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| **Grade 5** | **Lesson:** **Traits of Organisms Part 1****Collecting Data on Human Traits**  | Reference to English Interconnections LessonCause & Effect: Inheriting Traits pg. 93 |
| **Science Standard(s): Standard 5 Objective 1**  |
| **Content Objective(s):** | **Language Objective(s):** |
| SWBAT collect data identifying traits among the students in the class and represent the data by making a chart with a partner.***I can collect data identifying traits of my friends and share the data by making a chart with a partner.******我可以收集有关我的朋友们的特征的资料，并且把它们归纳成一个图表，然后告诉我的伙伴。*** | Students will be able to name specific traits in students in the class by interviewing classmates in partners and students will be able to discuss class data findings after collecting data by talking with students in small groups. ***I can name traits found in my friends in class by interviewing classmates in partners and I can discuss class data findings after collecting data by talking with my friends in small groups.******我可以透过访问我的同班同学说出他们外表特征的名称，并且收集同学们的特征，然后跟我的小组伙伴们讨论我们从所收集到的资料而得到的发现。*** |
| **Essential Questions:***How can you provide evidence that shows traits are passed from parent to offspring?*  | **Required Academic Vocabulary for Word Wall:****Listen:** trait, inherited, data, chart, collection, interview, curly, straight, hand span, right handed, left handed特征，遗传的，资料，图表，收集，访问，卷的，直的，拇指到小指的跨度，用右手的人，用左手的人（又叫左撇子）**Speak:** data, trait, curly, straight, hand span, right handed, left handed资料，特征，卷的，直的，拇指到小指的跨度，用右手的人，用左手的人（又叫左撇子）**Read:** curly, straight, hand span, right handed, left handed卷的，直的，拇指到小指的跨度，用右手的人，用左手的人（又叫左撇子）**Write:** **Sentence Frames:**What is your \_\_\_\_\_\_\_\_\_ (eye color, hair color, hand span)?你的眼睛是什么颜色？你的头发是什么颜色？你的拇指到小指的跨度是多长？Is your hair curly or straight?你的头发是卷的还是直的？Are you right handed or left handed?你是用右手的人还是用左手的人？My \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (eye color, hair color, hand span) is \_\_\_\_\_\_\_\_\_\_\_\_\_.我的眼睛是\_\_\_\_\_色。我的头发是\_\_\_\_\_色。我的拇指到小指的跨度是\_\_\_\_\_\_\_公分。My hair is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (curly/straight).我的头发是卷的/直的。I am \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (right handed/left handed).我是用右手的人/用左手的人。 |
| **Materials:*** Picture of the teacher as a child with parents, or picture of teacher with his/her children
* Vocabulary card
* Data Collection Worksheet
* Chart Template
 | **Additional Lesson Vocabulary:**Parents, humans父母，人类 |
| **Lesson:**  | **Instructional Time: 45 Minutes** |
| **Opening:** **(5 minutes)**Hook: Show a picture of you as a baby or as a young child with your parents OR show a picture of you with your child if you have children. Question: “Do you see some similarities between me and my parents, or between me and my child? Talk with your partners.” “你看得出来我跟我的父母（或我跟我的小孩）长得有什么相似的地方吗？请跟你的伙伴谈一谈。”* Have some students share their ideas with the class.

Explain: “Yes, there are some traits or characteristics I get from my parents, and that my children get from me. Those of us who have brothers and sisters may share some of those characteristics with our sisters. We are going to talk about traits today.”“对，我确实有些特征像我的父母（或我的小孩确实有些特征像我）。我们跟我们的兄弟姐妹有些特征也很像。今天我们就是要介绍特征。”Introduce the Objectives: Have the students read the content objective with their partners and identify one thing they are going to learn, and how they will know they learned it.**Introduction to New Material (Direct Instruction): (5 minutes)**Explain: “We all are humans. As humans, we all have many traits. A trait is a distinguishing characteristic or quality. (Show vocabulary card) Being tall or short is a trait. Having curly or straight hair is a trait. Having blue or brown eyes is a trait. Some of our traits may be similar to others traits while other traits may be different. The combination of our traits makes us unique and special. Nobody has our exact combination of traits. We get many of our traits from our parents. We call those inherited traits.” “我们都是人类。作为人类，我们每个人都有很多的特征。特征就是与众不同的地方，或是一种特点。（展示字卡）长得高或长得矮就是一个特征。有一头卷发或是直发也是一个特征。我们有些特征会跟别人很像，有些特征会跟别人很不一样，要是把这些特征全部放在一起，就让我们变成一个独一无二的个体。没有人会跟我们长得完全一样。我们很多特征都来自于我们的父母，这种特征就叫遗传的特征。”Question: “Who got their dark hair from your mom or dad? (Students raise hands) Who got their eye color from your mom or dad? (Students raise hands). Turn to your partners and describe two different traits you got from your parents.”“谁的深色头发是遗传自爸爸或妈妈的？（有些学生会举手）谁的眼睛的颜色是遗传自爸爸或妈妈的？（有些学生会举手）跟你身边的伙伴说说你有哪两个特征是遗传自你的父母的。”* Have a couple of students share with the class what they discussed.

