the visual stimulus.

(*) Beware of looking straight into blacklight, this may be harmful for the eyes of children. Blacklight used in the "amusement industry" will only be harmful if a person is exposed to it for more than 8 hours. (1)

(1) "Optic radiation in work-related situations" by TNO, an independent research organization compiled for the Dutch government; F.P. Wieringa, C.J.P.M. Teirlinck en J.W.A.M. Alferdinck. Review: prof. D. van Norren, 2006, TNO, the Netherlands

- Primary coloured material
  - Sheets and objects in colors yellow, red, blue and green and sandpit shapes in these colors. Present standing still/moving, with or without the torch or blacklight lamp shining onto the material.
  - Elicit fixation with the material in different quadrants of the visual field, both still and slightly moving. Repositioning the material can help to attract visual attention
  - Elicit pursuit by slowly moving the material in different directions. The material can be slightly shaken while moving, to enhance the visual stimulus.

### 3.2 Using the forms

Five different forms are available, one for each category of material, also available on www.visio.org/SeeSaw

1. Light
2. Shiny material
3. Black and white
4. Fluoresent colors
5. Primary colors

Fill in on each form:

- The child's name and date of birth
- The date of the observation
- The lighting circumstances

All the reactions of the child to the stimuli offered are noted on the form.

Besides the basic visual skills observed, also note the distance between the child and the stimulus. Vary the distance during the observation and note on the form the distance at which the child (visually) responds.

Note in the section "remarks" the things that are remarkable in the (visual) reaction of the child. For example

- The time the child needs before reaction (latency)
- The time the child keeps looking( fixation)
- Level of concentration
- Non-visual reactions
- Does the child require tactile and auditory stimuli to give a (visual) reaction, or can it just use only one sense at a time?Whether the child has a strong preference for certain stimuli.

### 3.3 Interpreting the data

After the observation and filling in the forms a good picture of the visual functioning of the child at that moment has formed. This picture always needs to be complemented by information from the other team members. These data combined will be the starting point for vision intervention.

The observation can be repeated after some time to compare the data. Using videotaping of the observation is helpful as it shows quality of the reactions and the skills more than the data on the forms.

For more information on assessment of basic visual skills and vision intervention read:
A. Hall Lueck & G.N. Dutton, editors (in press) "Vision and the Brain: Understanding Cerebral Visual Impairment in Children"