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ICMEE Learning Packets: LEVEL 2 of English
Proficiency (K-12)

International Coalition for Multilingual
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2020

9th–10th Grade: English Level 2, Learning Packet #1 • Theme: Who Am I?

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9th – 10th grade • English Level 2

LEARNING PACKET #1



Theme: Who Am I?

International Consortium for Multilingual Excellence in Education



August 15th, 2020

Dear District/School Personnel:

We are a consortium of researchers, teacher educators, and teachers who believe in and strive to foster multilingual excellence. Therefore, during this time of crisis and difficulty, we are eager to put our expertise and passions to use to try to be of assistance. We initially designed 21 immediate-response packets for K-5, as soon as the pandemic forced schools to shut down. We then applied for and received a grant that has allowed us to create more than 100 full activity packets, ranging from Levels 1-3 of English proficiency, and grades K-12.

The breakdown of packets is as follows:

Level 1 – Entry into English

Emphasis on developmentally appropriate interesting/challenging tasks

- K-2
- 3-5
- 6-8 with a literacy background
- 9-12 with a literacy background
- 6-8 without literacy background
- 9-12 without literacy background

Level 2 – Building Background

- K-1
- 2-3
- 4-5
- 6
- 7-8
- 9-10
- 11-12

Level 3 – Interdisciplinary Inquiry

- K-1
- 2-3
- 4-5
- 6
- 7-8
- 9-10
- 11-12

With this letter, is an “Activity Packet” that can be used freely with any group of students or families as you see fit. Each packet includes interdisciplinary activities designed to be completed within a week. Teachers from around the country have designed, developed, and created these packets, each focusing on the topics of their choice. Because learning academic content can happen within any thematic context, these packets are designed to be diverse, dynamic, and engaging for students of all backgrounds. The topics covered in these units range from cultures, animals, natural disasters, inventions, and much more. You will see each teacher’s personality reflected strongly in these packets, and our hope is that this will capture students in a way similar to that of a rich and immersive classroom environment.

International Consortium for Multilingual Excellence in Education



Our hope is that these materials can provide some meaningful learning supports to students and families who may not have access to online learning opportunities. However, we can also imagine a variety of ways that these packets can provide learning opportunities outside of our original intent and purpose. Please use these activity packets in any way you see fit for your students and families. We will be so pleased to learn of how they might be useful, particularly for your multilingual students and their families. We think it might be particularly helpful for you to print packets and mail them to families, but we also see opportunities to work with local agencies, leave printed-out packets for pick-ups at schools, etc.

We designed these activities based around several big ideas:

- Productive play and inquiry
- Grade level and English Language Development standards/curriculum
- Fostering multilingual language development
- Providing opportunity for all four language domains (reading, writing, speaking and listening)

These packets are self-contained. Everything a child will need to be successful with the activities is provided in the packet. Students will only need a writing utensil. Additional tools like crayons or scissors are optional.

We have also included a letter to parents. We hope this will help parents understand what students will be doing with the packet and that we encourage the use of all language resources available to the student. The packets are in English for the students, but the students can write, talk and engage with family members regarding the packet activities in any language they would like. We have translated the parent letter into Spanish, and we encourage districts to translate the letter into any other language that would be helpful for your local families.

Designing Activity Packets is a new initiative for us, though we have been designing professional learning opportunities (eWorkshops) for teachers of multilingual learners since 2011. Like our Activity Packets, those learning opportunities for teachers are free. To learn more about them and us, please visit our website at: <https://cehs.unl.edu/icmee/>

We are eager to be a helpful, collaborative partner in all learning needs related to multilingual students and their teachers, so please, do not hesitate to reach out to us with questions, ideas, concerns, feedback, etc. We are available at icmee@unl.edu.

Sincerely,

Kara Mitchell Viesca, PhD
Associate Professor of Language Education
University of Nebraska Lincoln
Teaching, Learning and Teacher Education
PI: International Consortium for Multilingual Excellence in Education

This packet was designed and created by **Morgan Spanel**
in collaboration with Aaron Johnson and Alexa Yunes.

The Standards that Informed the Development of this Packet are:

Common Core Math:

- HSA-SSE.A.1
- HSA-REI.B.3
- HSF.LE.A.3

Common Core Social Studies:

- RH.9-10.4

Common Core English Language Arts:

- CCW.9-10.3
- CCW.9-10.4
- CCRI.9-10.4
- CCSL.9-10.4
- CCL.9-10.4

NGSS Science Standards:

- HS-LS3-1
- HS-LS3-3

Art

- Anchor Standard 1
- Anchor Standard 11

Physical Education

- National Standard 1
- National Standard 5

9th – 10th grade • English Level 2

LEARNING PACKET #1



Theme: Who Am I?

International Consortium for Multilingual Excellence in Education



August 15th, 2020

Dear Families:

During the COVID-19 pandemic, it became necessary for students to learn at home. Many students have limited access to technology, others struggle with online learning, and some simply want more to do while they are at home. With these things in mind, we have created an extensive resource of learning materials that we hope will be helpful for your children to engage with. These Activity Packets were designed with your students in mind and are aligned with each of their grade level content. Each activity in the packets will help students continue with their schooling as well as continue to grow their multilingualism. We encourage you to talk to your student about what they are doing and let your child ask you about the topics they are learning about. The packet is in English, but we encourage you and your children to speak and think together in any language you would like to. We strongly encourage you to use the language you feel most comfortable using with your student. Supporting their learning in all the languages they know is helpful—even for developing their English! So, please encourage your student to do the work in the packet in any language they would like.

We know that families are dealing with a lot of stress and uncertainty right now, so we encourage you to play the role you would like to play with your student and their Activity Packet based on what works best for you. We recommend reading the information about the packet and activities and then discussing with your student how the packet works and how they can work through it. We believe that with that introduction, your student can do a lot, if not all, of the work themselves. However, if you are available to work more closely with your student (or for a sibling or other family member to do so), we encourage that as well. Please know, this is not intended to be something that adds stress and work to your family during this demanding time. We hope that this is a helpful resource so your student can continue growing academically while in unusual situations.

We also hope you will find these packets interesting and fun. We have integrated activities from all of the grade level content standards: English Language Arts, Mathematics, Social Studies, Science, Physical Education and Art. We have also developed different packets for the different levels of English proficiency, so your child should feel challenged but also capable of largely understanding the content in front of them.

6th-12th grade students are encouraged to talk about their learning as much as possible, even if it is not to one person in particular. Some packets will include activities where students can “use a cell phone” to record voice messages and post on social media, which we hope might be ways in which they can be encouraged to speak in English or in any language they prefer.

In these packets, we have also included the following activities:

- Dictionary. Each day we hope that your student will engage with words they find interesting and want to keep track of. We encourage students to use the dictionary activities to keep track of words they learn and find interesting. We also encourage students to use any language they would like as well as pictures to help them remember what the words mean.

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- Journal. Students should be encouraged to write in any language (or combination of languages) that they feel most inclined to. They can also use pictures as appropriate. We hope these journal spaces will also be points of conversation for your child with someone in their home.
- Packet: “Who Am I?” In this packet, students will be exploring a variety of different aspects of their identity. They will learn about their family structure, genetics, events in their life as well as the language to express their learning. At the end of the week, they will write an autobiography about themselves up to this point in their life.

