CiE iGCSE Physics Checklist

Section 18: Reflection and refraction

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| **CORE** |  |  |  |
| Describe the formation of an optical image by a plane mirror, and give its characteristics  |  |  |  |
| Recall and use the law angle of incidence = angle of reflection |  |  |  |
| Describe an experimental demonstration of the refraction of light  |  |  |  |
| Use the terminology for the angle of incidence i and angle of refraction r and describe the passage of light through parallel-sided transparent material  |  |  |  |
| Give the meaning of critical angle |  |  |  |
| Describe internal and total internal reflection |  |  |  |
| Describe the action of a thin converging lens on a beam of light  |  |  |  |
| Use the terms principal focus and focal length |  |  |  |
| Draw ray diagrams for the formation of a real image by a single lens |  |  |  |
| Describe the nature of an image using the terms enlarged/same size/diminished and upright/inverted |  |  |  |
| **SUPPLEMENT** |  |  |  |
| Describe the formation of an optical image by a plane mirror, and give its characteristics  |  |  |  |
| Recall and use the law angle of incidence = angle of reflection |  |  |  |
| Recall and use the definition of refractive index n in terms of speed |  |  |  |
| Recall and use the equation sin I / sin r=n |  |  |  |
| Recall and use n = n = 1 / sin c |  |  |  |
| Describe and explain the action of optical fibres particularly in medicine and communications technology |  |  |  |
| Draw and use ray diagrams for the formation of a virtual image by a single lens  |  |  |  |
| Use and describe the use of a single lens as a magnifying glass |  |  |  |
| Show understanding of the terms real image and virtual image |  |  |  |