**“A Huge Microworld” (English, grades 10-11)**

**Case Task**

**Task: “Which Microelectronics Job Would You Choose?”**

**Objective: Debate the pros and cons of different careers in microelectronics and choose the best option for you.**

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**Job Descriptions**

**1. Chip Design Engineer**

**o What they do: Design microchips using software (e.g., CPUs for phones).**

**o Skills needed: Math, coding (Python/VHDL), creativity.**

**o Workplace: Office or lab, sometimes remote.**

**2. Crystal production operator**

**o What they do: Produce microchips in sterile rooms (wear a full-body suit!).**

**o Skills needed: Attention to detail, patience, teamwork.**

**o Workplace: High-tech factory (fab).**

**3. Quality Control Inspector**

**o What they do: Test chips for defects using microscopes/X-rays.**

**o Skills needed: Observation, attention to defectsl.**

**o Workplace: Lab or production line.**

**4. Robotics Engineer (for Chip Factories)**

**o What they do: Program equipment that produces microchips.**

**o Skills needed: Coding, electronics, mechanics.**

**o Workplace: Factory with cool machines!**

**Debatable Questions**

Discuss in pairs/groups:

1. **Money vs. Passion:**
   * Chip designers earn more, but cleanroom work is hands-on. Which is better?
2. **Creativity vs. Routine:**
   * Designing chips is creative, but QC is repetitive. Which suits you?
3. **Education Path:**
   * Some jobs need a university degree (engineer), others need a college diploma (technician). Does this affect your choice?
4. **Future Demand:**
   * Robots/AI might replace some jobs (e.g., basic QC). Which job is “future-proof”?

**Hints to Help Decide**

**• Love tech but hate math? → Robotics or QC.**

**• Prefer teamwork? → Crystal production operator.**

**• Want to work from home? → Chip design (partial remote options).**

**• Like solving puzzles? → Quality control, or technologist.**

**Final Task**

**Write/Speak:**  
*Which job would you choose? Give 3 reasons. Then, argue against one other job.*  
Example:  
*“I’d pick robotics engineer because I love machines, coding is fun, and it’s future-proof. However, cleanroom work might be tiresome in a suit all day!”*