## WEST DEPTFORD SCHOOL DISTRICT

| ourse Title: Human Impact  | Grade Level: 8 |
|--|----------------|
|  | Weeks Spent    |
| Quarter 1:   | 9 weeks        |
| Activity 1 - Where Should We Build?  |                |
| Activity 2 - Does it Dissolve?   |                |
| Activity 3 - Water Quality   |                |
| Activity 4 - Living Indicators   |                |
| Activity 5 - Nutrients as Contaminants   |                |
| Activity 6 - Gulf of Mexico Dead Zone     Activity 7 - Cutting Converse and Building Deltas                              |                |
| Activity 7 - Cutting Canyons and Building Deltas   |                |
| <ul> <li>Activity 8 - Traveling with the Water Cycle</li> <li>Activity 0 - Human Impacts on Farth's Water</li> </ul>     |                |
| Activity 9 - Human Impacts on Earth's Water  |                |
| Activity 10 - Making Topographic Maps  |                |
| <ul> <li>Activity 11 - Boomtown's Topography</li> <li>Activity 12 - Modeling Cliff Erosion</li> </ul>                    |                |
| , ,  |                |
| <ul> <li>Activity 13 - Weathering, Erosion, and Deposition</li> <li>Activity 14 - Building on the Mississippi</li> </ul> |                |
| <ul> <li>Activity 14 - Building on the Mississippi</li> <li>Activity 15 - Building in Boomtown</li> </ul>                |                |
| <ul> <li>Activity 15 - Building in Boontown</li> <li>Activity 16 - Building Site Plan</li> </ul>                         |                |
|  |                |
| Quarter 2: Evolution   | 9 weeks        |
|  | J J WCCKJ      |
| Activity 1 - The Full Course   |                |
| Activity 2 - Hiding in the Background  |                |
| Activity 3 - A Meeting of Minds  |                |
| Activity 4 - Battling Beaks     Activity 5 - Mutational Coord on Bod2  |                |
| Activity 5 - Mutations: Good or Bad?   |                |
| Activity 6 - Mutations and Evolution   |                |
| Activity 7- Origins of Species   |                |
| Activity 8 - History and Diversity of Life   |                |
| Activity 9 - Fossil Evidence     Activity 10 - Fossilized Fostprints   |                |
| Activity 10 - Fossilized Footprints  |                |
| Activity 11 - Family Histories   |                |
| <ul> <li>Activity 12 - A Whale of a Tale</li> <li>Activity 13 Embryology</li> </ul>                                      |                |
| <ul> <li>Activity 13 - Embryology</li> <li>Activity 14 The Sixth Extinction?</li> </ul>                                  |                |
| Activity 14 - The Sixth Extinction?  |                |