Explain: “Today we are going to ask one another about our traits by interviewing each other, and we are going to record our data on a chart. When we record data on a chart, we can easily see trends in data and make observations about different traits in our class.”“今天我们要访问我们的同学关于他们的特征，然后我们要把我们收集到的资料记录下来做成一个图表。当我们把图表做好的时候，我们就能够很容易的看出这些资料的走向，也能很清楚的观察出我们班上同学们不同的特征。”**Guided Practice: (10 minutes)*** Put students in partnerships. Pass out the data collection worksheet and chart template to each partnership, and rulers. Have all students use rulers to measure the length of their hand span. Model the correct procedure for measuring. Explain they will need this information as part of our activity. Post the sentence frames on the board.

Explain: “We are going to use the sentence frames to interview each other and we’ll use the data collection worksheet to record the answers. When we are done asking and answering questions and collecting data, we will then write the data on our charts.”“我们现在要用一些固定的句型来访问我们的同学，然后把访问到的答案记在记录单上。当我们把所有的访问做完并记录好所有的答案以后，我们再来把这些资料做成一个图表。” *Use the modeling cycle:**Teacher Does:** Use a puppet, stuffed animal or imaginary partner to model. As the teacher, tell the class they will use the sentence frame: What is your \_\_\_\_\_\_\_\_\_ (eye color, hair color, hand span)? As Partner 1, ask the question: What is your \_\_\_\_\_\_\_\_\_ (eye color)? 你的眼睛（头发）是什么颜色的？你的拇指到小指的跨度是多少？ As Partner 2, respond using the sentence frame: My \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (eye color) is \_\_\_\_\_\_\_\_\_\_\_\_\_. 我的眼睛（头发）是\_\_\_\_\_色的。我的拇指到小指的跨度是\_\_\_\_公分。Record one tally mark in the box with the eye color labeled. Now it is Partner 2’s turn to ask the question: What is your \_\_\_\_\_\_\_\_\_ (eye color)? 你的眼睛（头发）是什么颜色的？你的拇指到小指的跨度是多少？ Then Partner 1 will respond using the sentence frame: My \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (eye color) is \_\_\_\_\_\_\_\_\_\_\_\_\_. 我的眼睛（头发）是\_\_\_\_\_色的。我的拇指到小指的跨度是\_\_\_\_公分Record one tally mark in the box with the eye color labeled.

*Teacher Does with a Student:** Call up a student to help you model. As the teacher, tell the class they will use the sentence frame: Is your hair curly or straight? As Partner 1, ask the question: What is your hair type, curly or straight? 你的头发是直的还是卷的？ Have the student respond using the sentence frame: My hair is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (curly/straight). 我的头发是直的/卷的。 Record one tally mark in the box with hair type. Now, have the student ask the question: What is your hair type, curly or straight? 你的头发是直的还是卷的？ Respond using the sentence frame: My hair is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (curly/straight). 我的头发是直的/卷的。 Have the student record one tally mark in the box with hair type.

*Two Students Do:** Call two students up to help you model. Have them use the sentence frames: Are you right handed or left handed? And I am \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (right handed/left handed). 你是用右手的人还是用左手的人？我是用右手的人/用左手的人。

*All Students Practice:** Point out the questions and sentence frames the students are supposed to use. Walk them through the process of interviewing as a class. Observe their interactions and responses. Correct any errors with language as they practice.
* Once the students have gone through all of the questions together, show them how to fill out a chart with their partners.

*Use the modeling cycle:**Teacher Does:** Look at the data collection sheet and count up the tally marks and record the data as numbers on the chart.

*Teacher Does with Student:** Call up a student to help you model. Work together to count the tally marks and record the data as numbers on the chart.

*All Students Practice:** All students work with their partners to collect the data and record it on the charts. Ensure they understand the task, are working together and are talking in the target language.

**Independent Practice: (20 minutes)*** Pass out the data collection sheet and chart to all of the students in the class.

