**Waves: Sound and Light Unit**

**Materials List for Supply Bins**

**Introduction to waves and Sound Unit**

**Lesson #1: What Are Waves?**

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| **Item** | **Amount** |
| Student record sheet | 50 |
| Bin (to fill with water) | 1  |
| Ball | 1  |
| Sound box (includes speakers) with rice | 1 set  |
| Large cloth (or parachute) | 1 (ask classroom teacher at least 1 week before about parachute) |

**Lesson #2: Types of Waves**

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| **Item** | **Amount** |
| Rubber rope | 3  |
| Slinkies | 3  |
| Colored tape | 1 roll |

**Lesson #3: Properties of Transverse Waves**

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| **Item** | **Amount** |
| Pipe cleaners | 2 bags  |
| Play-Doh | 4 tubs  |
| Masking tape | 1 roll  |
| Markers (not provided) |  |
| “A World in Motion” handout | 50 |
| Explain Everything presentation guidelines and rubric handout | 50  |

**Lesson #4: Pitch Perfect: What is Sound?**

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| **Item** | **Amount** |
| Bottles (fill with water) | 12  |
| Metal spoon | 4  |
| Tuning forks | 2-4 (borrow from the physics department) |
| Pitch Perfect experiment worksheet | 50 |

**Lesson #5: Sound and Communication**

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| **Item** | **Amount** |
| Part 1: |
| “A History of Communication Technology: Inventing the Telegraph and Morse Code” pamphlet | 50  |
| Morse code worksheet | 50 |
|  |  |
| Part 2: |
| Small paper cups | 1 box  |
| Large plastic cups | 1 box  |
| Styrofoam cups | 1 box  |
| Fishing Line | 1 spool  |
| Yarn | 1 spool  |
| Twine | 1 spool  |
| Paper clips | 1 box  |
| String Phone experiment worksheet and datasheet | 50 |
| String Phone experiment station instructions | 9 |
| Rulers (not provided) | 1 per group  |
| Scissors (not provided) | 1 per group  |

**Lesson #6: Ears**

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| **Item** | **Amount** |
| “Hearing Sounds” article | 50 |
| Ear diagram Fill-in-the-blanks worksheet | 50  |
| Pop-up tent | 1  |
| Yellow Play-Doh | 1 container  |
| Yarn | 1 ball  |
| 2-liter bottles | 2  |
| Mustard | 1 bottle  |
| Toy hammer | 1  |
| Toy drumstick | 1  |
| Triangle | 1  |
| Bin | 1 |
| Duster | 1 |
| Jump ropes | 3  |
| Pillow | 1  |

**Light Unit**

**Lesson #1: Introduction to Light**

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| **Item** | **Amount** |
| “Discover Light: Electric and Magnetic Waves” pamphlet | 50  |
| Experimental Record Sheets | 50 |
| Black cloth with hole | 1 large piece  |
| Can with no top and hole near the bottom | 1  |
| Bin | 1  |
| Rectangular glass dish | 1  |
| Dish towels | 2  |
| Flashlight | 1  |

**Lesson #2: Transparent, Translucent, and Opaque**

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| **Item** | **Amount** |
| Science Journals |  |
| Ball | 1 |
| Flashlight | 5  |
| Sorting Activity Bag**Transparent items:**Plastic wrapPlastic water bottleLaminating materialClear plastic lidWater**Translucent items:**Bubble wrapTissue paperWaxed PaperPiece of white paperColored plastic folder**Opaque items:**FeltTin foilCardboardStack of white paperStyrofoam | 1 set (1 of each item in each set) |
| Shadow Activity Bag: Cardboard cutouts of the following shapesSemi-circleCrescentSquareCircleTriangleStarPentagonRectangle | 5 sets (1 of each item in each set) |

**Lesson #3: Reflecting Light: Periscopes**

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| **Item** | **Amount** |
| Periscope kits | 50 |
| Mirrors | 2  |
| Tape | 2 rolls  |
| Glue (not provided) |  |
| Protractor | 1  |
| Writing utensils (not provided) |  |
| White paper (not provided) |  |
| Crayons or markers (not provided) |  |
| Pre-made periscopes\* | 1-2 (made yourselves) |

**\*Ask Jen or Molly for periscope kits to test them 1 week before this lesson.**

**Lesson #4: Bending Light**

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| **Item** | **Amount** |
| Experimental Record Sheet | 50 |
| Popsicle stick | 5  |
| Rectangular glass container | 1  |
| Glass rod | 1  |
| Glass beaker | 3  |
| Clear plastic cup | 1  |
| Index cards | 50  |
| Markers (not provided) |  |

**Lesson #5: Colors**

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| **Item** | **Amount** |
| Flashlights | 3  |
| Flashlight filters | 3 (1 red, 1 green, 1 blue)  |
| Rubber bands | 3 or more  |
| Large books (not provided) | 2 (in classroom)  |
| Mirror | 1  |
| White Card | 2  |
| Black Card | 1  |
| Exploring Color Record Sheets | 50 |
| Color Venn Diagrams Sheet | 50  |

**Lesson #6: Optics and the Eye**

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| --- | --- |
| **Item** | **Amount** |
| Convex and Concave Lenses worksheet | 50 |
| Parts of the Eye worksheet | 50  |
| Convex and concave lenses | 5 of each  |