|   | : Evolution of Resistance  |             |
|---|--|-------------|
| <ul> <li>Activity 16 - Manipulating Ge</li> <li>Activity 17 Evolution and US</li> </ul>   |  |             |
| <ul> <li>Activity 17 - Evolution and US</li> </ul>  | ,  |             |
| Quarter 3: Energy   |  | 9 weeks     |
| Activity 1 - Home Energy Use  |  |             |
| <ul> <li>Activity 2 - Drive a Nail</li> </ul>   |  |             |
| Activity 3 - Roller Coaster Energy  |  |             |
| <ul> <li>Activity 4 - Shake the Shot</li> </ul>   |  |             |
| <ul> <li>Activity 5 - Conservation of Er</li> </ul>   | •  |             |
| <ul> <li>Activity 6 - Follow the Energy</li> </ul>  |  |             |
| <ul> <li>Activity 7 - Mixing Hot and Co</li> </ul>  |  |             |
| <ul> <li>Activity 8 - Thermal Energy St</li> </ul>  | -  |             |
| Activity 9 - Energy Across the  |  |             |
| <ul> <li>Activity 10 - Energy Transfer C</li> </ul>   | Challenge  |             |
| • Activity 11 - Energy in Light   |  |             |
| Activity 12 - Conduction, Con   |  |             |
| <ul> <li>Activity 13 - Maximizing Solar</li> </ul>  | r Energy Transfer  |             |
| Activity 14 - Hot Bulbs   |  |             |
| <ul> <li>Activity 15 - Improving Home</li> </ul>  | Energy Efficiency  |             |
|   |  |             |
|   |  |             |
| Quarter 4: Waves  |  | <br>9 weeks |
| Quarter 4: Waves <ul> <li>Activity 1 - It's a Noisy World</li> </ul>  |  | 9 weeks     |
|   | ves  | 9 weeks     |
| • Activity 1 - It's a Noisy World   |  | 9 weeks     |
| <ul> <li>Activity 1 - It's a Noisy World</li> <li>Activity 2 - Making Sound Wa</li> </ul>   | nd   | 9 weeks     |
| <ul> <li>Activity 1 - It's a Noisy World</li> <li>Activity 2 - Making Sound Wa</li> <li>Activity 3 - The Nature of Sou</li> </ul>   | nd   | 9 weeks     |
| <ul> <li>Activity 1 - It's a Noisy World</li> <li>Activity 2 - Making Sound Wa</li> <li>Activity 3 - The Nature of Sou</li> <li>Activity 4 - Noise-Induced Here</li> </ul>  | nd<br>aring Loss   | 9 weeks     |
| <ul> <li>Activity 1 - It's a Noisy World</li> <li>Activity 2 - Making Sound Wa</li> <li>Activity 3 - The Nature of Sou</li> <li>Activity 4 - Noise-Induced Here</li> <li>Activity 5 - Telephone Model</li> </ul>  | nd<br>aring Loss<br>Technology   | 9 weeks     |
| <ul> <li>Activity 1 - It's a Noisy World</li> <li>Activity 2 - Making Sound Wa</li> <li>Activity 3 - The Nature of Sou</li> <li>Activity 4 - Noise-Induced He</li> <li>Activity 5 - Telephone Model</li> <li>Activity 6 - Analog and Digital</li> </ul>   | nd<br>aring Loss<br>Technology   | 9 weeks     |
| <ul> <li>Activity 1 - It's a Noisy World</li> <li>Activity 2 - Making Sound Wa</li> <li>Activity 3 - The Nature of Sou</li> <li>Activity 4 - Noise-Induced He</li> <li>Activity 5 - Telephone Model</li> <li>Activity 6 - Analog and Digital</li> <li>Activity 7 - Another Kind of W</li> </ul>   | nd<br>aring Loss<br>Technology<br>/ave   | 9 weeks     |
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# WEST DEPTFORD SCHOOL DISTRICT Eighth Grade Science Pacing Guide Unit: Human Impacts

| Activity<br>Number | Title                                | DATES               | Number of<br>Days |
|--------------------|--------------------------------------|---------------------|-------------------|
| 1                  | Where Should We Build?               | 9/12                | 1                 |
| 2                  | Does it Dissolve?                    | 9/13-9/14           | 2                 |
| 3                  | Water Quality                        | 9/15-9/16           | 2                 |
|                    | Flint Water Crisis Documentary       | 9/19-9/20           | 2                 |
| 4                  | Living Indicators                    | 9/21-9/22           | 2                 |
| 5                  | Nutrients as Contaminants            | 9/23 & 9/26         | 2                 |
|                    | Activities 1-5 Quiz                  | 9/27                | 1                 |
| 6                  | Gulf of Mexico Dead Zone             | 9/28                | 1                 |
| 7                  | Cutting Canyons and Building Deltas  | 9/29-9/30           | 2                 |
| 8                  | Traveling with the Water Cycle       | 10/3-10/4           | 2                 |
|                    | Water Cycle Project                  | 10/5, 10/6, & 10/11 | 3                 |
| 9                  | Human Impact on Earth's Water        | 10/12               | 1                 |
| 10                 | Making Topographic Maps              | 10/13-10/14         | 2                 |
|                    | Activities 6 -10 Quiz                | 10/17               | 1                 |
| 11                 | Boomtown's Topography                | 10/18-10/19         | 2                 |
| 12                 | Modeling Cliff Erosion               | 10/20-10/21         | 2                 |
| 13                 | Weathering, Erosion, and Deposition  | 10/24               | 1                 |
|                    | What If This Was Your Water? Article | 10/25               | 1                 |
| 14                 | Building on the Mississippi          | 10/26               | 1                 |
| 15                 | Building in Boomtown                 | 10/27-10/28         | 2                 |
| 16                 | Building Site Plan                   | 10/31-11/1          | 2                 |

| Unit Review | 11/2-11/3 | 2 |
|-------------|-----------|---|
| Unit Test   | 11/4      | 1 |

