1. A Slide Projector: How it works

- **Concave Mirror**: Focuses the light to increase the light intensity.
- **Condenser**: Consists of two plano-convex lenses that focuses and directs light rays onto the object.
- **Projector lens**: A double convex lens that focuses the light through the object onto the screen.
- **Image formed**: Magnified, Inverted and real.

2. Our Slide Projector Setup

- **Focal length of projection lens**: 0.1m
- **Object position**: Within focal length

**Adjustments made:**
- Elimination of the concave mirror; it made no difference in the setup.
- Use of a double concave mirror as a condenser; potential differences in the amount of light that goes through due to surface change.

3. The 3D Projector

- **How 3D projection works**:
  - **Stereoscopy**
  
  This phenomenon is due to the fact that our eyes are at different places on our faces and thus see slightly different things. When working together, our brains combine the two images to give us a more accurate depiction of our world.

  - **3D projection** uses this same concept.
  
  The left and right images are oppositely polarized and the eye lenses are polarized similarly so that only the left image makes it to the left eye and only the right image makes it to the right eye.

4. Awesomosity 3D Projector!

- **Setup**: Using two slide projectors with polarizers at right angles to each other. The observer uses polarized glasses too.
- **Image**: Magnified, Real and Inverted.

5. Difficulties and future directions:

**Difficulties**
- i. Aligning the images
- Possible explanations:
  - Condenser used
  - Lens sizes that vary the focal length
- ii. Space confinements

**Future directions**:
- i. Reducing obstruction from the light rays coming from the bulb source but not through the lens
- ii. Reducing the size/length of the setup so that it is more portable.

**References**:

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