Explain: “ You will be interviewing 15 students in the class using the sentence frames, and you will record their responses on the data collection sheet using tally marks. You will take turns asking all of the questions to one another before looking for a new student to interview. You will put a tally mark in the bottom box labeled ‘Number of students interviewed’ after each student interview until you have fifteen tally marks.”“你要访问班上十五个同学前面练习的五个问题，然后把他们的答案用“正”字标明在访问结果记录单上。跟一个同学互相访问完五个问题以后，再找下一位同学访问。每访问完一个同学，就要在记录单下面的‘受访学生人数’那一栏中写下“正”字的一画来计算人数，一直到访问完十五个同学为止。*Use the modeling cycle:**Teacher Does:** Quickly model the process of interviewing students in the class. The language will be the same as above, so focus on the procedure of how students should look for students to interview, where they should sit or stand for the interview and recording of data, and what student should do while they are waiting for a student to interview.

*Teacher Does with Student:** Call up a student to help you model. Model the process with the student, focusing on the procedure and recording the tally marks in the bottom box.

*Two Students Do:** Call up two students to help you model. Have them interview one another following the procedure you established.

*All Students Practice:** All students find someone to interview and begin following the procedure established and using the language to collect the data. Ensure they understand the task, are following procedure and are talking in the target language.
* When students are finished collecting data, have all students return to their seats and begin transferring their data to their charts.
* When students have all finished their charts, have them discuss the findings on their charts with partners or in small groups of four. Have them use sentence frames like “I notice \_\_\_\_\_\_\_\_,” “我注意到\_\_\_\_\_\_,” “It is interesting that \_\_\_\_\_\_\_,”“我有一个很有趣的发现，就是\_\_\_\_\_\_” “I am surprised by \_\_\_\_\_\_,” “我很惊讶地发现\_\_\_\_\_\_\_”and other phrases that naturally fit into the conversation. Post some of the possible sentence frames students can choose to use. Walk around and ensure students are having meaningful conversations about the data they collected.

**Closing: (5 minutes)**Revisit the Objectives: Have students reread the content objective as a class. Have students explain to their partners one thing they learned today, and how they know they learned it. Have some students share with the class.Real World Application: Challenge students to go home and analyze different traits of their parents and their siblings. Identify traits that are similar and traits that are different. Start a conversation with the family about traits that are inherited in the family, and some traits that the students may have inherited from grandparents. Provide an opportunity in a future class period to have students share what they discussed and discovered. |
| **Assessment:** |
| Observe students during guided and independent practice. Collect their data collection sheets and/or charts if you would like to assess their application of the content objective. Observe their conversations when discussing data to assess their mastery of the language objective. |
| **Extra Ideas:** |
| * You can choose to have students bring in pictures of their families and identify inherited traits and traits they share with their siblings. Be sensitive to students who may not have pictures or typical families to bring pictures of.
 |

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**EYE COLOR:**

**GREEN:**

**BLUE:**

**BROWN:**

**BLACK:**

**HAZEL:**

**HAIR COLOR:**

**BLONDE:**

**BLACK:**

**BROWN:**

**RED:**

**HAND SPAN:**

**15-20 CM:**

**10-15 CM:**

**0-10 CM:**

**20-25 CM:**

**HAIR TYPE:**

**STRAIGHT:**

**CURLY:**

**RIGHT HANDED/ LEFT HANDED:**

**LEFT HANDED:**

**RIGHT HANDED:**

**Number of Students Interviewed:**

姓名\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 日期\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**眼睛的颜色：**

**绿色：**

**蓝色：**

**咖啡色：**

**黑色：**

**栗色：**

**头发的颜色:**

**金色：**

**黑色：**

**咖啡色：**

**红色：**

**拇指到小指的跨度:**

**15-20 公分:**

**10-15 公分:**

**0-10 公分:**

**20-25 公分:**

**发型:**

**直的:**

**卷的:**

**用右手的人/用左手的人:**

**用左手的人:**

**用右手的人:**

**受访学生人数:**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**TRAIT DATA CHART**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **EYE COLOR** | BROWN | BLUE | GREEN | HAZEL | BLACK |
| **HAIR COLOR** | BROWN | BLACK | BLONDE | RED |  |
| **HAND SPAN** | 0-10 CM | 10-15 CM | 15-20 CM  | 20-25 CM |  |
| **HAIR TYPE** | CURLY | STRAIGHT |  |  |  |
| **RIGHT HANDED/** **LEFT HANDED** | RIGHT HANDED | LEFT HANDED |  |  |  |

姓名\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 日期 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**特征资料调查表**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **眼睛的颜色** | 咖啡色 | 蓝色 | 绿色 | 栗色 | 黑色 |
| **头发的颜色** | 咖啡色 | 黑色 | 金色 | 红色 |  |
| **拇指到小指的跨度** | 0-10 公分 | 10-15 公分 | 15-20 公分  | 20-25 公分 |  |
| **发型** | 卷的 | 直的 |  |  |  |
| **用右手的人/用左手的人** | 用右手的人 | 用左手的人 |  |  |  |

**TRAIT** A distinguishing characteristic or quality.



特征 就是与众不同的地方或是一种特点

  