## WEST DEPTFORD SCHOOL DISTRICT Eighth Grade Science Pacing Guide Unit: Evolution

| Activity<br>Number | Title                          | Dates         | Number of<br>Days |
|--------------------|--------------------------------|---------------|-------------------|
| 1                  | The Full Course                | 11/14-11/15   | 2                 |
| 2                  | Hiding in the Background       | 11/16-11/17   | 2                 |
| 3                  | A Meeting of Minds             | 11/18         | 1                 |
| 4                  | Battling Beaks                 | 11/21-11/22   | 2                 |
| 5                  | Mutations: Good or Bad?        | 11/28-11/29   | 2                 |
|                    | Create Your Own Beast Activity | 11/30         | 1                 |
| 6                  | Mutations and Evolution        | 12/1-12/2     | 2                 |
|                    | Animal Adaptations Activity    | 12/5          | 1                 |
| 7                  | Origins of Species             | 12/6-12/7     | 2                 |
| 8                  | History and Diversity of Life  | 12/8-12/9     | 2                 |
|                    | Activities 1-8 Quiz            | 12/12         | 1                 |
| 9                  | Fossil Evidence                | 12/13-12/14   | 2                 |
| 10                 | Fossilized Footprints          | 12/15         | 1                 |
| 11                 | Family Histories               | 12/16 & 12/19 | 2                 |
| 12                 | A Whale of a Tale              | 12/20-12/21   | 2                 |
| 13                 | Embryology                     | 12/22-12/23   | 2                 |
| 14                 | The Sixth Entinction?          | 1/3-1/4       | 2                 |

|    | Evolution Project                          | 1/5,1/6, & 1/9 | 3 |
|----|--|----------------|---|
| 15 | Bacteria and Bugs: Evolution of Resistance | 1/10           | 1 |
| 16 | Manipulating Genes                         | 1/11-1/12      | 2 |
|    | Activities 9-16 Quiz Review                | 1/17           | 1 |
|    | Activities 9-16 Quiz                       | 1/18           | 1 |
| 17 | Evolution and US                           | 1/19-1/20      | 2 |
|    | Unit Review                                | 1/23-1/24      | 2 |
|    | Unit Test                                  | 1/25           | 1 |

## WEST DEPTFORD SCHOOL DISTRICT Eighth Grade Science Pacing Guide Unit: Energy

| Activity<br>Number | Title                          | Dates     | Number of<br>Days |
|--------------------|--------------------------------|-----------|-------------------|
| 1                  | Home Energy Use                | 1/30-1/31 | 2                 |
| 2                  | Drive a Nail                   | 2/1-2/2   | 2                 |
| 3                  | Roller Coaster Energy          | 2/3       | 1                 |
|                    | Marble Roller Coaster Activity | 2/6       | 1                 |
| 4                  | Shake the Shot                 | 2/7-2/8   | 2                 |
| 5                  | Conservation of Energy         | 2/9-2/10  | 2                 |
| 6                  | Follow the Energy              | 2/13-2/14 | 2                 |
| 7                  | Mixing Hot and Cold Water      | 2/15-2/16 | 2                 |

|    | Activities 1-7 Quiz                   | 2/21             | 1 |
|----|---------------------------------------|------------------|---|
| 8  | Thermal Energy Storage                | 2/22-2/23        | 2 |
| 9  | Energy Across the Sciences            | 2/24             | 1 |
|    | Paris to Pittsburgh Documentary       | 2/27             | 1 |
| 10 | Energy Transfer Challenge             | 2/28-3/1         | 2 |
| 11 | Energy in Light                       | 3/2-3/3          | 2 |
| 12 | Conduction, Convection, and Radiation | 3/6              | 1 |
| 13 | Maximizing Solar Energy Transfer      | 3/7-3/8          | 2 |
|    | Heat Loss Project                     | 3/9,3/10, & 3/13 | 3 |
| 14 | Hot Bulbs                             | 3/14-3/15        | 2 |
|    | Activities 8-14 Quiz                  | 3/16             | 1 |
| 15 | Improving Home Energy Efficiency      | 3/20-3/21        | 2 |
|    | Unit Review                           | 3/22-3/23        | 2 |
|    | Unit Test                             | 3/24             | 1 |

