



America's Greatest History Attraction

## CURRICULUM CONNECTIONS

### Flight of the Butterflies in 3D (film)

[\(website\)](#)

### Flight of the Butterflies Educator Guide

[\(website\)](#)

#### Common Core State Standards for English Language Arts:

##### Kindergarten

- W.K.7** Participate in shared research and writing projects.
- W.K.8** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
- SL.K.1** Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups.

##### Grade 1

- W.1.7** Participate in shared research and writing projects.
- W.1.8** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
- SL.A.1** Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.

##### Grade 2

- W.2.7** Participate in shared research and writing projects.
- W.2.8** Recall information from experiences or gather information from provided sources to answer a question.
- SL.2.1** Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.

##### Grade 3

- W.3.7** Conduct short research projects that build knowledge about a topic.
- SL.3.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 3 topics and texts*, building on others' ideas and expressing their own clearly.

##### Grade 4

- W.4.7** Conduct short research projects that build knowledge through investigation of different aspects of a topic.
- SL.4.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.

##### Grade 5

- SL.5.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly.

##### Grade 6

- SL.6.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 6 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
- Grade 7**
- W.7.1** Write arguments to support claims with clear reasons and relevant evidence.
- W.7.9b** Draw evidence from literary or informational texts to support analysis, reflection, and research. b. Apply *grade 7 Reading standards* to literary nonfiction.
- W.7.10** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
- SL.7.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 7 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
- Grade 8**
- W.8.1** Write arguments to support claims with clear reasons and relevant evidence.
- W.8.9b** Draw evidence from literary or informational texts to support analysis, reflection, and research. b. Apply *grade 8 Reading standards* to literary nonfiction.
- W.8.10** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
- SL.8.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 8 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
- Grades 9-10**
- W.9-10.1** Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
- W.9-10.9b** Draw evidence from literary or informational texts to support analysis, reflection, and research. b. Apply *grades 9–10 Reading standards* to literary nonfiction.
- W.9-10.10** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
- SL.9-10.1** Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 9–10 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.
- Grades 11-12**
- W.11-12.1** Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
- W.11-12.9b** Draw evidence from literary or informational texts to support analysis, reflection, and research. b. Apply *grades 11–12 Reading standards* to literary nonfiction.
- W.11-12.10** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

- SL.11-12.1** Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 11-12 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.

### **Common Core State Standards for Literacy in Science and Technical Subjects:**

#### **Grades 6-8**

- WHST.6-8.1** Write arguments focused on *discipline-specific content*.
- WHST.6-8.9** Draw evidence from informational texts to support analysis reflection, and research.
- WHST.6-8.10** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

#### **Grades 9-10**

- WHST.9-10.1** Write arguments focused on *discipline-specific content*.
- WHST.9-10.9** Draw evidence from informational texts to support analysis reflection, and research.
- WHST.9-10.10** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

#### **Grades 11-12**

- WHST.11-12.1** Write arguments focused on *discipline-specific content*.
- WHST.11-12.9** Draw evidence from informational texts to support analysis reflection, and research.
- WHST.11-12.10** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

### **National Curriculum Standards for Science**

#### **Michigan Science Grade Level & High School Content Expectations**

##### **Kindergarten**

- S.IP.00.11** Make purposeful observation of the natural world using the appropriate senses.
- S.IA.00.12** Share ideas about science through purposeful conversation.
- S.RS.00.11** Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.
- L.OL.00.11** Identify that living things have basic needs.
- E.SE.00.12** Describe how Earth materials contribute to the growth of plant and animal life.
- S.IP.00.14** Manipulate simple tools (for example: hand lens, pencils, balances, non-standard objects for measurement) that aid observation and data collection.

##### **Grade 1**

- S.IP.01.11** Make purposeful observation of the natural world using the appropriate senses.
- S.IA.01.12** Share ideas about science through purposeful conversation.

- S.RS.01.11** Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.
- L.OL.01.13** Identify the needs of animals.
- L.OL.01.21** Describe the life cycle of animals including the following stages: egg, young, adult; egg, larva, pupa, adult.
- L.HE.01.11** Identify characteristics (for example: body coverings, beak shape, number of legs, body parts) that are passed on from parents to young.

## **Grade 2**

- S.IP.02.11** Make purposeful observation of the natural world using the appropriate senses.
- S.IP.02.14** Manipulate simple tools (ruler, meter stick, measuring cups, hand lens, thermometer, balance) that aid observation and data collection.
- S.IA.02.12** Share ideas about science through purposeful conversation.
- S.RS.02.11** Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.
- L.OL.02.14** Identify the needs of plants.

## **Grade 3**

- S.IP.03.11** Make purposeful observation of the natural world using the appropriate senses.
- S.IP.03.13** Plan and conduct simple and fair investigations.
- S.IP.03.14** Manipulate simple tools that aid observation and data collection (for example: hand lens, balance, ruler, meter stick, measuring cup, thermometer, spring scale, stop watch/timer).
- S.IP.03.15** Make accurate measurements with appropriate units (centimeters, meters, Celsius, grams, seconds, minutes) for the measurement tool.
- S.IP.03.16** Construct simple charts and graphs from data and observations.
- S.IA.03.12** Share ideas about science through purposeful conversation in collaborative groups.
- S.RS.03.11** Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.
- L.OL.03.32** Identify and compare structures in animals used for controlling body temperature, support, movement, food-getting, and protection (for example: fur, wings, teeth, scales).
- L.OL.03.42** Classify animals on the basis of observable physical characteristics (backbone, body coverings, limbs).
- L.EV.03.12** Relate characteristics and functions of observable body parts to the ability of animals to live in their environment (sharp teeth, claws, color, body coverings).