We hope that these activities will enhance your child’s learning while we work through these very unusual circumstances. We also hope that they will give your child opportunities for productive play. If you have any questions or concerns about these packets, feel free to reach out to our project at icmee@unl.edu or by calling the Teaching, Learning and Teacher Education department at 402-472-2231.

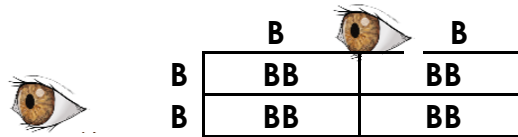
Sincerely,

Kara Mitchell Viesca, PhD
Associate Professor of Language Education
University of Nebraska Lincoln
Teaching, Learning and Teacher Education
PI: International Consortium for Multilingual Excellence in Education

This packet was designed and created by **Morgan Spanel**
in collaboration with Aaron Johnson and Alexa Yunes.

Activity 10:

If both parents are **homozygous dominant** for brown eyes, the Punnett square would be set up like this:



Complete the Punnett square.

Look at these examples, are they **homozygous dominant**, **homozygous recessive**, or **heterozygous**?

AA: homozygous dominant

Ff: heterozygous

yy: homozygous recessive

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En este paquete hemos incluido las siguientes actividades:

- **Diccionario:** Esperamos que cada día su estudiante aprenda palabras que encontrará interesantes y querrá tener un seguimiento y registro de estas. Al final de los paquetes encontrarán páginas en las que su estudiante podrá mantener su propio diccionario. Recomendamos ampliamente que los estudiantes usen estas páginas para registrar palabras que les gusten o les parezcan interesantes. También alentamos a los estudiantes a usar cualquier lenguaje que deseen, así como imágenes para recordar el significado de las palabras.
- **Diario:** Cada día, los estudiantes tienen un tema corto de escritura al que pueden responder. Los estudiantes deben ser alentados a escribir en cualquier idioma (o combinación de idiomas) que les parezca más conveniente. También pueden utilizar imágenes si lo consideran necesario. Esperamos que estos temas de escritura puedan utilizarse de puntos de conversación entre su estudiante y su amigo.
- **Paquete:** ¿Quién soy yo? En este paquete, los estudiantes explorarán una variedad de los diferentes aspectos de su identidad. Aprenderán de su estructura familiar, genética, eventos en su familia, así como el uso del lenguaje para expresar su aprendizaje. Al final de la semana, escribirán una autobiografía sobre ellos mismos hasta este punto de su vida.

Esperamos que estas actividades mejoren el aprendizaje de su hijo mientras trabajamos juntos para atravesar estas circunstancias tan inusuales. También esperamos que le darán a su hijo oportunidades de juego productivo. Si tiene alguna pregunta o inquietud acerca de estos paquetes, siéntase en libertad de comunicarse con nuestro proyecto a icmee@unl.edu o llamando al departamento de Enseñanza, Aprendizaje y Educación para maestras (Teaching, Learning, and Teacher Education) al 402-472-2231.

Sinceramente,

Kara Mitchell Viesca, PhD

Associate Professor of Language Education

University of Nebraska Lincoln

Teaching, Learning and Teacher Education

PI: International Consortium for Multilingual Excellence in Education



Share your learning!

Share a picture of any of your work by using **#MultilingualProud** on social media.

We'd love to see what you've done with this packet!



Instructions Key



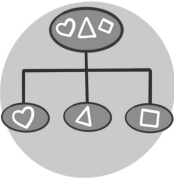
- Share with someone else
- Comparte con alguien más
- مشاركتها مع شخص آخر
- La wadaag qof
- Chia sẻ với ai đó



- Read
- Lee
- اقرأ
- Akhriso
- Đọc



- Write
- Escribe
- اكتب
- Qor
- Viết



- Sort
- Ordena
- رتب
- Kala sooc
- lựa chọn



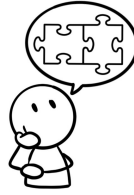
- Move your body
- Mueve tu cuerpo
- حرك جسمك
- Dhaqdhaqaaqa jirkaaga
- Di chuyển cơ thể của bạn



- Cut
- Corta
- قص الورقة
- Waraaqda jar
- Cắt giấy



- Read out loud
- Lee en voz alta
- قراءة بصوت عال
- Kor u aqri
- Đọc to



- Make a connection
- Hacer una conexión
- إجراء اتصال
- Xiriir samee
- Tạo kết nối

123

- Count
- Cuenta
- العدد
- Tiri
- đếm



- Draw
- Dibuja
- رسم
- Sawir
- Vẽ tranh



- Find
- Encuentra
- وجد
- Soo hel
- Tìm thấy


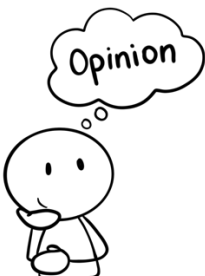

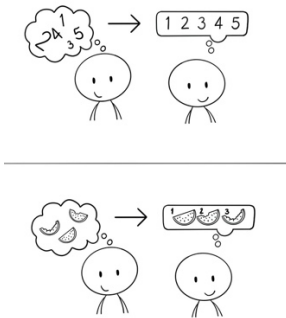



- Color
- Colorea
- لون
- Midab gudaha
- làm cho hoa mỹ



- Share with your Buddy
- Comparte con tu Buddy
- شارك مع صديقك
- La wadaag asxaabtaada
- Chia sẻ với bạn bè của bạn

Thinking Skills Glossary

Word	Definition	Picture
Fact 事实 Hecho	something we know, without question 我们知道的毫无疑问 Algo que podemos comprobar	
Opinion 意见 Opinión	something we think or believe 我们认为或相信的事情 Algo que pensamos	
Compare 相比 Comparar	think about how two or more things are the same or different 考虑一下两个或多个事物是相同还是不同 Pensar en qué se parecen y en qué son diferentes dos o más cosas	
Sequence 序列 Secuencia	to put things in the right order from first to last 从头到尾正确地安排事情 Poner las cosas en orden , del primero al último	
Classify Sort Categorize 分类 Clasificar Organizar	to put things into groups by how they are the same 通过相同的方式将事物分组 Agrupar cosas por cómo se parecen	

Question Words



Who?



When?



Where?



What?



Why?



iPhone Instruction Icons



Write a text message
写短信
Escribe un mensaje



Tweet: write one sentence
推特：写一句话
Tweet: escribe una oración



Post on Facebook: write a few sentences
在Facebook上发布：写几句话
Publica en Facebook: escribe algunas oraciones



Post on Instagram: write a sentence and draw a picture
在Instagram上发布：写一个句子并画一幅画
Publica en Instagram: escribe una oración y dibuja



Write an email: write a paragraph
写一封电子邮件：写一个段落
Escribe un correo electrónico: escribe un párrafo

