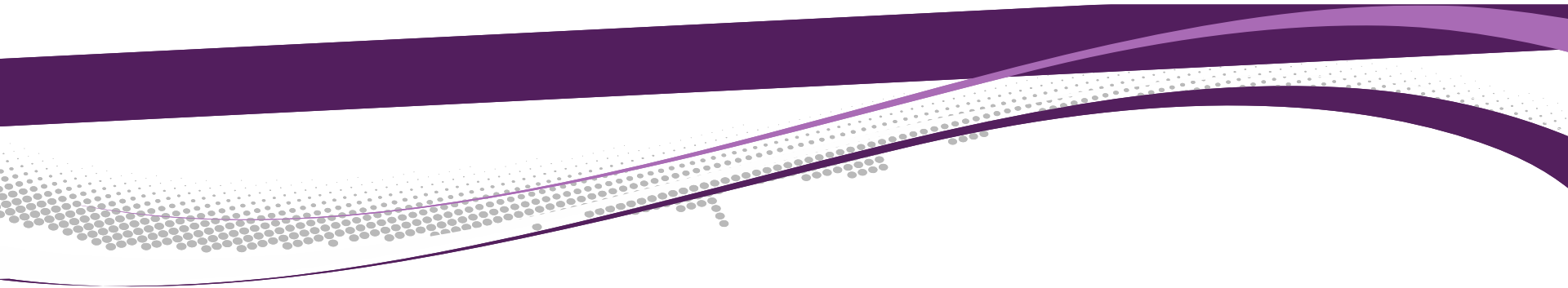
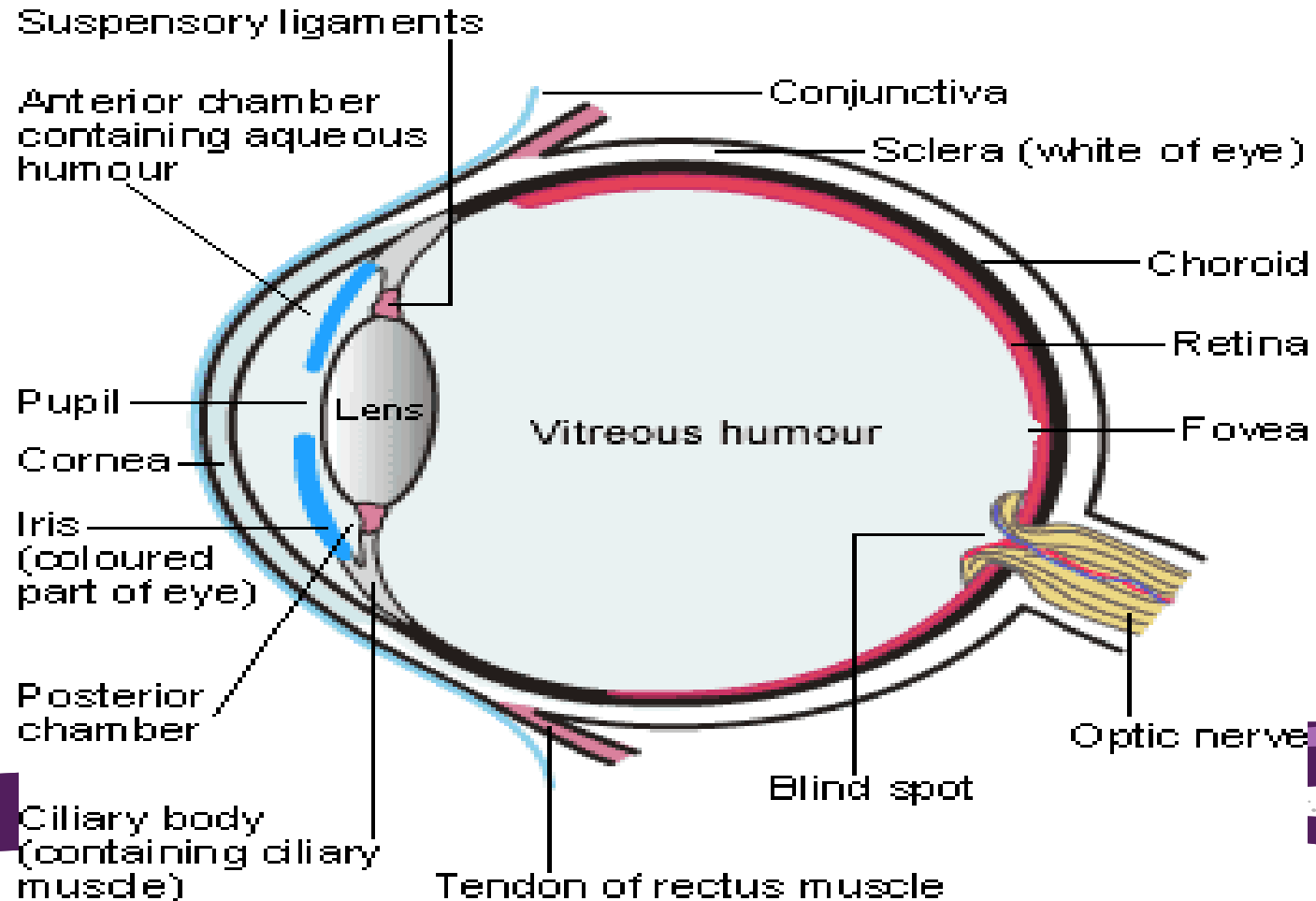


