

Big Idea: How do animals use their perceptions and memories to make decisions?

Guiding Question: Part A: How do animals receive and process different types of information from their environment in order to respond appropriately?

Part B: What happens when light from an object enters the eye?

Folder with Additional Resources

| DCI (Disciplinary Core Ideas) | Science and Engineering Practices | Cross Cutting Concepts | Student Learning Objectives | Differentiated Activities (Consider the 5 Es) | Resources/Technology | Formative Assessments | Benchmark Assessment |
|---|---|---|---|---|---|---|---|
| LS1.D: Information Processing • Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal's brain. Animals are able to use their perceptions and memories to guide their actions. (4-LS1-2) | Developing and Using Models • Use a model to test interactions concerning the functioning of a natural system. (4-LS1-2) | Systems and System Models • A system can be described in terms of its components and their interactions. (4-LS1-1),(4-LS1-2) | 1. SWBAT/ WALT: Identify components of a system and its interactions 1. Determine which senses process certain types of information in an animals brain 1. Identify how animals use their knowledge and memories to guide their actions | List Activities and hyperlink them, if available. | List and hyperlink Resources. | List and hyperlink Formative Assessments, if available. | List and hyperlink Benchmark Assessments, if available. https://njctl.org/courses/science/4th-grade-science/waves-light-information/attachments/waves-light-information-quizzes/sight and color https://njctl.org/courses/science/4th-grade-science/waves-light-information/attachments/waves-light-information-unit-test/ |
| | | | | Utilize resource links and formative assessment links to create | https://njctl.org/courses/science/4th-grade-science/molecules-to-organisms/attachments/plant-animal-structures-and-processes-presentation/Slides 63-93 | | |
| | | | | | Activity Clicker training https://njctl.org/courses/science/4th-grade-science/molecules-to-organisms/ | | |
| | | | | | http://www.bozemanscience.com/ngs-ls1d-information-processing | | |
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| PS4.B: Electromagnetic Radiation • An object can be seen when light reflected from its surface enters the eyes. (4-PS4-2) | Developing and using models • Develop a model to describe phenomena. (4-PS4-2) | Cause and Effect • Cause and effect relationships are routinely identified. (4-PS4-2) | 2. SWBAT/ WALT: Identify cause and effect relationships 2. Identify how cause-and-effect relationships are routinely identified, tested, and used to explain change. | | https://njctl.org/courses/science/4th-grade-science/waves-light-information/attachments/waves-light-information-2/ Slides 82-117 | I have... who has cause and effect card game | |
| | | | | | http://www.bozemanscience.com/ngs-cause-effect-mechanism-and-explanation | | |

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| | | | 2. Collaborate with peers to develop a model to show how light enters the eye and allows objects to be seen 2. Determine the best design solution through revisions | | https://www.brainpop.com/science/energy/rainbows/ | | | | |
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| | | | | | | Light Reflection Lab https://www.brainpop.com/science/energy/color/ | https://njctl.org/courses/science/4th-grade-science/waves-light-information/attachments/light-reflection-lab-teacher-notes/ | | |
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