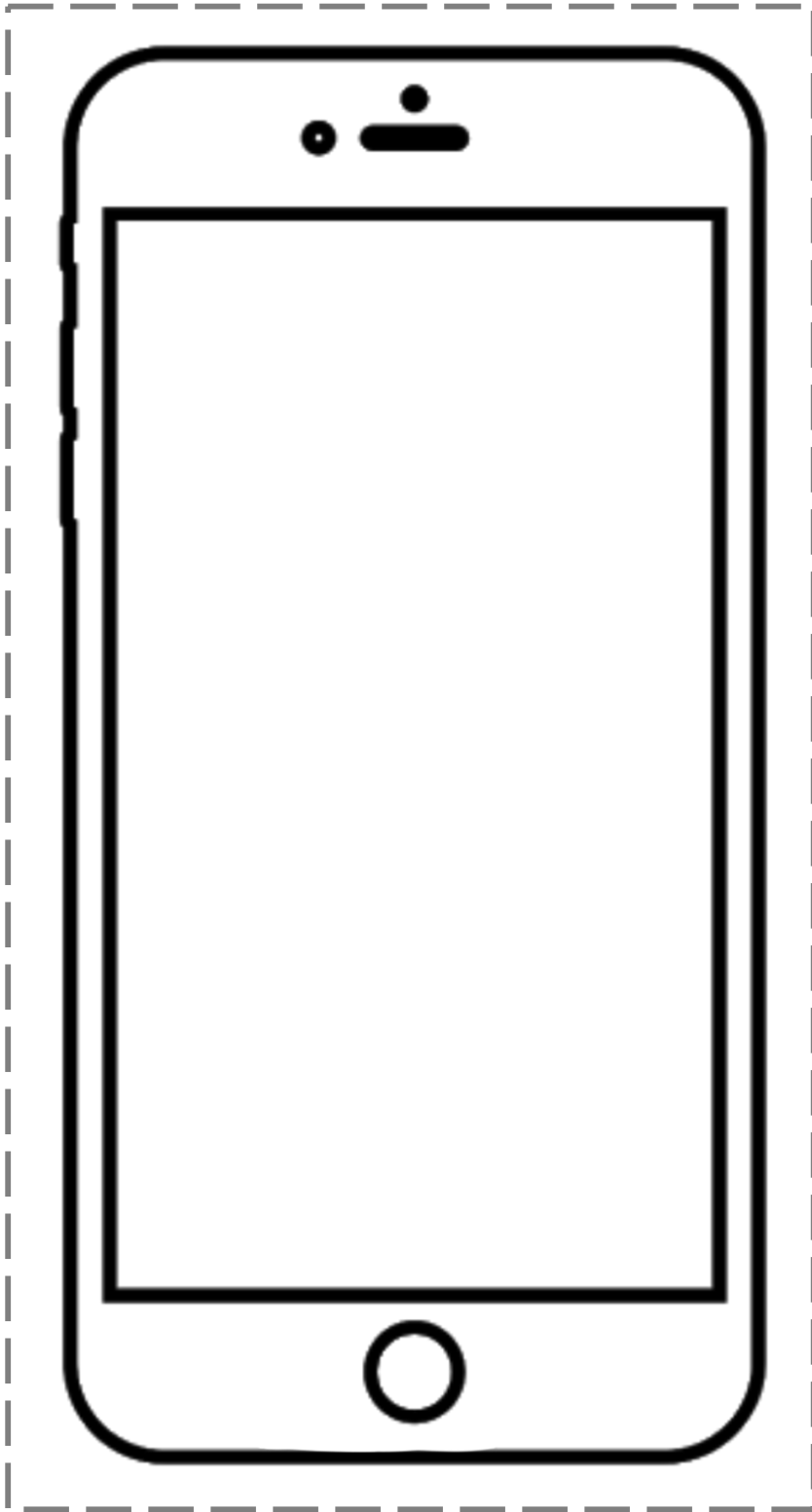


Record a voice message
录制语音留言
Graba un mensaje de voz



Make a phone call
打个电话
Haz una llamada





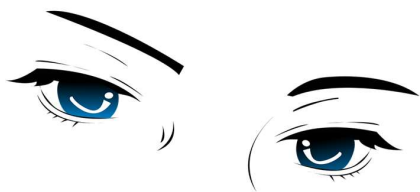


Day 1

“Who Am I?”

Read the text and answer the connection questions.

Mirella's Eyes, Understanding her Family History



“Mom, why do I have blue eyes?” Mirella asked her mother one day. Mirella was a wide eyed, 14 year old girl. She had just returned home from her first day of High School.

“Why? Your eyes are beautiful.” Her mother replied.

“Mom, the kids were making fun of me today. They said my eyes are fake. It made me feel really sad.”



Mirella did not know much about her family. Her mom *fled* to the United States with her and her brother, Mateo. She was only 4. Her mother was *hesitant* to talk about their family. Mirella's mom knew they probably all died in the war.

“Go get your brother, I will tell you about your eyes.” Her mother said, gently. Mirella ran and got her brother from the other room.

The three of them sat down on the couch. Their mom began to tell the story about their family. Mirella and Mateo looked at their mother *intently*.



A long time ago, there was beautiful woman named Elisabeth. She had long, black hair and bright, blue eyes. Her skin was the color of honey. One day when she was at the market in town she met my **grandfather**, Mateo. Mateo is your **great grandfather**. He was selling vegetables at the market. Shortly after, they fell in love and were married. They lived outside of town in a small house with a big field. Over time, they built their house into a small ranch with chickens and goats. They sold eggs and milk in the market. Your **great grandfather** and **great grandmother** had one son named, Luca. Luca is my **father**, your **grandfather**. He had his mother's same black hair and stunning blue eyes.

Connection:

Have you ever had people say mean things to you?

People have said _____
_____ to me. It made me feel _____.

Vocabulary:

fled – to run away from danger

hesitant – not sure about something

intently – to a lot of pay attention

When Luca was 17, he left the small town and moved to the city. He wanted to sell his **parents** milk and eggs to more people. During his time in the city, your **grandfather** made many friends. He sold the milk and eggs from the ranch for his family. One day, a lady, Maria, walked into his store. She was from the United States. She told Luca stories about “the good life” in the United States. Luca told Maria stories about his life on the ranch.

Connection:

Do you like big cities or small towns better?

I like _____ better because _____.

_____.

The city was getting to be too dangerous during the war. Luca asked Maria to marry him. They moved back to his ranch in the small town. Maria and Luca are my **parents**, your **grandparents**. They had three children who all helped them with the ranch. There was me, my **brother** Mateo, and my **sister** Ana. Only Mateo was born with the bright blue eyes like my **father**. My **brother** Mateo is your **uncle** and my **sister** Ana is your **aunt**. For many years, we worked on the ranch and helped your **grandparents**. Eventually, Mateo found a wife and they had a baby. Her name was Elisabeth, after your **grandmother**. Elisabeth would be your **cousin**.

Connection:

What is something you have done with your family?

My family and I _____.

_____.

We were all happy living on the ranch and taking care of the animals. In 2005, the war began moving into the country side. The destruction was getting closer and closer to our small town. Your **aunt** Ana and I *fled*. We walked day and night to escape. We took turns carrying you two. Your **uncle** and your **father** stayed to protect the ranch. I can still see your **uncle's** bright blue eyes looking at me, telling me to be brave.

