

# Inherited Traits Lesson Plan

Date: September 28, 2021

<b>Grade: 1<sup>st</sup></b>	<b>Subject: Science</b>
<b>Materials: Powerpoint, 18 Worksheets</b>	<b>Technology Needed: White Board for Powerpoint</b>
<b>Instructional Strategies:</b> <input type="checkbox"/> <b>Direct instruction</b> <input type="checkbox"/> Peer teaching/collaboration/cooperative learning <input type="checkbox"/> <b>Guided practice</b> <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> <b>Visuals/Graphic organizers</b> <input type="checkbox"/> Learning Centers <input type="checkbox"/> PBL <input type="checkbox"/> Lecture <input type="checkbox"/> Discussion/Debate <input type="checkbox"/> Technology integration <input type="checkbox"/> Modeling <input type="checkbox"/> Other (list)	<b>Guided Practices and Concrete Application:</b> <input type="checkbox"/> <b>Large group activity</b> <input type="checkbox"/> Hands-on <input type="checkbox"/> <b>Independent activity</b> <input type="checkbox"/> Technology integration <input type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Imitation/Repeat/Mimic <input type="checkbox"/> <b>Simulations/Scenarios</b> <input type="checkbox"/> Other (list) Explain:
<b>Standard(s)</b> <b>1-LS3-1.A: Inheritance of Traits</b> <b>Young animals are very much, but not exactly like, their parents.</b> <b>Plants are also very much, but not exactly, like their parents.</b>	<b>Differentiation</b> <b>Below Proficiency:</b> <b>Student's with help will demonstrate a partial understanding of the difference between an inherited trait and a non inherited trait.</b> <b>Above Proficiency:</b> <b>Students will be able to explain the difference between non inherited traits and inherited traits, and will begin further exploration on where our other traits come from.</b> <b>Approaching/Emerging Proficiency:</b> <b>Students will be able to give multiple examples of inherited and non inherited traits and explain where the non inherited traits come from.</b> <b>Modalities/Learning Preferences:</b> <ul style="list-style-type: none"> <li>• <b>Visual: The book, the powerpoint, the worksheet</b></li> <li>• <b>Auditory: Teacher explaining everything to them, reading them every direction, and reading them a book.</b></li> <li>• <b>Kinesthetic: Being able to move around on the carpet to show me their answers to my questions.</b></li> </ul>
<b>Objective(s)</b>  <b>By the end of the lesson, students will be able to explain which traits come from an animal parents and which do not.</b>  <b>Bloom's Taxonomy Cognitive Level:</b>  <b>Knowledge: Students are explaining which traits come from an animal or plant's parents and which do not.</b>	
<b>Classroom Management- (grouping(s), movement/transitions, etc.)</b> <ul style="list-style-type: none"> <li>• <b>Countdowns: 5, 4, 3, 2, and 1. Okay now you are quiet with your hands in your lap ready to listen to the teacher</b></li> </ul> <b>Movement/Transitions:</b> <ul style="list-style-type: none"> <li>• <b>To carpet: Students please come take your spot at the carpet, and sit criss cross applesauce with your hands in your lap</b></li> <li>• <b>From carpet: You may walk very quietly back to your table, please be as quiet as a mouse and sit very quietly for more instructions.</b></li> <li>• <b>I say "Hocus Pocus!" they say "It's time to focus!"</b></li> </ul>	<b>Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)</b> <ul style="list-style-type: none"> <li>• <b>Be safe</b></li> <li>• <b>Be respectful</b></li> <li>• <b>Be responsible</b></li> <li>• <b>Be safe</b></li> <li>• <b>Be kind</b></li> </ul>
<b>Minutes</b>	<b>Procedures</b>
<b>1</b>	<b>Set-up/Prep:</b> <b>First grade friends, can you all clean up your table area and meet me at the carpet for science. Today we are going to be learning about inherited traits.</b>
<b>8</b>	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)  First graders, thank you for coming to the carpet so quickly and quietly! Before we start science today I want to make sure we go over our rules for sitting at the carpet during science: <ul style="list-style-type: none"> <li>• I say "Hocus Pocus" you say "Time to Focus"</li> <li>• Your eyes are focused on the white board or the teacher the whole lesson!</li> <li>• We have our listening ears turned on and ready to listen!</li> <li>• We are sitting criss cross applesauce with our bodies calm and focused!</li> <li>• Our voices are at a level zero unless called on by the teacher, then we will talk at a level 1!</li> </ul> I think you guys are ready to get started now. Today for science we are going to talk about traits animals inherit from their parents. Inheriting means receiving. It's the traits animals receive from their parents. A trait is a characteristic that we get from our parents. An example of an inherited trait I have is that I have the same color eyes as my mom. Different traits that we could inherit from our parents are our hair color, eye color, the shape of our nose, our smile, our skin color. I want you to turn to your neighbor and tell them a trait that you inherited from your mom or dad!

