***Uncovering Student Ideas* Probe Collections- Grade 3\***

**LIFE SCIENCE**

**LS1.B Growth and Development of Organisms**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Does It Have a Life Cycle? | [*Uncovering Student Ideas in Science- Vol. 3*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-volume3) | life cycle, growth and development |
| Chrysalis | [*Uncovering Student Ideas in Life Science- Vol. 1*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-lifescience-volume1) | life cycle, concept of living |
| Is It an Amphibian? | [*Uncovering Student Ideas in Life Science- Vol. 1*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-lifescience-volume1) | amphibians |

**LS2.C Ecosystem Dynamics, Functioning, and Resilience**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Habitat Change | [*Uncovering Student Ideas in Science- Vol. 2*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-volume2) | adaptation, survival, habitat change |
| Changing Environment | [*Uncovering Student Ideas in Life Science- Vol. 1*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-lifescience-volume1) | adaptation |

**LS2.D Social Interactions and Group Behavior**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Probes will be added to this DCI when *Uncovering Student Ideas in Life Science- Vol. 2 is released in 2023.* | | |

**LS3.A Inheritance of Traits**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Probes will be added to this DCI when *Uncovering Student Ideas in Life Science- Vol. 2 is released in 2023.* | | |

**LS3.B Variation of Traits**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Probes will be added to this DCI when *Uncovering Student Ideas in Life Science- Vol. 2 is released in 2023.* | | |

**LS4.A Evidence of Common Ancestry and Diversity**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Is It a Fossil? | [*Uncovering Student Ideas in Earth and Environmental Science*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-earth-and-environmental-science) | fossils, fossil formation |

**LS4.B Natural Selection**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Probes will be added to this DCI when *Uncovering Student Ideas in Life Science- Vol. 2 is released in 2023.* | | |

**LS4.C Adaptation**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Habitat Change | [*Uncovering Student Ideas in Science- Vol. 2*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-volume2) | adaptation, survival, habitat change |
| Adaptation | [*Uncovering Student Ideas in Life Science- Vol. 4*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-volume4) | adaptation |

**LS4.D Biodiversity and Humans**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Habitat Change | [*Uncovering Student Ideas in Science- Vol. 2*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-volume2) | adaptation, survival, habitat change |

**EARTH AND SPACE SCIENCE**

**ESS2.D Weather and Climate**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Weather Predictors | [*Uncovering Student Ideas in Earth and Environmental Science*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-earth-and-environmental-science) | weather, weather forecasting |
| Coldest Winter Ever | [*Uncovering Student Ideas in Earth and Environmental Science*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-earth-and-environmental-science) | weather, climate |

**ESS3.B Natural Hazards**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| No probes available yet for this DCI at this grade level. Probes will be added to this section when new books come out. | | |

**PHYSICAL SCIENCE**

**PS2.A Forces and Motion**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| The Swinging Pendulum | [*Uncovering Student Ideas in Physical Science- Vol. 1*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-physicalscience-force-and-motion) | Patterns in motion, pendulums, periodic motion |
| Talking About Forces | [*Uncovering Student Ideas in Physical Science- Vol. 1*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-physicalscience-force-and-motion) | Pushes and pulls |
| Apple on a Desk  (can be modified for grade 3) | [*Uncovering Student Ideas in Science- Vol. 3*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-volume3) | Forces acting on an object at rest |

**PS2.B Types of Interactions**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Does It Have to Touch? | [*Uncovering Student Ideas in Physical Science- Vol. 1*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-physicalscience-force-and-motion) | Contact and noncontact forces |
| How Far Did It Go? | [*Uncovering Student Ideas in Physical Science- Vol. 1*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-physicalscience-force-and-motion) | Measuring distance traveled |
| Do the Objects Need to Touch | [*Uncovering Student Ideas About Magnetism and Electricity*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-physicalscience-electricity-and-magnetism) | Noncontact force, electric charge |
| How Will the Balloons Move? | [*Uncovering Student Ideas About Magnetism and Electricity*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-physicalscience-electricity-and-magnetism) | Electric charge, electrical interaction |
| Can Magnets Push or Pull without Touching? | [*Uncovering Student Ideas About Magnetism and Electricity*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-physicalscience-electricity-and-magnetism) | Noncontact force, magnetic interaction |
| What Happens if You Use the Other End of a Magnet? | [*Uncovering Student Ideas About Magnetism and Electricity*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-physicalscience-electricity-and-magnetism) | Magnetic poles, magnetic interaction |
| Can You Pick It Up with a Magnet? | [*Uncovering Student Ideas About Magnetism and Electricity*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-physicalscience-electricity-and-magnetism) | Magnetic interaction |
| Magnets in Water | [*Uncovering Student Ideas in Science- Vol. 4*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-volume4) | Magnetic interaction |

**ENGINEERING**

**ETS1.A Defining and Delimiting Engineering Problems**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| What’s the Problem? | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | Defining a problem |
| Who Needs It? | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | Who to consider when defining and delimiting a problem |
| Pizza Problem | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | Researching a problem |
| Criteria and Constraints  (can be modified for gr. 3) | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | Criteria, constraints |

**ETS1.B Developing Possible Solutions**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| An Engineering Design Process | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | Engineering Design Process (EDP) |
| How Do Engineers Solve Problems? | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | Engineering Design Process (EDP) |
| Brainstorming | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | Brainstorming process |
| Engineering and Nature | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | Biomimetics, using designs from nature |

**ETS1.C Optimizing the Design Solution**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| Testing for Success | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | Testing solutions |

**CONNECTIONS TO ENGINEERING, TECHNOLOGY, AND APPLICATIONS OF SCIENCE**

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| **Name of Probe** | **Source** | **Concepts addressed** |
| What’s the Purpose of Technology? | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | why technologies are developed |
| Surrounded by Technologies | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | technology |
| Is It a Technology? | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | technology |
| How Do Technologies Change? | [*Uncovering Student Ideas About Engineering and Technology*](https://www.uncoveringstudentideas.org/books/formative-assessment-probes/uncoveringstudentideas-engineering-and-technology) | Technological advancement |