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| **Lesson Plan:** |

**Prescribed learning outcomes**

**B2** use ray diagrams to analyse situations in which light reflects from plane and curved mirrors

**B3** analyse situations in which light is refracted

**Big Ideas**

1. Waves transfer energy via oscillations of particles in the medium. Matter does not transfer.
2. Decouple displacement-position vs. displacement-time graphs and use these to solve problems
3. Pictorially and physically manipulate light. This means being able to position mirrors and lenses to re-direct and focus light.
4. Differentiating virtual and real images by meaning, from calculations, and ray diagrams.
5. Explain the consequences when waves interact with each other and with objects with different penetrance

**Material and equipment needed**

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| --- | --- | --- | --- | --- | --- |
| ray boxes | sliders | meter sticks | white paper | felt pens | plastic trays |
| beakers | centigram balance | salt | sugar | red, blue, green filter paper | protractors |
| graduated cylinders | Easter eggs |  |  |  |  |

**Assessment Plan:**

**Formative -** Inquiry questions discussed in class and worksheet handed in this class or next class

**Hook and Introduction**

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| --- | --- | --- | --- |
| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| Before class | * Setup + find Easter eggs | * Have slide up with Easter eggs hidden * Ms Li needs to stand outside the door |  |
| 10:15-10:20 | * Go over some things to watch out | * shine ray box at middle of tray * draw out tray and replace for every trial, that way don't have to move and re-measure angle * don't use a too small angle of incidence, you want to use a big fat juicy angle * Warn them of clean up time |  |

**Development**

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| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| 10:20-11:25 | * Work on lab | * Go around and help students out |  |

**Closure**

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| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| 11:25-11:35am | * Clean up | Review next class  Mr. Scorda's room with marked tutorials + quizzes for correction |  |

What is that image I see

Is it real

Or virtual

Is it up side down or is it right side up