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- Give them 30-45 seconds to talk to their neighbor about a trait that they received from their parent.

I know so many of you have so many traits that you inherited from your parents and that's so cool!

Like I said before, today we are going to talk about those traits that animals inherit from their parents.

For animals, those traits include their eye color, their fur color, their fur pattern, beaks, claws, scales, fins, tails, size and their shapes. I want us to look at this picture of this mama panda bear and her baby. I'm going to point out all the inherited traits that I see and circle them with the white board marker!

- Their claws
- The dark circles under their eyes
- Their nose shape
- Their white belly
- Their white head
- Their black arms and legs
- Their black eyes
- Same shape ear



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**Explain: (concepts, procedures, vocabulary, etc.)**

Now I want you guys to pick out some inherited traits on these next few slides!





I want you guys to put on your scientist hats (demonstrate putting on a pretend hat) and look closely at these three pictures. We have an elephant and her baby, the basset hounds, and a zebra and her baby. I want you guys to look closely and see if you can find some traits that are inherited from their parents. Remember those inherited traits are their size, their shape, their color, their eye color, their fur, scales, and tail!

If you think you've found an inherited trait, I want you to raise your hand and I'm going to call on some friends to come up here and circle an inherited trait!

\_\_\_\_\_, come up here and you can circle an inherited trait you've found!

Yes, that's awesome! That is an inherited trait that the baby inherited from their mom. You can pick another friend that has their hand raised to circle another inherited trait on one of our three pictures!

- During this, I will remind them that if they are a boy, they have to hand the marker off to a girl, and if they are a girl, they have to hand off to a boy.
- When they are starting to take too long to pick their next friend to come up to the board I will say "Picking another friend in 3, 2, 1."

I will make sure we have covered the inherited traits before moving on like:

- Elephant trunk
- Elephant tail
- Elephant hooves
- Elephant ears
- Basset hound ears
- Basset hound eyes
- Basset hound coloring
- Zebra stripes
- Zebra hooves
- Zebra colors

(I will continue this until 6 or 7 friends have gone)

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**Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)**

First grade friends, now that you guys have a pretty good idea of which traits are inherited I am going to demonstrate our next activity! I'm going to put an animal up on the board with a trait and I'm going to decide whether it's an inherited trait or not an inherited trait. If it is I'm going to go to this side, and if it isn't I'll go to this side!

I will put my slide up on the board at this time and move to the proper side of the room.

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Okay friends, now it's your turn! Now we are going to stand up and I'm going to put some traits on the board and I want you guys to decide whether it is an inherited trait or not. Make sure when we are at the carpet we are at a voice level zero! If you know we're at a voice level zero show me a thumbs up!

Awesome friends, we are ready to get started!

Display slide

If you think that it's a trait, I want you to go to this side, and if you think it's not an inherited trait I want you to go to this side

The tiger has stripes. Do we think that's a trait that tigers get from their mommy's and daddy's or do we think that it's not?

To remind them and prod learning say "Remember if we think it's an inherited trait we go to this side and if you think it's not an inherited trait, you go to this side"

I will give them around 20-30 seconds to think.

Alright class, everyone should be on this side of the room because it IS a trait they inherit from our parents.

Okay friends back to standing in the middle of the carpet, I have another one for us to think about

Display next slide

The porcupine is prickly. If you think porcupines being prickly is a trait they inherit from their parents, I want you to stand on this side and if you think it's not, I want you to stand on this side!

I will give them 20-30 seconds to think.

Okay first graders, we should be on this side, because being prickly is a trait they inherit from their parents. They inherit their quills from their parents.

Come back to the middles now so we can get ready for the next trait!

My dog can sit when told.

If we think that is an inherited trait go to this side of the room and if we think that its not go to this side.

I want you guys to think very carefully is this something that they received from their parents or not.

Okay class we should be on the not side. My dog knowing how to sit is because I trained him to learn how to sit. He didn't learn how to sit from his mom.

Let's move back to the middle now.

Our next one we are going to look at is "The bee has a stinger." Do we think that it's an inherited trait or not? If we think it's inherited, I want us on this side, and if it is not, I want us on this side!

We should be on this side! Because the stinger is something the bee gets from it's mom and dad! All bees have a stinger!

Alright friends, back to the middle of the carpet, this is our last one!

Display next slide

Our last one is "The bird can sing!" I saved the hardest one for last, but I believe in you guys! If we think it's an inherited trait, I want you to stand on this side, and if you think that it's not, I want you on this side!

Ok first graders, I know that was a tricky one, but we should be on this side because it isn't an inherited trait! If birds are singing that means they learned it when they were a really young bird. Not all birds are born knowing how to sing!

Okay now class, I want you to go back to your spot at the table and take out a pencil. I am going to hand out this sheet of paper (hold up paper.) There are eight examples on here of traits that might or might not be inherited from their parents. If you think it is inherited you are going to circle "Inherited" if you think it's not you are going to circle "Not." I am going to go over the first one with you!

