EPSD Curriculum and HMH SCIENCE DIMENSIONS 2018 Alignment TEMPLATE

GRADE 3

EPSD Unit 4: Traits (part II)
Third Marking Period

Overview: In this unit of study, students acquire an understanding that organisms have different inherited traits and that the environment can also affect the traits that an organism develops. The crosscutting concepts of patterns and cause and effect are called out as organizing concepts for these disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in analyzing and interpreting data, constructing explanations, and designing solutions. Students are also expected to use these practices to demonstrate understanding of the core ideas. This unit is based on 3-LS3-1 and 3-LS3-2.

Standards: (3-LS3-1) Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. (3-LS3-2) Use evidence to support the explanation that traits can be influenced by the environment.

Instructional Days: 15-20

Objective 1: Students will classify seashells by observing similarities and differences in patterns.

HMH Science Dimensions Program Resources

Unit 5: Organisms and Their Environment (geese migrating to a warmer climate); **Unit Overview** p. 259; **Vocabulary** p. 261; **Making Connections** p. 261J; **Unit Project** p. 261K; **Unit Performance Task** pp. 340-341; **Unit Review** pp. 342-344

Standard for all Units: Interactive Glossary (D); Leveled Readers (D); Beginning-of-Year Test (D/P); Unit Pretest (D/P); Lesson Quizzes (D/P); Unit Test (D/P)

Note: Refer to the Curriculum Alignment Common Language (CACL) Guide to decipher acronyms.

Lesson 1: How Does the Environment Affect Traits? pp. 262-281	**Lesson 2:** What Are Adaptions? pp. 282-301	**Lesson 3:** How Can Organisms Succeed in Their Environments? pp. 302-319	**Lesson 4:** Engineer It: What Happens When Environments Change? pp. 320-339
D/P- CYEI (video) Two examples of trees p. 263 P- ENB (prompt) How do these trees differ? What could cause the differences you see? p. 263	D/P- CYEI (video) Octopus exhibiting a behavior p. 283 P- ENB (prompt) What characteristics of the octopus changed? How does this change help the octopus? p. 283	D/P- CYEI (video) Bowerbirds building nests p. 303 P- ENB (prompt) Students identify which male bowerbird is more likely to find a	D/P- CYEI (digital image) Changes to an environment due to a wildfire. p. 321 P- ENB (prompt) This San Joaquin kit fox lost its home

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Objective 2: Students will explain that any given physical or behavioral characteristic has advantages and disadvantages. **Objective 3:** Students will demonstrate understanding of environmental influence on an animal's survival. **Objective 4:** Students will identify and interpret traits that are found in mammals by noticing differences among animals of the same species. Make a claim that traits are inherited from parents that is supported by evidence. **Topics:** Traits Twenty-First Century Themes and Skills include: Environmental Literacy • The Four C's **Essential Questions**: What kinds of traits are passed on from parent to offspring? What environmental factors might influence the traits of a specific organism?	D/P- Plants and the Environment: Seeing the Light (Students watch video and explore online to learn about the cause-and-effect relationships related to factors that affect plant traits. pp. 264-266 P- ENB (prompt) Water is one factor that can affect a plant. Students describe how other environmental factors affect plants and record their thoughts in their ENB. p. 266 D/P- AWYK HO Activity Plan a Garden (Students design a greenhouse to grow plants in and label the parts of their design; students write how the parts will help plants grow healthy. 267	D/P- Organisms Adapt: Berry Interesting! (Students explore blackberry adaptations online to learn more about the traits or characteristics that help this plant survive. pp. 284-285 P- ENB (prompt) Students make inferences about the animals' habitats on page 285; students make a list and conduct research to confirm their observations. p. 285 P- AWYK HO Activity Match It! (Students develop a matching game that includes animals and their adaptations and share their game with their classmates; students can	mate. Why? p. 303 D/P- Differences That Win (Students view videos and explore online to learn more about the characteristics of plants and animals that help them survive and reproduce.) pp. 304-306 P- ENB (prompt) Students think about the sparrows and identify why a female would prefer a tan-stiped male and how a tan-striped male, instead of a white-striped male, would help the female and offspring survive; students write their answer in their ENB. p. 306 D/P- LS Using Linking Words	because of a wildfire. What will happen to it now. p. 321 D/P- Everything Changes (Students watch videos to discover how water can affect the land and explore online to learn more about environmental changes and how these changes affect living things.) pp. 322-324 D/P- LS Relationships Between Scientific Ideas (Students identify what other kinds of changes might happen quickly in an environment.) p. 322 P- ENB (prompt) Students think about floods and identifies what happens to plants and animals;