How to perform basic ophthalmoscopy

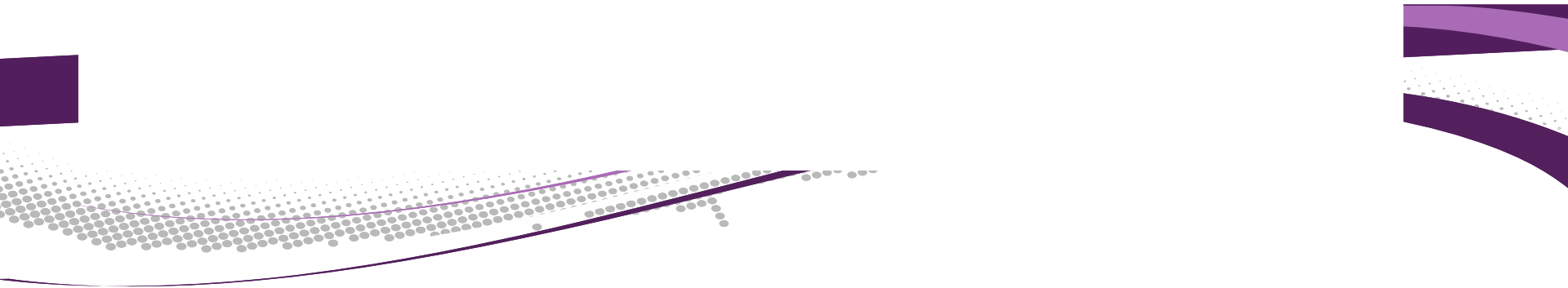


Anatomy of the Eye



Learning Outcomes

- Re-familiarity with the anatomy of the eye
- Identify patients at risk from eye disease & common eye conditions
- Understand the impact eye conditions have on vision
- Identify the features of a normal fundus
- Recognise & describe abnormal fundus findings
- Understand & apply the correct procedure to use an ophthalmoscope
- Practice undertaking basic ophthalmology on each other and look at the features of common abnormalities