Connection:

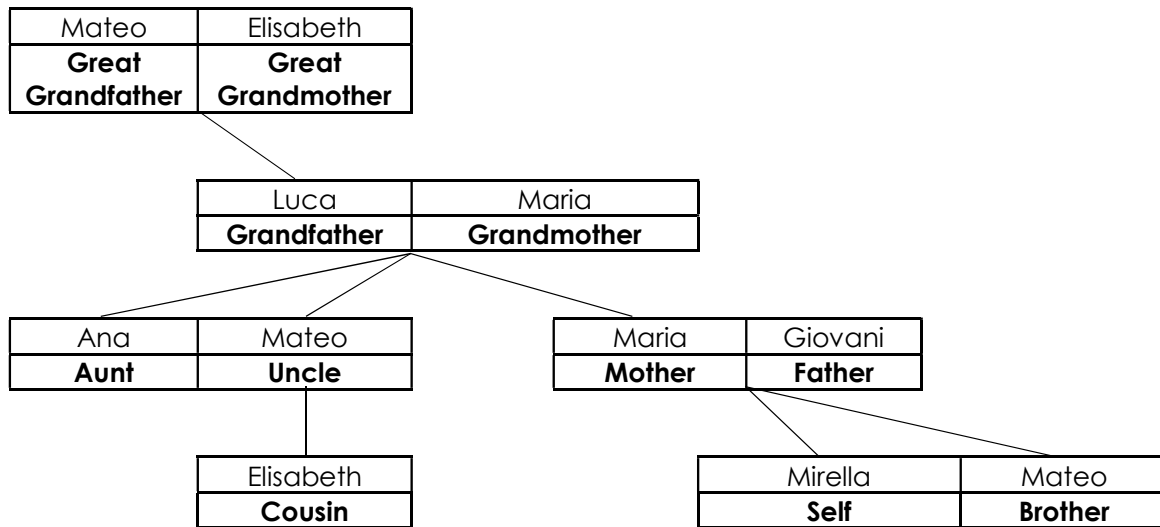
What is a characteristic about you that comes from your family?

I have _____ just like my _____.

_____.

Mirella, every time I look in your bright blue eyes. I think about how brave our family is and how brave you are. Your eyes are not fake. Your eyes are strong and brave.

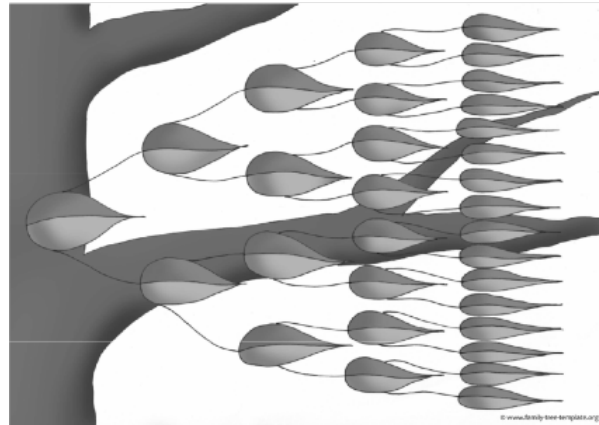
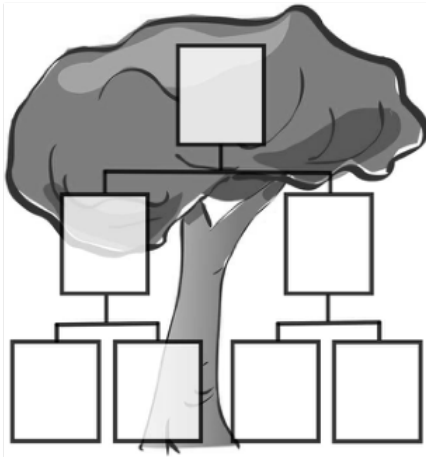
Mirella's Family Tree



“Who Am I?”

Create your own family tree

You have read about how to make a family tree and how your family members are connected. Look at the two examples below. At the bottom of the page, create a family tree for at least three generations of your family. You can use these examples, or create your own!



Be sure to label each family member and their relationship to you!

“Who Am I?”

Calculating Ages

Complete the following math problems to determine different people's ages.

Ex. Hafsa was born on October 3, 1967. How old is she today?

2020 – 1967 = 53. Hafsa is 53, she will be 54 on October 3, 2020.

1. Maria has 2 children, Jose and Karen that were born two years apart on February 21. Karen is older. She was born in 2004. How old are **both** Jose and Karen?
2. How old is Maria if her age is the sum of Karen and Jose's age?
3. Thu Reh is 15, his mom, Pa Reh, is three times as old as him. His uncle, Tay Reh, is half of Pa Reh's age. How old are **both** Pa Reh and Tay Reh?
4. Sergei's great grandpa died 6 years ago. He was born in 1918. How old was Sergei's great grandpa when he died?
5. Jeff wants to know how old his grandma was when she moved to the United States. He knows that his mom was born in Rwanda in 1974 and was 3 when they moved. His grandma was 22 when she gave birth to his mom. How old was his grandma when she first moved to the United States?
6. This year, Francesca will be twice as old as her brother, Juan. Pablo will be half as old as Juan next year. The sum of their ages is 18. How old are each of the children?
7. In the year, 2032, Halima will be twice as old as she is today. What year was Halima born in?

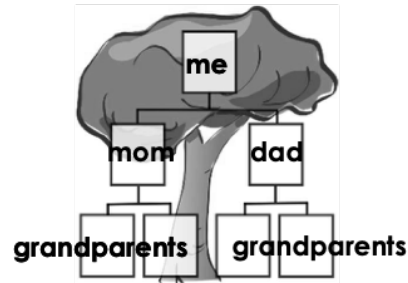
[Type here]

Word Bank: sum – addition, add the numbers together. Twice – two times, multiply by 2

"Who am I?"

Family Tree Vocabulary Practice

Complete the graphic organizer. Then ask friends or family members the questions at the bottom.



Relative	Relationship to YOU (definition)	Who is this in your family?
Ex. Brother	A male sibling. You have the same parents	Mateo
mother	A female parent. You are your mother's child.	
father	A male parent. You are your father's child.	
sister	A female sibling. You have the same parents.	
aunt	The sister of one of your parents. Also, the wife of your uncle.	
uncle	The brother of one of your parents. Also the husband of your aunt.	
grandmother	The mother of your mother or father.	
grandfather	The father of your mother or father.	
great grandmother	The mother of your grandmother or grandfather	
great grandfather	The father of your grandmother or grandfather.	
niece	The daughter of your brother or sister.	
nephew	The son of your brother or sister.	
cousin	The child of your aunt or uncle.	

Questions:

Ask friends or family these questions to practice!

1. Who is your **sister**?
2. What is your **aunt's** name?
3. How many **siblings** does your **grandmother** have?
4. Do you have any **nieces** or **nephews**?
5. Who is your favorite **cousin**?



Day 2

Cute Features Caused by Gene Mutations

By ThoughtCo.com, adapted by Newsela staff on 11.20.17



Dimples can be seen when a person smiles. Photo by: Natashi Jay/Flickr.

Everybody is different. Some people have bright blue eyes, others have dark brown ones. Someone might have thick eyebrows. Others might have a thin sharp nose.

All these traits are caused by the genes in our DNA. Genes are the basic building blocks of life. They tell your body how to grow and work. They are passed from parents to their children.

These genes sometimes go through mutations. A mutation doesn't mean something is wrong. It simply means change. Some mutations can lead to diseases or death. Others have no effect on us. Some can even help us.

Some mutations are also just cute. Here are four examples you've probably seen before.

Dimples

Dimples are little dents that appear on the skin. Often, dimples are on someone's cheeks. They show up when a person smiles.

If both parents have dimples, their children will probably have dimples, too. If both parents do not have dimples, their children probably won't have them either.

Multicolored Eyes

Some people have eyes that are different colors. One eye may be completely different from the other. Or part of one eye might have a different color than the rest of the eye.