## WEST DEPTFORD SCHOOL DISTRICT Eighth Grade Science Pacing Guide Unit: Waves

| Activity<br>Number | Title               | Dates     | Number of<br>Days |
|--------------------|---------------------|-----------|-------------------|
| 1                  | It's a Noisy World  | 3/27      | 1                 |
| 2                  | Making Sound Waves  | 3/28-3/29 | 2                 |
| 3                  | The Nature of Sound | 3/30      | 1                 |

|    | Yanny vs. Laurel Debate       | 3/31        | 1 |
|----|-------------------------------|-------------|---|
| 4  | Noise-Induced Hearing Loss    | 4/3         | 1 |
|    | Activities 1-4 Quiz           | 4/4         | 1 |
| 5  | Telephone Model               | 4/5         | 1 |
| 6  | Analog and Digital Technology | 4/17        | 1 |
|    | Wired to Wireless Project     | 4/18-4/20   | 3 |
| 7  | Another Kind of Wave          | 4/21 & 4/24 | 2 |
| 8  | Wave Reflection               | 4/25-4/26   | 2 |
| 9  | Refraction of Light           | 4/27-4/28   | 2 |
| 10 | Comparing Colors              | 5/1         | 1 |
| 11 | Selective Transmission        | 5/2-5/3     | 2 |
|    | Activities 5-11 Quiz          | 5/4         | 1 |
| 12 | The Electromagnetic Spectrum  | 5/5         | 1 |
| 13 | Where Does the Light Go?      | 5/8-5/9     | 2 |
| 14 | Blocking out Ultraviolet      | 5/10-5/11   | 2 |
| 15 | Personal Protection Plan      | 5/12 & 5/15 | 2 |
|    | Waves Unit Project            | 5/16-5/19   | 4 |
|    | Unit Review                   | 5/22-5/23   | 2 |
|    | Unit Test                     | 5/24        | 1 |
|    |                               |             |   |

# WEST DEPTFORD SCHOOL DISTRICT Eighth Grade Science Pacing Unit: End of Year Final Review (Survivor Science)

| Day | Title   | Dates | Number of<br>Days |
|-----|---|-------|-------------------|
| 1   | Introduction to Survivor Science                    | 5/25  | 1                 |
| 2   | Super Surfers Challenge                             | 5/26  | 1                 |
| 3   | Tribal Council & Complete Reward Challenge          | 5/30  | 1                 |
| 4   | Complete Immunity Challenge                         | 5/31  | 1                 |
| 5   | Tribal Council & Super Scientists Challenge         | 6/1   | 1                 |
| 6   | E=MC2 Challenge                                     | 6/2   | 1                 |
| 7   | Tribal Council & Word Whomp Challenge               | 6/5   | 1                 |
| 8   | Survival of the Fittest Challenge                   | 6/6   | 1                 |
| 9   | Tribal Council & Inspector Gadget Challenge         | 6/7   | 1                 |
| 10  | Complete final challenge and announce winning Tribe | 6/8   | 1                 |
| 11  | End of Year Final                                   | 6/9   | 1                 |

### WEST DEPTFORD SCHOOL DISTRICT

## **Eighth Grade Science Lesson Plan Format**

### {45 Minutes of Instruction}

#### **ENGAGE**

10 minutes

• Opening activity - access prior learning / simulate interest/ generate question

#### **EXPLORE**

25 minutes

- Introduce lesson objective and expectations to students
- Teacher demonstration/modeling
- Student practice

#### **EVALUATE**

10 minutes

- Formative monitoring
- Summative assessment