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	<p>The elephant has a trunk!</p> <p>Is a trunk something that the elephants inherit from their parents or not?</p> <p>Yes, it's something that they inherit from their parents, so we are going to circle <i>Inherited</i>.</p> <p>You guys have seven more of those questions to work through on your own! You can turn them in when you are all done! Please don't forget your name, so I know who's paper it is!</p>
<b>1</b>	<p><b>Review (wrap up and transition to next activity):</b></p> <p>Friends, I see that most of you are done and have turned your worksheet in! Tonight, when you go home I want you to look at your family and see which traits you inherited from your parents, or look at your pets and see which traits they have that are inherited from their mom and dad!</p> <p>Mr. Flores is coming in just a minute, so I want you to get your tables cleaned up and ready for music!</p>
<p><b>Formative Assessment: (linked to objectives, during learning)</b></p> <ul style="list-style-type: none"><li><b>Progress monitoring throughout lesson (how can you document your student's learning?)</b></li></ul> <p>I will be able to observe whether my students have a good grasp of what traits animals and plants inherit from their parents and which they do not during the explore section as I have them moving from side to side on the carpet. I will know which students are unsure by the look on their faces and how eager they are to move to one side of the room or the other. If they are moving slower and just following the group, they are my students who are going to need extra help and more work on what an inherited trait is and which are not.</p> <p>I will be able to assess my students learning with the worksheet I give to them at the end of the lesson. (Attached at the bottom of this lesson as Appendix A) This worksheet will give me an understanding of what they are struggling with and what we need to review in the lesson.</p> <p>I will be able to assess my students learning after they have heard me give examples of an inherited trait, after we have gone over traits together, after they have done our carpet area movement, and their worksheet by asking them when they line up for gym to go on one side or the other whether or not they think bears being furry is an inherited trait or not.</p> <p>After giving them the worksheet at the end of the lesson and grading that, I will be able to better understand which students of mine will need extra help during WIN time that day or the following day to fully understand the content we are covering of which is an inherited trait and which is not.</p>	<p><b>Summative Assessment (linked back to objectives, END of learning)</b></p> <p>Appendix B</p>
<p><b>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</b></p> <p>This was my favorite lesson I've taught so far! The students were so engaged throughout the whole lesson and every day for the rest of the week the students asked if we could work on more science stuff because they were so excited about it and they wanted to learn more traits that were inherited, and which weren't. The students learned the difference between an inherited trait and a non-inherited trait. I know because we were going through what each was throughout the whole lesson and I was assessing them constantly throughout the lesson. If I were to make changes, I would incorporate more about the student and characteristics of humans. When I first started creating this lesson, I wanted to add stuff in about the traits of humans but kept telling myself that I needed to do it all about animals. At the end of the lesson, I was really wishing I would have made the connection to humans, because students understand so much better when you are able to make connections to them and to their life. I would also make sure that when I do my attention grabber "Hocus Pocus", I have all their attention before moving on. If I don't</p>	

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have their attention, that is my cue that I need to stop and reteach why we do the attention grabber and why during lessons their attention is supposed to be on the teacher.

Name: \_\_\_\_\_

Circle the correct answer for each box.

The elephant has a trunk.



Inherited

Not Inherited

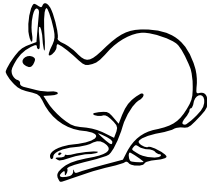
The bee is black and yellow.



Inherited

Not Inherited

The bunny ran.



Inherited

Not Inherited

The bear has fur.



Inherited

Not Inherited

The dog sits.



Inherited

Not Inherited

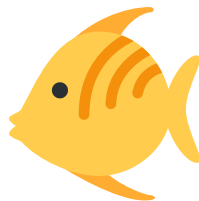
The duck swam.



Inherited

Not Inherited

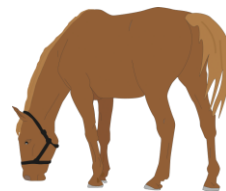
Fish have fins.



Inherited

Not Inherited

The horse won the race.



Inherited

Not Inherited

Appendix B

**Variation of Traits in Animals - Authentic Performance**

As a veterinarian, you will be evaluating the health of pets. In dog breeds, you can point out features that are inherited and those that are affected by the dog's environment. Comment on each of the following traits and whether they are inherited, influence by the environment or both in this German shepherd.

Upright ears: \_\_\_\_\_

Piece missing from ear: \_\_\_\_\_

Fur coloring: \_\_\_\_\_

Broken tooth: \_\_\_\_\_

Aggressive temperament: \_\_\_\_\_

Cut on leg: \_\_\_\_\_

Loyalty to master: \_\_\_\_\_

\_\_\_\_\_

Long tail: \_\_\_\_\_

\_\_\_\_\_