These different colors can be caused by a gene mutation. They can also happen later in life. People can get them because of a disease. People born with different colored eyes can usually see normally.



Freckles

Freckles are little brown dots on the skin. They often show up on the cheeks and nose. Sometimes, they are on the arms and shoulders.

People with light skin and blond or red hair have more freckles. Freckles are usually caused by a mutation in skin cells. These skin cells are in the outer part of the skin. They create melanin, which makes skin darker. Dark skin helps protect us from the sun.

Sometimes, the skin cells gather together in big clumps. This makes more melanin than normal. It causes brown or red spots to form on the skin. These are the freckles.



Freckle genes are often passed down from parents to their children. They also can be caused by sitting in the sun too long. Too much sun is unhealthy. It can cause diseases, like skin cancer.

Cleft Chin

A cleft chin is also known as a dimple chin. A cleft chin is formed very early in life. It happens when a human is still forming inside its mother. Bones or muscles around the mouth do not join together completely. This causes a small dimple.

Parents with cleft chins often pass this gene to their children. But someone can have the gene and still not get a cleft chin.



"Who Am I?"

Examining Fingerprints

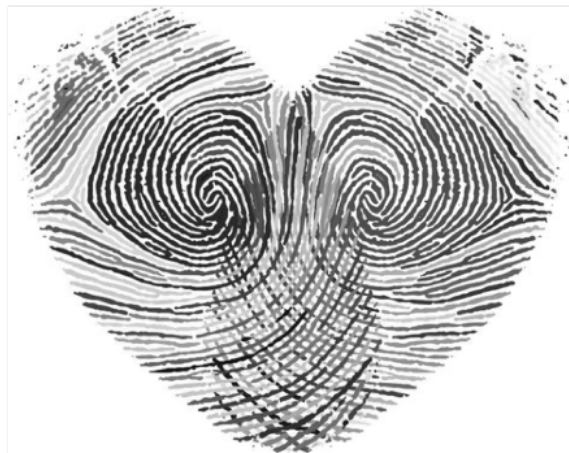


Did you know that everybody has unique fingerprints that are not like anyone else? Some people have straight lines. Some people have wavy lines. Some people have circles. What shapes do you have in your fingerprint?

Fingerprints are used to determine your identity. Family members even have different fingerprints. It can be hard to see your fingerprints. When you put ink (marker or pencil) on your finger, you can make a print of your finger! Police officers use fingerprints to help them find criminals. Some people use their finger prints to create art!

To do this activity you will need a blank piece of paper, a marker or a pencil.



1. Color your finger tip with the marker or pencil.
2. Place your finger on the piece of paper.
3. Examine your fingerprint.
4. Now, create a piece of art using only your fingerprints! For added fun, have your family add their fingerprints to your art too.



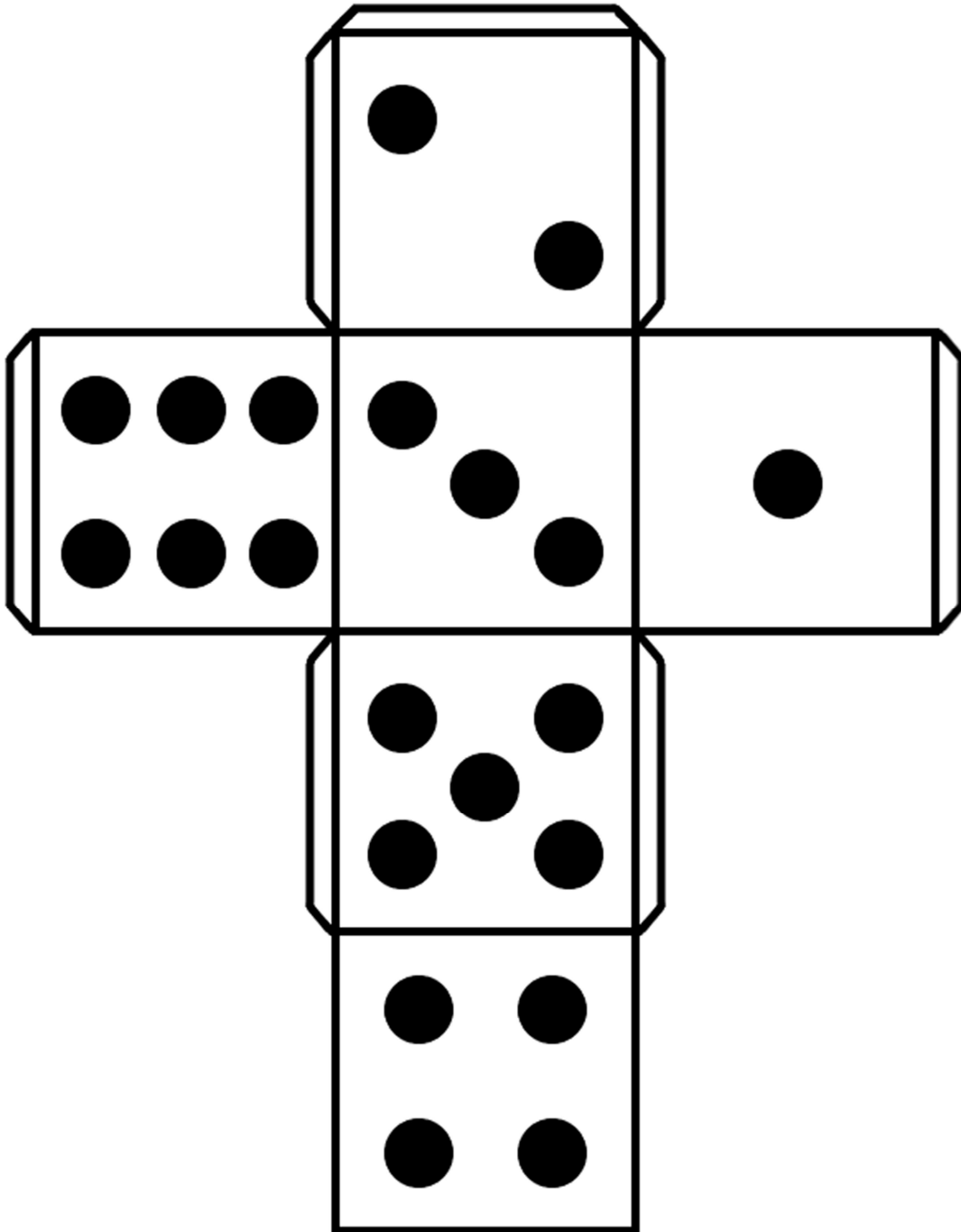
“Who Am I?”

Find and Complete the Pattern

Fingerprints create repeating patterns. Finding these patterns is important. We also find and complete patterns in math. For each problem, find the pattern. What comes next?

What is the pattern?	What comes next?
	<p>_____</p> <p>_____</p>
<p>1, 2, 4, 8, 20, 22</p>	<p>_____</p> <p>_____</p>
	<p>_____</p> <p>_____</p>
<p>91, 90, 80, 79, 69, 58</p>	<p>_____</p> <p>_____</p>
<p>5, 10, 13, 18, 21, 26, 29</p>	<p>_____</p> <p>_____</p>
<p>Challenge:</p> <p>2, 5, 10, 17, 26, 37, 50</p>	<p>_____</p> <p>_____</p>

Cut this out to make a dice.
Use this dice activities this week.









