

## 32. Reverse Engineering

### Classroom Activity:

Take apart an object/toy/machine to explain how it works.

**Grade (s):** 9 and 12

**Course(s) and Strand (s):** Technological Education

Exploring Technologies, Grade 9 Open

B. Technological Skills

Manufacturing Engineering Technology, Grade 12 University/College

B. Manufacturing Technology Skills

See supplementary document Ontario Curriculum Alignment for Engineer-in-Residence Secondary Classroom Activities: Science and Technological Education for relevant overall and specific expectations.

### Assessment Categories:

- Knowledge and Understanding
- Thinking
- Communication
- Team-building skills

**Type of Activity:** Classroom/Lab – Independent Study

**Preparation:** varies

**Time needed to complete the task:** varies

**Materials and Resources for Teachers:**

None

**Materials and Resources for Students:**

Object to be examined

### Activity Description:

Discuss the concepts and history behind reverse engineering, and its relationship to the product development cycle.

Discuss reverse engineering in the software industry.

Working as a team or individually, students will select an



object, toy or simple machine, take it apart and explain how it works. A write-up including labeled drawings, analysis, calculations and data is required.

**Tips:** This task can be used with nearly any grade.

Cross-disciplinary connections: Social Studies, History, Technology