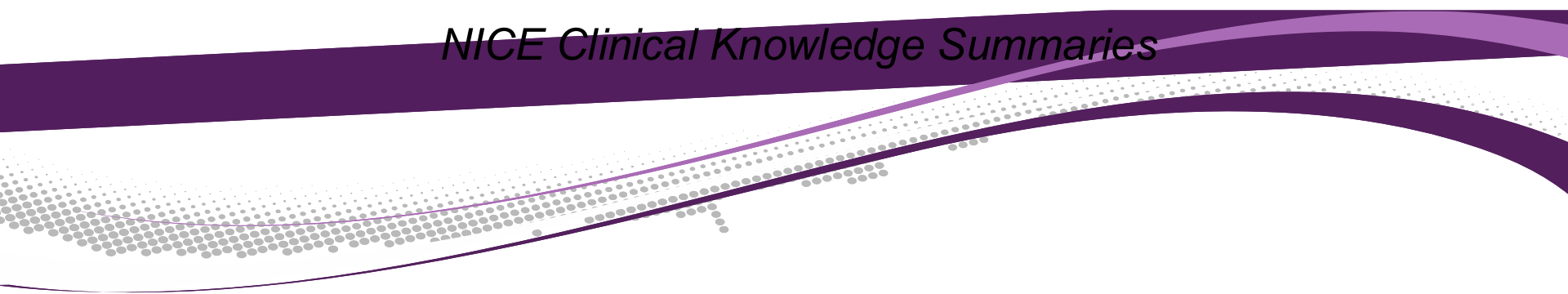
Health conditions requiring Ophthalmic examination

- **Diabetes**
 - Type 1: 25%, Type 2: 40%¹
- **Hypertension**
 - Retinal vascular changes generally correlate with severity of systemic hypertension^{2, 3}
- **Stroke / CVA**
 - $\frac{2}{3}$ visual problems post ^{4,5}
- **Cardiac disease**
- **Chronic diseases**
 - HIV (Most do not but 70% will if CD4 <50 i.e. highly immune compromised)⁶
 - Sick cell ⁷
- **Drugs**
 - E.g. Long term use of anticholinergics / steroids

Top 5 common eye conditions

- Diabetic retinopathy¹
- Cataract
 - Ageing ⁸
 - Diabetes⁹
- Glaucoma¹⁰
- Age related macular degeneration (AMD)¹¹
- Squint (strabismus)¹²

NICE Clinical Knowledge Summaries



What's causing my sight changes?