“Who Am I?”
Practicing Sequence Words and Phrases

Use the dice you made to play this sequence game with your family.

Rules:

1. Get 2-4 players
2. Take turns rolling the dice
3. On your turn, make a sentence with the sequence word or phrase

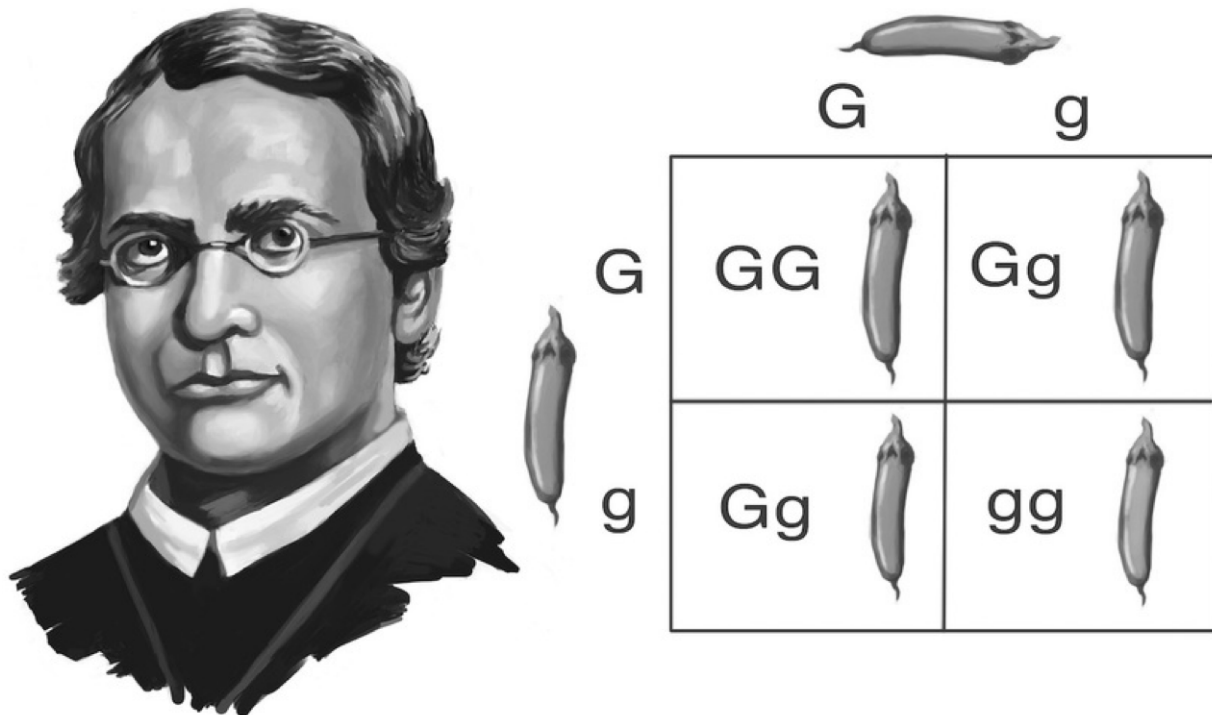
Dice Roll	Sequence Word or Phrase
	A few days ago, _____
	When I was <u>(age)</u> , I _____
	Last year, _____
	Yesterday, _____
	In <u>(month)</u> , I _____
	One day, _____



Day 3

What does dominant and recessive mean?

By Washington Post, adapted by Newsela staff on 11.26.19



An illustration of Gregor Mendel at left, and the Punnett square at right. The Punnett square is a visual representation of Mendelian inheritance. The diagram is used by biologists to determine the probability of an offspring having a particular genotype. Image by: Spencer Sutton/Science Source

Why are some genes dominant over others?

Over 200 years ago, scientist Gregor Mendel tested his ideas about traits. He did this using pea plants. Traits are qualities of living things. An example is eye color in humans. Another trait is flower color in pea plants.

Mendel showed how traits come from parents. Two parents with the same trait could even have offspring with another trait. Offspring are children. For example, two tall plants would make mostly tall plants. Yet, some of their offspring might be short.

Genes carry information. This information determines traits. Each gene comes in different forms known as alleles. You get 1 copy of every gene from your dad and one copy from your mom. You can get two different alleles, or forms, of the same gene.

Mendel's Pea Plant Example

Let's look at an example. A pea plant could have one copy of the height gene that coded for "tall." Its other copy could code for "short." The tall allele is dominant. This means that it can mask the other allele. The short allele is recessive. In this case, the mix of tall and short would result in a tall plant. The tall allele masks the short allele.

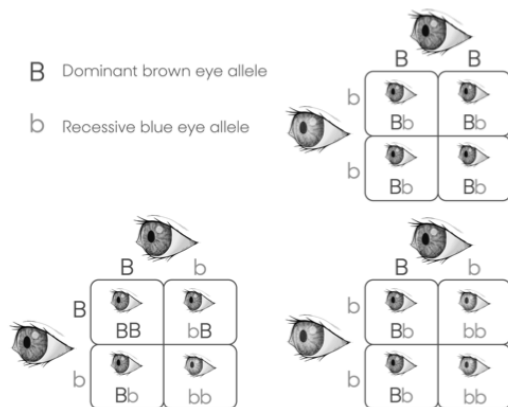
Suppose there are two tall plants. Both have a tall and short copy of the gene. Their offspring could be short. A Punnett square is a type of diagram. It helps find out how many offspring will have each trait. Here, the Punnett square would show that about 1 out of 4 offspring would get two short alleles. This means that these offspring would be short.

Blue Eyes Are Recessive

Many genes can affect traits. For example, many different genes influence eye color.

Genes carry the instructions for making proteins. Traits are controlled by the amount of protein that is made. You can think of these amounts as "doses." A dominant allele has a large dose of protein. It can make its own trait. A recessive allele doesn't signal the body to make any protein. So, when there are two recessive alleles, the body receives a low dose or no dose.

Eye color is a good example. The genes for eye color produce proteins. They produce the eye pigment, or color. When the alleles for eye color are both recessive, the protein is turned off. There are no doses of protein. The trait shows up as blue eyes. It is just like the sky. The sky has no color, yet it looks blue.



Several genes make up eye color. It isn't as simple as brown and blue. Still, the dosage size is a big part. This is why eye color is thought of as a simple trait.

How People Get Sickle Cell Anemia

Some dominant traits work a little differently. Sometimes, an allele that causes a change will be dominant. Here's an example: Suppose genes are making bricks. They are making bricks to build a wall. One allele makes round bricks by mistake. It doesn't matter how many normal bricks are made. The wall will collapse. The allele making the round bricks is dominant. It is the trait that will show up.

Let's look at sickle cell anemia. It is a disease. It causes red blood cells to become misshaped. This leads to serious health problems. People with two copies of the sickle cell allele have misshaped red blood cells. Other people have only one copy of the sickle cell allele. Some of their cells are misshaped. Other cells are not. The normal cells can keep the body healthy.

You can think about a trait in different ways. For example, you could think of the trait as whether or not you have sickle cell anemia. In this case, the allele for sickle cell is recessive. Still, the dominant copy doesn't cover the recessive one in every blood cell. Yet, there are enough normal

blood cells to keep a person healthy. This is called co-dominance. It is like mixing genes for red flowers and white flowers to get pink.