	D/P- LS Making Inferences (Students explain to a friend what happens when poppies in a garden turn throughout the day; students also write and explain other ways that the environment can affect plants. p. 267 D/P- HO Activity How Much Water Do Plants Need? (Students collaborate with peers to investigate how environmental factors, such as amount of water, can influence the traits of plants; students use evidence to support their explanations. pp. 268-271 P- CER Each group shares the claim they made for Step 9 in the HO Activity. p. 271	conduct research to help them find out more about the adaptations.) p. 286 D/P- On Their Best Behavior (Students watch videos to discover more about animal behaviors.) p. 287 D/P- LS Gather Information (Students use evidence to explain the differences between physical and behavioral adaptations and provide an example of each.) p. 287 D/P- Adaptation and Environment (Students explore online and watch videos to learn more about adaptations, mimicry and camouflage.) pp. 288-289 P- ENB (prompt) Students choose an	(Students use at least one linking word or phrase to write about characteristics they think would help an animal survive the most; students also identify any characteristics that they would like to have.) p. 307 D/P- HO Activity Battle of the Beans! (Students collaborate with peers to determine how an animal's body color might affect its ability to survive in its environment.) pp. 308-310 D/P- Better Together (Students watch video about coral and explore online to learn more about how	students also identify how a mudslide might affect plants and animals and record their ideas in their ENB. p. 322 D/P- Staying Alive (Students watch video to discover more about wildfires) p. 325 D/P- LS Ask and Answer Questions (Students identify what they think might happen to the population of plants and animals in a forest that has been destroyed.) p. 325 D/P- Reacting to Change (Students explore digital pictures to discover more about reactions to changes in environments.) p. 326 D/P- AWYK Dear Deer (Students

	D/P- Animals and the Environment: Birds of a Feather (Students watch videos to discover more about the color of flamingos and explore online to learn about ways that organisms may differ due to interactions with their environment.) pp. 272-273 P- ENB (prompt) Students list some of the factors in an environment that may affect animal traits or features and tell how each factor affects an animal; students record thoughts in their ENB. p. 272 D/P- LS Based on what students have discovered about animals, students identify whether they think the environment can affect the traits of	adaptation that is mentioned in the lesson and list as many other plants or animals they can think of with a similar adaptation. p. 289 P- AWYK In their ENB or on a separate sheet of paper, students draw four animals in their natural habitats and show one way each animal is adapted to protect itself; students write two sentences telling about the adaptation of each animal. p. 290 D/P- LS Describe Relationships (Students describe the relationship between the leopard seal's environment and its spotted top coat and light belly.) p. 290	animals live in groups.) pp. 311-313 P- AWYK HO Activity Identify It! (Students work in groups to draw detailed plant or animal specimens and participate in a matching activity with group members.) p. 313 P- ENB (prompt) Students identify how living in groups help the members of the group survive and how being different from others in the group can be an advantage for individuals; students also identify which they think is more important and write their ideas in their ENB. p. 313 D/P- LS Taking Note (Students	work as a class to participate in a kinesthetic game.) pp. 327-328 P- ENB (prompt) Students respond to the following questions and write responses in ENB: How did the ability to get water, shelter, and food affect the population of deer, in the game? How did the environmental changes affect the population? p. 328 D/P- Moving on Upstream (Students watch video to discover more about salmon migration) p. 329 p- ENB (prompt) Students describe one way humans cause environmental changes that affect plants and animals and write their

