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| Diocese of Wheeling-Charleston | | | | |
| Unit Planner | | | | |
| Name of Teacher: Amy Hammerquist | | | Grade Level: Grade 1 | |
| Subject Area: Science | | | Cross Curricular Opportunities: Math, Language Arts | |
| Unit Title: Force/Energy | | | Estimated Duration of Unit: 5 days | |
| Overview of Unit: Students will learn about energy, where it comes from and how it is used. Students will learn how and why objects move the way they do and if an object is magnetic or non magnetic. | | | | |
| Forms of Text (non fiction/fiction): Knee-High Man (Reading story for the week), Science textbook, The Wind Blew (Religion), Science Workbook | | | Teaching Strategies: large and small group instruction, experiment with a partner, teacher-guided activities, co-op learning. | |
| Catholic Identity Connections: Wind – Holy Spirit, effecting change. Read *The Wind Blew* by Pat Hutchins | | | | |
| Assessment (authentic/published - summative/formative): Oral questioning, Observation and the Think, Pair, Share methods will assess most of the activities in this unit. Students will work together in groups and independently to collect data on pre-made worksheets and share their data with their teacher and classmates. | | | | |
| Standard Number | Standards | Description of Activity | Resources | Date of Completion |
| SC.O.1.1.1 | Ask questions about themselves and our world | Gravity and how objects move.  -Ask students “What makes things move?”  Read Unit F in Science book. Read F-5-F7.  Go outside on the playground with toy balls. Discuss and show push and pull by using the balls. Let students work with partners to apply push and pull.  When finished- fill out the push and pull worksheet- describing what happened outside and the difference between push and pull. | Science Book  Playground balls  Push and Pull Worksheet | Day 1 |
| SC.O.1.1.2 | Discuss the lives and discoveries of scientists after listening to stories about their lives and discoveries. | Famous scientists – Isaac Newton – gravity  Laws of motion  -Watch the short YouTube video about Isaac Newton and Gravity.  (<https://www.youtube.com/watch?v=h48BWDeBLno>)  -Perform the “What Goes Up Must Come Down” Experiment. Students will toss up two objects (paper clip and a book) at the same time and chart which object lands first. This data worksheet can be found on Teacherspayteachers.com when searching “gravity”.  -When finished with experiment discuss the data collected as a class and ask students to explain why it happened. (Gravity). | Internet  SmartBoard  Books  Data Worksheet | Day 2 |
| SC.O.1.1.4 | Use scientific instruments and everyday materials to investigate the natural world | Ramps, gravity and the effect on speed investigation  -Using rulers, ramps, and matchbox cars to measure distance traveled depending on the height of the ramp.  - Students will work in groups to perform this experiment.  -Each group will set the height of their ramp different from others and measure with their rulers the distance the matchbox car traveled. Each group will experiment with at least two different heights.  - When groups are finished- have a class discussion about the results of each matchbox car and why some went further than others. | Science textbook  Investigation worksheet | Day 3 |
| SC.O.1.2.10 | Classify objects as magnetic or non-magnetic | Sorting activity – metals v. non-metals, thus magnetic or non-magnetic  Forces reacting to one another.  Read Unit F- Lesson 1 What Are Magnets?- How do they work?  -Use the Magnetic VS. Non- Magnetic worksheet (from teacherspayteachers.com) to collect data.  -Students will work independently to look for the items on the worksheet and use a magnet to test whether or not the items are magnetic.  -Once the data is collected, students will share with one another to make sure they understand the difference between magnetic/non-magnetic. | Magnets  Science text  Various classroom objects  Magnetic/Non-Magnetic Worksheet | Day 4 |
| SC.O.1.1.12 | Describe the changes in the motion of objects (slowing down, speeding up, curving) | Surface, friction, and speed all covered in the speed investigation.  Discuss ways objects can move (directions, zig zag, rocking, swinging, etc.)  Read Unit F – Lesson 2  Co-op: build paths to test the different ways things move.  -When finished, write a few sentences describing the different ways things move. | Investigation worksheet  From science workbook  Items from classroom | Day 5 |
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| Differentiated Instruction Opportunities/Overview: Students who are not finished before others will explore other materials related to that topic. Example: If student is finished with collecting data with magnets, he/she will test other objects around the classroom or in the hallway to see if they are magnetic until all students are finished. | | | | |
| Cross Curricular Opportunities level: | | | | |
| Standard Number | Standards | Description of Activity | Resources | Date |
| M.1.MD.2 | express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end and understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.* **(CCSS Math.1.MD.2)** | See Day 3- Rulers, Ramps and Matchbox Cars. |  |  |
| ELA.1.W.C11.2 | with guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. **(CCSS W.1.8)** | See Day 5- Writing prompt after building paths. |  |  |
| ELA.1.SL.C13.2 | ask and answer questions about key details in a text read aloud or information presented orally or through other media. **(CCSS SL.1.2)** | See Day 1-5 |  |  |
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| **Common Core Checklist** | | | | |
| Writing | | | | |
|  | Paragraph | | | |
|  | Essay (narratives, fairy tales, realistic fiction) | | | |
|  | Summary | | | |
|  | Research | | | |
| X | Detailed answers (text supported) | | | |
|  | Notes (note taking skills, outlines) | | | |
| X | Complete sentences | | | |
| Reading | | | | |
| X | Informational text | | | |
|  | Lexile | | | |
|  | Complex literature |  |  |  |
| X | Speaking | | | |
| X | Listening | | | |
| X | Varied strategies and instructional methods | | | |
| X | Critical thinking in whole class discussion | | | |
|  | Student led activities | | | |
|  | common core standards (literature circles) | | | |
| Technology | | | | |
| X | Smartboard | | | |
|  | Computers | | | |
|  | iPads | | | |
|  | Powerpoint, Elmo etc. | | | |
| Differentiated Instruction | | | | |
| X | Used multiple resources | | | |
|  | Domain Vocabulary | | | |
| X | Cross-Curricular | | | |
|  | Collaborative engagement (meaningful feedback) | | | |
| X | Higher level learning and teaching | | | |
| Assessment | | | | |
| X | Project based | | | |
|  | Writing prompt | | | |
|  | Portfolio | | | |
| X | Observation | | | |
|  | Quiz | | | |
|  | Technology based | | | |
|  | Test | | | |
|  | Student created test | | | |
|  | Presentation | | | |
|  | Journal | | | |
| X | Think, pair, share | | | |
|  | Summary | | | |
| X | Oral questioning | | | |
|  | Analogy | | | |
|  | Powerpoint, or movie maker | | | |
| Authenticity | | | | |
| X | Various activities | | | |
| X | Inquiry, research and evidence | | | |
| X | Evidence of time management and planning | | | |
| X | Problem solving strategies | | | |
| Summary of Unit: | | | | |
| This unit has not yet been taught. It will be taught at the end of the school year. | | | | |
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