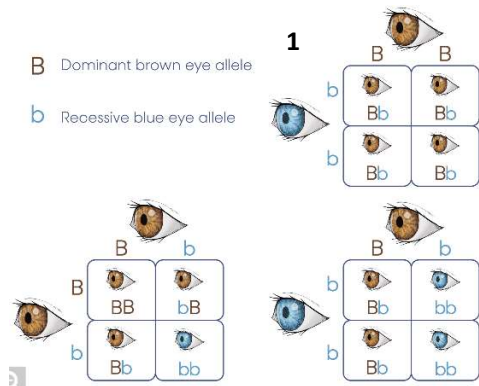
You can also think of the sickle cell allele as dominant. A single copy of the allele protects against malaria. So that trait is actually a dominant one. Malaria is a serious illness. It is passed through mosquito bites. The allele's protection against the disease is probably why sickle cell trait still exists.

Dominant and recessive are simple words. But they describe a tricky idea. It is trickier than Mendel imagined.

“Who Am I?” Practicing with Punnett Squares

Gregor Mendel showed how offspring, or babies, show the characteristics of their parents. You can use a Punnett square to help predict what characteristics or traits will be given to the offspring.

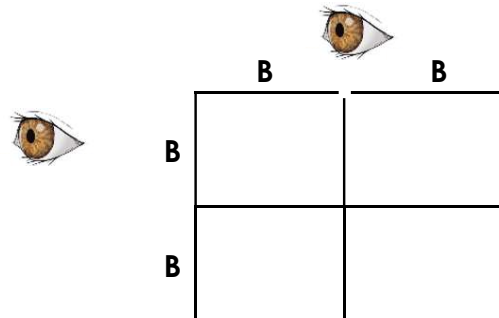
For example:



In picture 1, both parents are **homozygous** for their characteristic. The parent with brown eyes (on the top) is **homozygous dominant**. It is written with capital letters (B). They have two of the same letters BB. The other parent (on the side) has blue eyes and is **homozygous recessive**. It is written with lower case letters (b). They have two of the same letters bb.

Their offspring, or children, will be **heterozygous**. They have two *different* letters Bb. As you can see, they will have brown eyes.

If both parents are **homozygous dominant** for brown eyes, the Punnett square would be set up like this:



Complete the Punnett square.

Look at these examples, are they **homozygous dominant**, **homozygous recessive**, or **heterozygous**?

AA: _____

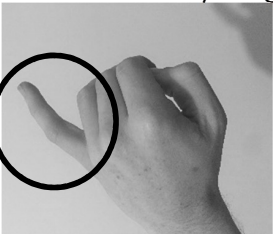
Ff: _____

yy: _____

“Who am I?”

My own dominant and recessive genetics

Did you know that many genetic characteristics are easy to see? We will look at several different characteristics that may be in your family!

Dominant genetic traits	Recessive genetic traits	Which do you have?
Widow's peak 	Strait hairline	
Dimples 	No Dimples	
Cleft Chin 	Smooth Chin	
Crooked Pinky Finger 	Straight Pinky Finger	
Tongue Rolling 	No Tongue Rolling	

“Who Am I?”

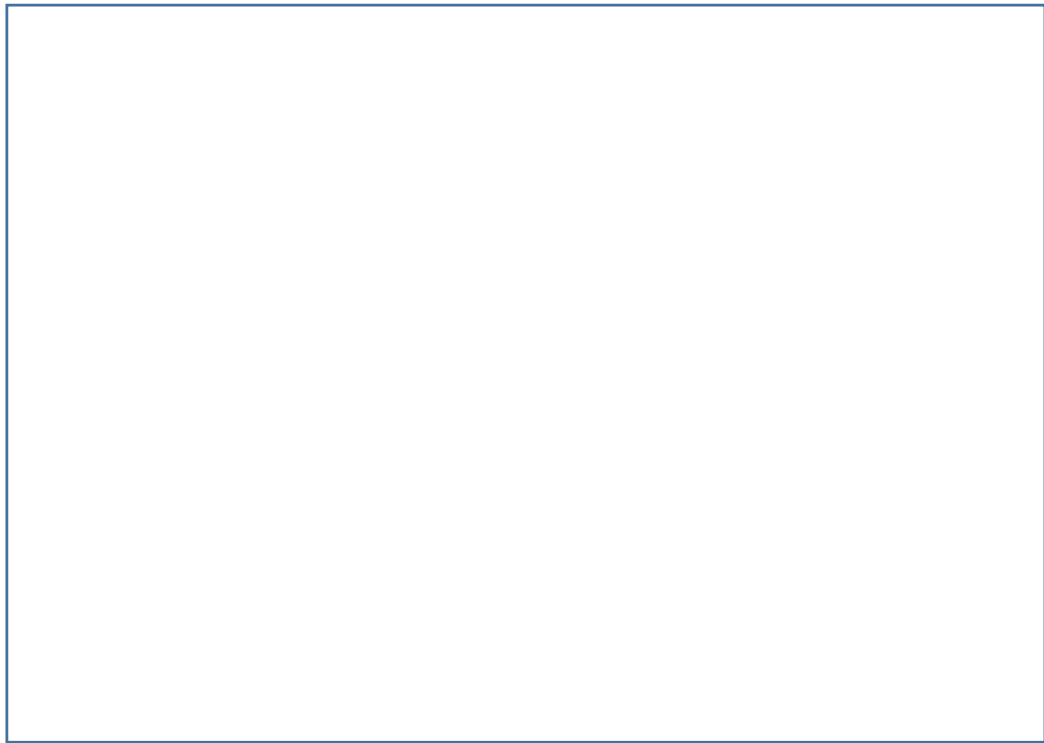
Graphing Genetic Traits

Walk around your neighborhood and ask people if they have the genetic traits from the last activity. Track your data in the table below. Then, create a bar graph of the results.

Genetic Trait/Characteristic	Number of people WITH the dominant trait
Widow's Peak	
Dimples	
Cleft Chin	
Crooked Pinky	
Rolled Tongue	

Graph your data!