Cataract



Glaucoma



Diabetic retinopathy



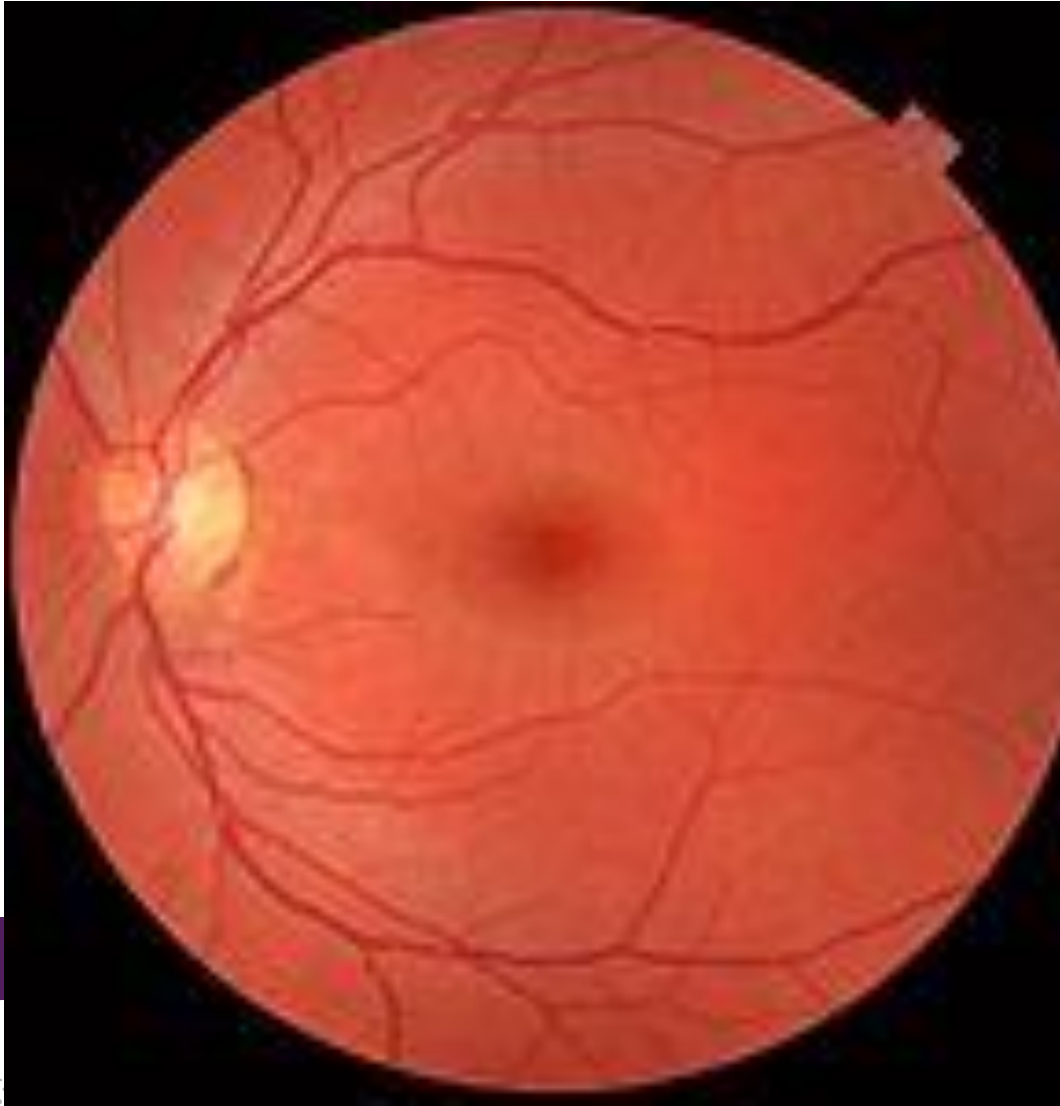
AMD



Retinal Detachment



Normal fundus



What we are looking for:

Optic disc-
colour/size/edges

Cup – size

Blood vessels –
number/width/tortuosity

Macular / fovea

Other findings –
haemorrhages, soft & hard
exudates, oedema

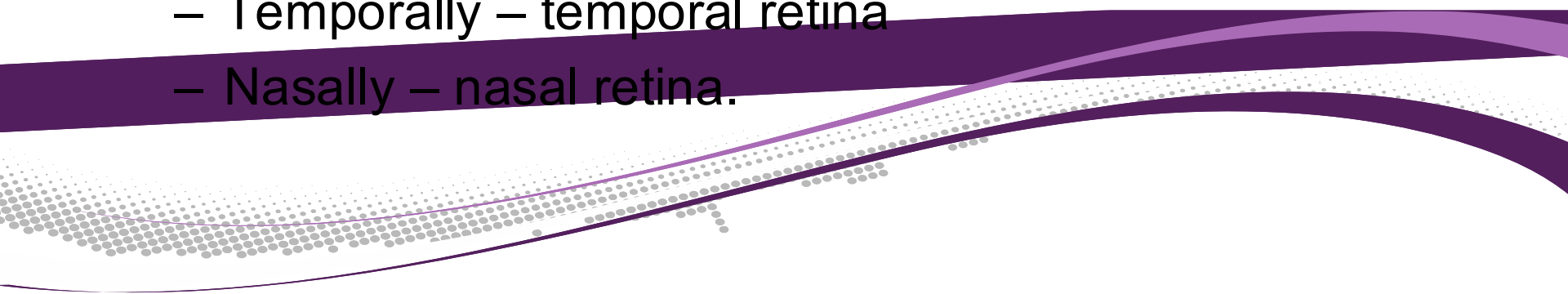
What can you see?