	people and explain their answer. p. 274 D/P- ENGIT Lucky Lizards (Students generate and compare a variety of solutions to housing a pet lizard and meeting its needs.) p. 275 D/P- TIF (enrich) People in Science: Dr. Charles Henry Turner and Dr. May Berenbaum; Can Animal Growth be Tracked? Human Traits and the Environment pp. 276-278 D/P- Lesson Check pp. 279-280 D/P- Lesson Roundup p. 281 D- Lesson Quiz P- DI (ELL/RTI) p. 261I P-Extension p. 261I P- COLLAB p. 261J	D/P- Surviving and Thriving (Students explore online to learn about different environments and organisms.) pp. 291-292 D/P- LS Survival Skills (Students use what they have learned to predict what would happen if a polar bear were in a hot rainforest environment; students provide evidence to support their claim.) p. 292 P- ENB (prompt) Students think about the habitat of the octopus at the beginning of the lesson and identify how another animal might be adapted differently to that same environment. p. 293	respond to the following questions: Why is it an advantage for animals to live in groups? How might the different characteristics of animals help the group survive if something were to happen?) p. 314 D/P- TIF (enrich) Careers in Science: Wildlife Expert; People in Science; Hidden Animals pp. 315-316 D/P- Lesson Check pp. 317-318 D/P- Lesson Roundup p. 319 D- Lesson Quiz P- DI (ELL/RTI) p. 261I P-Extension p. 261I P- COLLAB p. 261J	answer in their ENB. p. 329 D/P- What Humans Can Do (Students explore online to learn more about how humans can change the environment.) pp. 330 -331 D/P- LS Cause and Effect (Students identify how salmon get past the river dam to lay their eggs and describe how their solution might affect the environment around the river.) p. 331 D/P- HO Activity How Can It Cross the Road? (Students watch video to discover more about the caribou migration and collaborate with a group to design and model a solution to help

	P- Making Connections p. 261J D- Science Safety HB D- CCC-HB D- ELA-HB D- M- HB D- SEP - HB D- ScienceSarurs Reference HB	D/P- HO Activity Just Pecking? (Students collaborate with classmates to model how different types of bird beaks are adapted for getting different types of food. pp. 294-296 P- CER Student groups exchange data tables and results and evaluate whether the data support the analysis of the results. p. 296 D/P- TIF (enrich) Robotic Adaptations; Build a Super Organism; Hide and Seek pp. 297-298 D/P- Lesson Check pp. 299-300 D/P- Lesson Roundup p. 301 D- Lesson Quiz	P- Making Connections p. 261J D- Science Safety HB D- CCC-HB D- ELA-HB D- M- HB D- SEP - HB D- ScienceSarurs Reference HB D- YSI Simulation Survival!	caribou migrate.) pp. 332-334 D/P- TIF (enrich) Engineer It; Invasion; Conservation Biologist pp. 335-336 D/P- Lesson Check pp. 337-338 D/P- Lesson Roundup p. 339 D- Lesson Quiz P- DI (ELL/RTI) p. 261I P-Extension p. 261I P- COLLAB p. 261J P- Making Connections p. 261J D- Science Safety HB D- CCC-HB D- ELA-HB D- M- HB D- SEP - HB D- ScienceSarurs Reference HB

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Curriculum Alignment Common Language (CACL) Guide K-5		
Acronym	**Word/Phrase**	**Description**
AWYK	Apply What You Know	Hands on opportunities for students to apply learning.
CER	Claims Evidence Reasoning	Students make a claim and gather evidence along the way (during EXPLORATORY activities) to support claim.
CYEI	Can You Explain It	Lesson phenomenon used to ENGAGE students in learning at the beginning of the lesson.
CYSI	Can You Solve It	Lesson phenomenon used to ENGAGE students in learning at the beginning of the lesson.
D	Digital	Program resources and features in interactive digital form.
DI (ELL/RTI) **Extension** **COLLAB** **Connections to Science**	Differentiated Instruction (English Language Learner/Response to Intervention) Collaboration Connections to Science	A page that lists all learning activities used to differentiate learning, engage students in collaborative activities and connect learning to other subjects.
DTM	Do the Math	Integrated subject learning.

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ENB	Evidence Notebook (prompt)	Student notebook or journal used to gather evidence during EXPLORATORY learning activities to support their claims.
ENGIT	Engineer It	Integrated subject learning.
HB **CCC-HB** **ELA-HB** **M-HB** **SEP-HB**	Handbooks Crosscutting Concepts English Language Arts Math Science and Engineering Practices	Students who need extra support in grasping concepts or to refresh student knowledge of skills.
HO	Hands-On (Activity)	Student collaboration activities.
LS	Language Smarts	Integrated subject learning.
P	Print	Program resources and features in print form.
TIF	Take It Further (enrich)	Enrichment activities for students in print or digital.
YSI	You Solve It (Simulation)	Open-ended simulation-based learning with multiple answer options.