**Lesson Cycle**

**Lesson Title/Topic:** Inherited Traits vs. Learned Behaviors

**Target Concept:** Difference between inherited traits and learned behaviors. (5th grade)

**Standards/Rationale:** 112.16 (b)(10)(B)-- Differentiate between inherited traits of plants and animals such as spines on a cactus or shape of a beak and learned behaviors such as an animal learning tricks or a child riding a bicycle.

|  |  |
| --- | --- |
| **Learning Target:**  Students will demonstrate knowledge of inherited traits through the written question assignment with 70% accuracy. | **Assessment:**  Chapter questions. |

**Materials:** Textbook, Sea Turtle Video at <https://www.youtube.com/watch?v=fKPKfC7SnDM>, poster board, markers, enrichment game.

**Lesson Cycle: (Direct Instruction, Numbered Heads Together, Team Stand-N-Share)**

|  |  |
| --- | --- |
| **The teacher will:** | **The student will:** |
| **Focus/Mental Set:**   * Play Sea Turtle hatching video   <https://www.youtube.com/watch?v=fKPKfC7SnDM>   * Ask “What would happen if the turtles didn’t go to the water?” * Call on a few students to answer * Ask “How do you think the turtles knew to go to the water?” * Call on a few different students to answer * Instruct the students to think of other animals and something they do, it can be anything * Ask the question allowed “What does your animal do?” * Call on a few new students to get their answers to ensure the class understands the question * Instruct all of the students to quietly write their own answer on a piece of paper along with the type of animal and their name. * Tell them they will turn this in at the end of the class after they learn about today’s lesson. * Instruct the students to fold this piece of paper up and put it in their pocket | * Watch the video clip playing * Engage with questions asked and answer if called on in regards to the video and animals * Follow instruction to write down their animal and its action on a piece of paper with their name * Fold their answer paper up and put in pocket until needed for closure. |
| **Teacher Input:**   * Recap to students that we learned about traits and genes in previous lesson. * Have last week’s definitions on the board for quick review * Traits- visible characteristics * Offspring- any new and living thing produced by one or more parents * Genes- factors that control traits * Introduce the following terms and write them on the board. Definitions to be written on board as discussed throughout the lesson * Inherited traits- physical or behavioral characteristic * Learned traits- learned over time * Have non ESL students write the terms and look up the definitions then they should think of 3 examples of each. * ELL Students: Gather ESL students point to the word on the board inherited trait then rock your arms like you are holding a baby. Have students repeat the word and action. Same the words learned trait and hold up a text book. Have the students repeat. Do this until the students are familiar with the terms. * Ask the students “Think about your traits, what makes you, you?” * Ask students to go over to the window, point to a tree * Begin asking students what they see as parts of the tree. What makes the tree a tree? * Explain all the parts they see on the tree are inherited traits. Ask questions “What if the tree had flowers?” “Would the flower color be inherited?” ***Try to not go into learned traits with plants as this will be a part of the student teach during the guided practice.*** * Have the students return to their seats and ask them again “What makes you, you?” * Probe the students on their thoughts. Did you think of your hair color? Or your eye color? * Ask a few students “What is something about you that makes you unique?” * Based off the answers given write the definitions of inherited and learned traits on the board * Ask the students to now feel their ear lobes, have students raise their right hand if the ear lobes are connected. * Instruct students to keep their hands up if they have connected ear lobes * Then ask who can roll their tongue (demonstrate). * Instruct students who can do this to now also raise their left hand. * Record on the board how many students have L, R, Both or No hands raised. * Explain to students that these are both inherited traits along with their hair color and other examples previously given by the students. * Remind students that some inherited traits can be the same as other people around you. * Introduce Inherited traits and that animals and plants both have inherited traits * Ask the students for examples of inherited traits in animals or plants. Write 5-10 of them on the board. If some traits are learned and not inherited go into further questions of “Was \_\_\_\_ born knowing how to do this? * Develop the questioning to introduce instinctual behavior (i.e. bird hatching, or flying in a V, remind them the turtle video was an instinct) * Discuss and link instinctual behavior to inherited traits. * Ask about other instinct behaviors. * What about bats? How do they sleep? Learned or **Inherent** * Sharks eating chum thrown out by fisherman? Learned or **Inherent** * Remind students that some traits can be instinct and built on later to become learned. * i.e. a puppy whimpers for food when they are born but later learn to bark at the mailman. * Review the terms on the board and their definition then have the students read the term allowed followed by the definition. | * Actively follow along with definition overview, take notes as needed. * Students will begin thought processing the questions asked*.* * Move to the window to join into the tree discussion. * ELL students say the term when instructed and do the action. Repeat as needed reversing action to word. * When asked, participate in discussion to learn the difference between terms. * Interact when determining if they have connected ear lobes and if they can role their tongue. * Take notes as need for new terms |
| **Guided Practice:**   * “Numbers assign” each student but instead of numbers (1, 2, or 3) they are person, animal or plant. * Once everyone knows their “number” * Encourage everyone to pick who they are going to be any person, animal or plant and write it on the top of their paper. * Instruct the students to list 5 of their inherited traits based off of who they picked they are (quiet activity no talking) * Have students write down 3 learned traits for the person, animal or plant (trick question: there are no learned traits for plants) * Have all people, animals and plants gather together accordingly in different parts of the room. * Give each group poster board and markers * Have the group discuss all of their people, animals or plants and the traits they wrote down in round robin method * Instruct the teams to pick their top 5 inherited traits and their top 3 learned traits. * Have the groups draw the favorite 5 traits and favorite 3 learned traits on their poster board * Monitor and assist as needed to ensure traits are accurate (especially the plant group and their learned traits) * Place each poster on the front board and have the groups explain who they are and what their traits are. | * Listen for their assigned category person, animal or plant. * Pick who they want to be for the activity within their assigned group. * Write down who they are, their 5 inherited traits and 3 learned traits. * Gather with the other students in their group in the designated spot of the classroom. * Discuss their person, animal or plant and the traits they wrote down as a group * Work together to decide what traits they want to draw as their favorite inherited and learned traits. * Draw their traits out with the markers on the poster board * When called on to discuss their drawing tell the class who they are and what traits they drew. |
| **Independent Practice:**   * Have each student quietly and independently answer the questions from the text on page ##. * Remind students that these answers will be turned in and graded for accuracy, they can use the text to find answers if needed. * Provide the ELL worksheet with pictures and names of the trait. This worksheet progressively gets harder to measure where the student is on understanding of concept and ability to categorize learned vs inherited traits. Assist students in saying the trait names correctly and understanding what the trait is. | * Use the textbook to answer question on page ## * Submit their answers for grading * ELL student reads the name of the trait. Re-writes the trait and determines then writes if it is learned or inherited. |
| **Closure:**   * Have each student pull out the folded paper in their pocket. * Ask students to look at what they wrote down for their animal and what their animal does. * Ask “Is what your animal does an inherited trait or a learned trait?” * Instruct the students to write down if what they wrote at the beginning of class was a learned or inherited trait. * Challenge the class to now write down an opposite trait (for example: If what they wrote was a learned trait instruct the students to now write down one inherited trait and vice versa). * Have the students to turn in this paper on the way out of class along with their question answers. * Review what ELL learner wrote, have student read it allowed and correct any grammatical errors they wrote. If student was incorrect on their trait have them research it at home have student find a video about inherited traits to learn from they should bring this back the following day along with their trait and why it is inherited/learned. | * .Utilize their first animal trait from the beginning of class and determine if it is inherited or learned. * Record their answer and come up with the opposing trait to record. * Tur this paper into the teacher * Read what their notecard says allowed to the teacher, tell the teacher why their trait is inherited or learned and vice versa. If clear understanding is not present student is to complete independent research for homework. |