## **Grade 4**

- S.IP.04.11** Make purposeful observation of the natural world using the appropriate senses.
- S.IP.04.13** Plan and conduct simple and fair investigations.
- S.IP.04.14** Manipulate simple tools that aid observation and data collection (for example: hand lens, balance, ruler, meter stick, measuring cup, thermometer, spring scale, stop watch/timer, graduated cylinder/beaker).
- S.IP.04.15** Make accurate measurements with appropriate units (millimeters centimeters, meters, milliliters, liters, Celsius, grams, seconds, minutes) for the measurement tool.

- S.IP.04.16** Construct simple charts and graphs from data and observations.  
**S.IA.04.12** Share ideas about science through purposeful conversation in collaborative groups.  
**S.RS.04.11** Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.  
**L.OL.04.16** Determine that animals require air, water, and a source of energy and building material for growth and repair.  
**L.EV.04.22** Identify how variations in physical characteristics of individual organisms give them an advantage for survival and reproduction.  
**L.EC.04.11** Identify organisms as part of a food chain or food web.

#### **Grade 5**

- S.IP.05.11** Generate scientific questions based on observations, investigations, and research.  
**S.IP.05.12** Design and conduct scientific investigations.  
**S.IP.05.13** Use tools and equipment (spring scales, stop watches, meter sticks and tapes, models, hand lens) appropriate to scientific investigations.  
**S.IP.05.14** Use metric measurement devices in an investigation.  
**S.IP.05.15** Construct charts and graphs from data and observations.  
**S.IA.05.12** Evaluate data, claims, and personal knowledge through collaborative science discourse.  
**S.IA.05.14** Draw conclusions from sets of data from multiple trials of a scientific investigation.  
**S.RS.05.15** Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.  
**L.EV.05.11** Explain how behavioral characteristics (adaptation, instinct, learning, habit) of animals help them to survive in their environment.  
**L.EV.05.12** Describe the physical characteristics (traits) of organisms that help them survive in their environment.

#### **Grade 6**

- S.IA.06.12** Evaluate data, claims, and personal knowledge through collaborative science discourse.  
**S.RS.06.15** Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.  
**S.IA.06.14** Draw conclusions from sets of data from multiple trials of a scientific investigation.

#### **Grade 7**

- S.IP.07.11** Generate scientific questions based on observations, investigations, and research.  
**S.IP.07.12** Design and conduct scientific investigations.  
**S.IP.07.13** Use tools and equipment (spring scales, stop watches, meter sticks and tapes, models, hand lens, thermometer, models, sieves, microscopes, hot plates, pH meters) appropriate to scientific investigations.  
**S.IP.07.14** Use metric measurement devices in an investigation.  
**S.IP.07.15** Construct charts and graphs from data and observations.  
**S.IP.07.16** Identify patterns in data.  
**S.IA.07.11** Analyze information from data tables and graphs to answer scientific questions.

- S.IA.07.12** Evaluate data, claims, and personal knowledge through collaborative science discourse.
- S.IA.17.13** Communicate and defend findings of observations and investigations.
- S.RS.07.17** Describe the effect humans and other organisms have on the balance of the natural world.
- E.ES.07.41** Explain how human activities (surface mining, deforestation, overpopulation, construction and urban development, farming, dams, landfills, and restoring natural areas) change the surface of the Earth and affect the survival of organisms.
- E.ES.07.71** Compare and contrast the difference and relationship between climate and weather.

**Grade 9-12 Earth Science**

- E1.1A** Generate new questions that can be investigated in the laboratory or field.
- E1.1C** Conduct scientific investigations using appropriate tools and techniques (e.g., selecting an instrument that measures the desired quantity—length, volume, weight, time interval, temperature—with the appropriate level of precision).
- E1.1D** Identify patterns in data and relate them to theoretical models.
- E1.1h** Design and conduct a systematic scientific investigation that tests a hypothesis. Draw conclusions from data presented in charts or tables.
- E4.p2B** Describe the difference between weather and climate.

**Grade 9-12 Biology**

- B1.1C** Conduct scientific investigations using appropriate tools and techniques (e.g., selecting an instrument that measures the desired quantity—length, volume, weight, time interval, temperature—with the appropriate level of precision).
- B1.2k** Analyze how science and society interact from a historical, political, economic, or social perspective.
- L3.p3A** Identify the factors in an ecosystem that influence fluctuations in population size.
- L3.p4A** Recognize that, and describe how, human beings are part of Earth’s ecosystems. Note that human activities can deliberately or inadvertently alter the equilibrium in ecosystems.
- B3.1A** Describe how organisms acquire energy directly or indirectly from sunlight.
- B3.4C** Examine the negative impact of human activities.
- B3.5d** Describe different reproductive strategies employed by various organisms and explain their advantages and disadvantages.
- B3.5e** Recognize that and describe how the physical or chemical environment may influence the rate, extent, and nature of population dynamics within ecosystems.
- B3.5f** Graph an example of exponential growth. Then show the population leveling off at the carrying capacity of the environment.
- L5.p1A** Define a species and give examples.