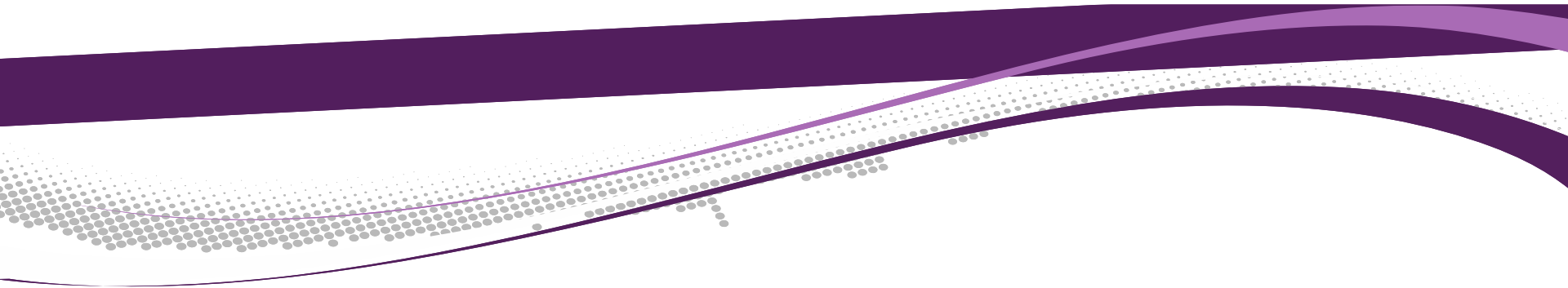
How to use an Ophthalmoscope

- Turn on scope and set lens dial to 0
- Set aperture to smallest reading
- If pt wears glasses, ask them to remove them.
- Dim room lights & ask pt to fix stare at object in front of them
- Wedge scope against your cheek with hand & then head/hand/scope should move as one unit.
- Use your right hand & your right eye to look at the patient's right eye, & vica versa.
- Rest hand on patients shoulder or forehead
- Position ophthalmoscope approx. 15cm in front & slightly to the right (25°), direct light beam into pupil. A red "reflex" should appear.
- Keeping the red reflex visible, move closer to pt until optic disc visible (aprox.3-5cms). Turn lens dial until optic disc clearly visible. If loose it, start again.
- "Pivot" the ophthalmoscope, angling up, down, left and right
- *Myopic (short sighted) – take off glasses, turn disc for minus numbers (red)*
- *Hyperopic (long sighted) – turn disc for plus numbers (green)*