|  |  |
| --- | --- |
| **Options:** |  |
| **Enrichment:** Play the Inherited game (attached), break down class to teams of three or four so they utilize team work to come up with answers. | **Reteach:** Have students research inherited and learned traits in the computer lab. Have them find a YouTube video that explains the difference to their understanding. Ask probing questions to see if the student clearly understands, if not have them keep looking or pair with a partner to see if they can find a video together and explain the difference to one another. |

**Modifications/Correctives:**

|  |  |
| --- | --- |
| **(Dysgraphia)**   * Allow student to utilize class computer to type answers to chapter questions. * Provide peer tutor to “proofread” and help look for errors   **(ESL)**   * Provide student with translation device to display and write answers in Spanish and have them translated to English * Provide one on one time with student or peer tutor to “proofread” and help look for errors.   **(Physical Impairment- missing arm)**   * Provide extra time for completing answers to chapter questions if student choses to hand write, or provide class computer. * Provide one on one time to ensure emotional support for discussion of inherited traits vs physical impairment   **(ELL)**   * Post “word wall” on front board and give printed word wall to all students containing the following key **vocabulary words**: animal, gene, inherited trait, learned trait, offspring, person, plant, & trait. Have available lines to add vocabulary to the word wall and/or to the students’ individual word wall if needed. Revisit word wall repeatedly throughout the lesson and give one on one time to test students’ knowledge and understanding of key vocabulary words. * Separate class into groups of 4, utilize graphic organizer and discussion circle to come up with and separate examples of traits in all three categories (animal, plant, and person). Have each group present their ideas to the class rally robin style with a different person speaking each time. This will help master inherited trait, learned trait, animal, person, and plant from the word wall. |  |

**References:** Enrichment game: https://www.uen.org/lessonplan/view/33034