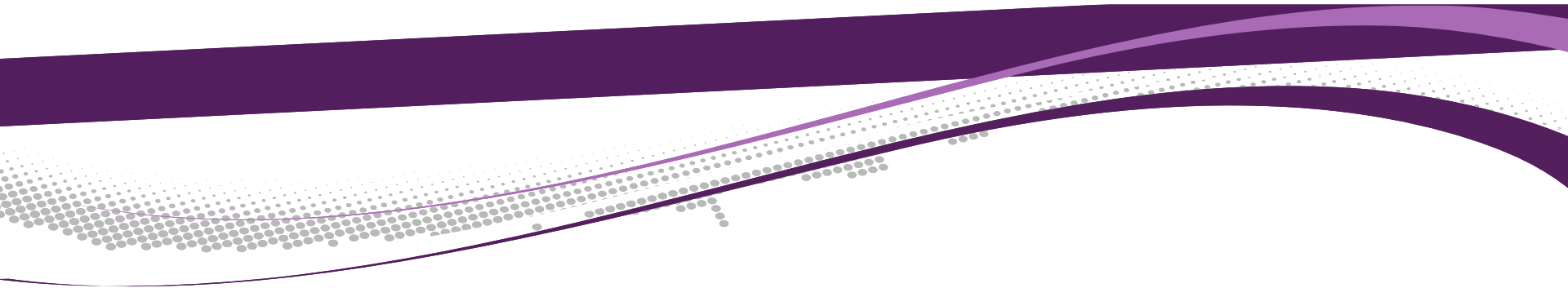
Examine

- **Optic disc:** clarity, outline & colour.
 - **Vessel condition:** follow each vessel to the periphery
 - **Macula:** to locate have the pt. look at the light of the ophthalmoscope which will automatically place the macula in full view
 - **Extreme periphery:** ask pt. to
 - Look up – superior retina
 - Down – inferior retina
 - Temporally – temporal retina
 - Nasally – nasal retina.
- 

[https://www.youtube.com/watch?v=NhzBjm1xA
nk#action=share](https://www.youtube.com/watch?v=NhzBjm1xA
nk#action=share)



- <https://youtu.be/NhzBjm1xAnk>
- <https://www.youtube.com/watch?v=NhzBjm1xAnk#action=share>



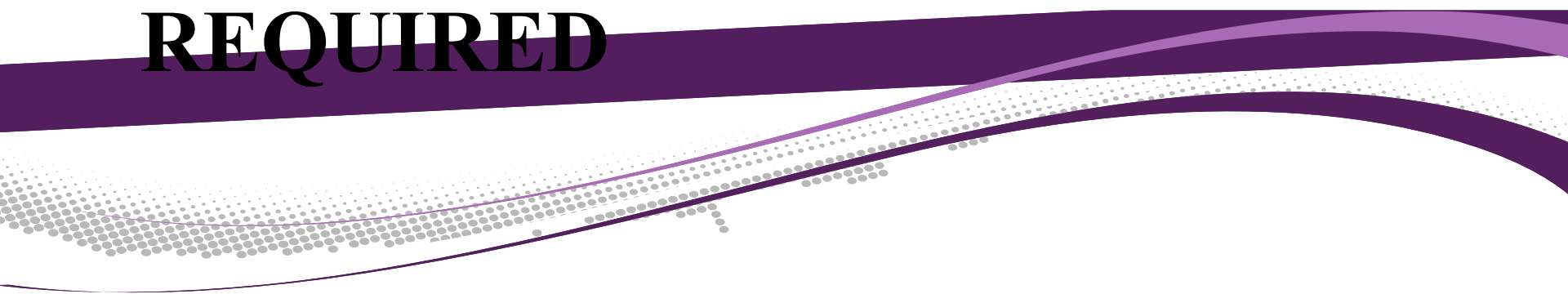
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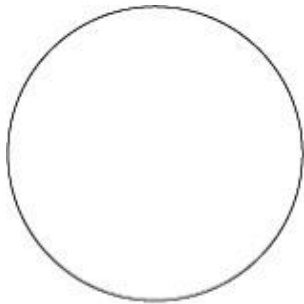
Have a go !



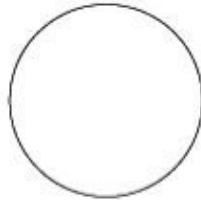
**ADDITIONAL SLIDES IF
REQUIRED**

The bottom of the slide features a decorative design consisting of several overlapping, wavy purple lines. Below these lines is a halftone pattern of small grey dots that fades out towards the left side.

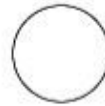
Ophthalmoscope Settings



Large light



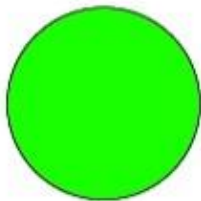
Medium light



Small light



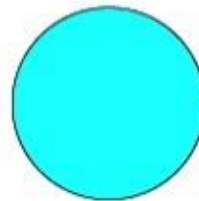
Half light



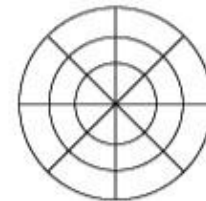
Red free light



Slit



Blue light



Grid