Number of People



Genetic Trait



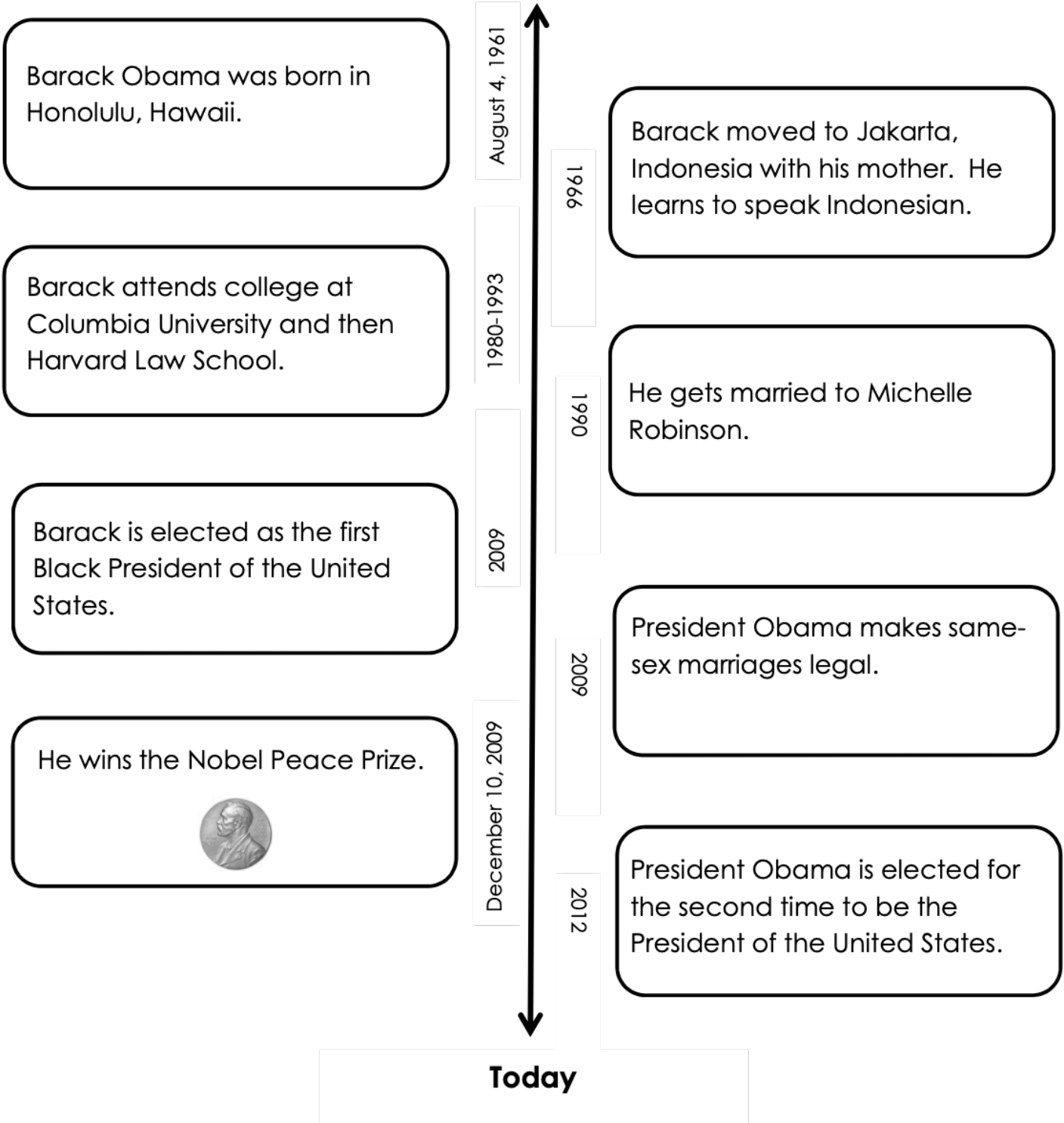


Day 4

“Who Am I?”

Barack Obama Timeline of important events

Read about important and interesting events in Barack Obama's life. President Obama was the 44th President of the United States. As you read, think about important or interesting events from your life.



"Who Am I?"

Timeline of Interesting Events from My Life

We just read about the life of Barack Obama. The timeline had important and interesting events in his life. Now, it's your turn. Think about important or interesting things that have happened in your life. Complete the timeline with pictures or descriptions of these events.

I was born.

When I was _____ I _____

Today

“Who Am I?”

Mirella’s Eyes: Identifying Sequence Language

Reread the text, “Mirella’s Eyes.” As you read, underline words or phrases that show sequence.

Example:

A long time ago, there was beautiful woman named Elisabeth. She had long, black hair and bright, blue eyes. Her skin was the color of honey. One day when she was at the market in town she met my **grandfather**, Mateo.

After you underline all of the sequence words and phrases, complete the graphic organizer below. Practice using the underlined sequence language in sentences.

Sequence word or phrase	Use in an example
A long time ago,	A long time ago, I broke my arm.
One day,	One day, my friend spent the night at my house.

Family Vocabulary

T	M	M	N	I	L	I	I	U	I	N	E	M	I
R	I	R	B	U	B	O	C	N	U	N	C	L	E
U	E	S	R	N	D	D	O	T	U	I	E	B	R
R	R	I	G	E	A	N	U	I	R	U	R	C	R
E	E	T	O	N	U	H	S	R	A	E	R	E	M
B	T	S	C	S	N	I	I	D	H	I	H	E	I
T	S	O	I	U	T	R	N	T	T	T	O	C	T
R	I	N	G	M	D	S	A	N	O	G	L	S	I
L	S	C	T	M	T	F	M	R	O	N	S	I	M
A	U	N	S	A	D	T	B	E	T	I	F	D	O
H	N	O	E	N	S	T	R	U	N	L	L	R	M
F	F	U	A	B	A	U	U	L	T	B	N	C	L
S	O	R	I	R	H	S	T	S	H	I	G	R	S
G	G	M	D	A	D	N	B	E	T	S	E	U	I

DAD

SIBLING

COUSIN

AUNT

MOM

GRANDFATHER

UNCLE

BROTHER

SISTER



Day 5

Artists: Frida Kahlo

By Evelyn Quezada, adapted by Newsela staff on 03.08.17



Frida Kahlo

Synopsis: Frida Kahlo is one of Mexico's greatest artists. She was born in Mexico in 1907. Her moving paintings express the pain she suffered in her lifetime. Today, Kahlo continues to be an artistic icon.

Early Life

Frida Kahlo was born Magdalena Carmen Frieda Kahlo y Calderon on July 6, 1907, in Mexico City, México. At the age of 6, she became sick with polio. The disease caused her right leg to grow thinner than her left. Kahlo started wearing long skirts to cover her thin leg. She would later be recognized for her fashion style.

As a child, Kahlo was very close with her father. He was an artist himself, and he taught her about photography, literature and nature.

Education

At age 15, in 1922, Kahlo attended the National Preparatory School. She planned on going to medical school. She studied natural sciences.

In 1925, Kahlo was badly hurt in a bus accident. She had to spend a long time in bed to get better. While she was recovering, Kahlo spent her time painting. She had a special easel that allowed her to paint while she was lying down. A mirror was placed above her so she could paint pictures of herself. Kahlo would continue to make pictures of herself for the rest of her life. "I paint myself because I am so often alone," she once said. "I am the subject I know best."

Celebrating Her Mexican Background

By 1927, Kahlo had mostly recovered. She got involved in politics and joined the Mexican Communist Party. The communists believed that people should share things equally. They wanted to do away with the gap between the rich and the poor. Kahlo met several important communists, including the painter Diego Rivera. Rivera was famous for his murals. These were enormous paintings that he made directly on walls.



In 1929, Kahlo and Rivera got married. They moved to Cuernavaca, México, where Kahlo worked on her art. She celebrated her Mexican background in her paintings. She also started wearing traditional Mexican clothes, including colorful tops and long skirts.

Kahlo Abroad

Rivera's work took the couple to the United States, where Rivera was hired to paint murals. Kahlo was disappointed by American life. She didn't like that the rich lived in fancy homes while the poor went hungry. Instead of going to parties, she kept working on her paintings.

In 1934, the couple returned to Mexico. Their marriage started to fall apart. Rivera was not happy about leaving the United States, and Kahlo was having health problems again. They both began dating other people. Kahlo liked both men and women, and she had several girlfriends during her life.

In 1937, some of Kahlo's paintings were shown in Mexico. Important art collectors began to celebrate her work. Kahlo was eventually invited to show her paintings in New York. In the United States, she was widely praised for her bold paintings and fashion style.

Divorce, Remarriage, Then Sickness

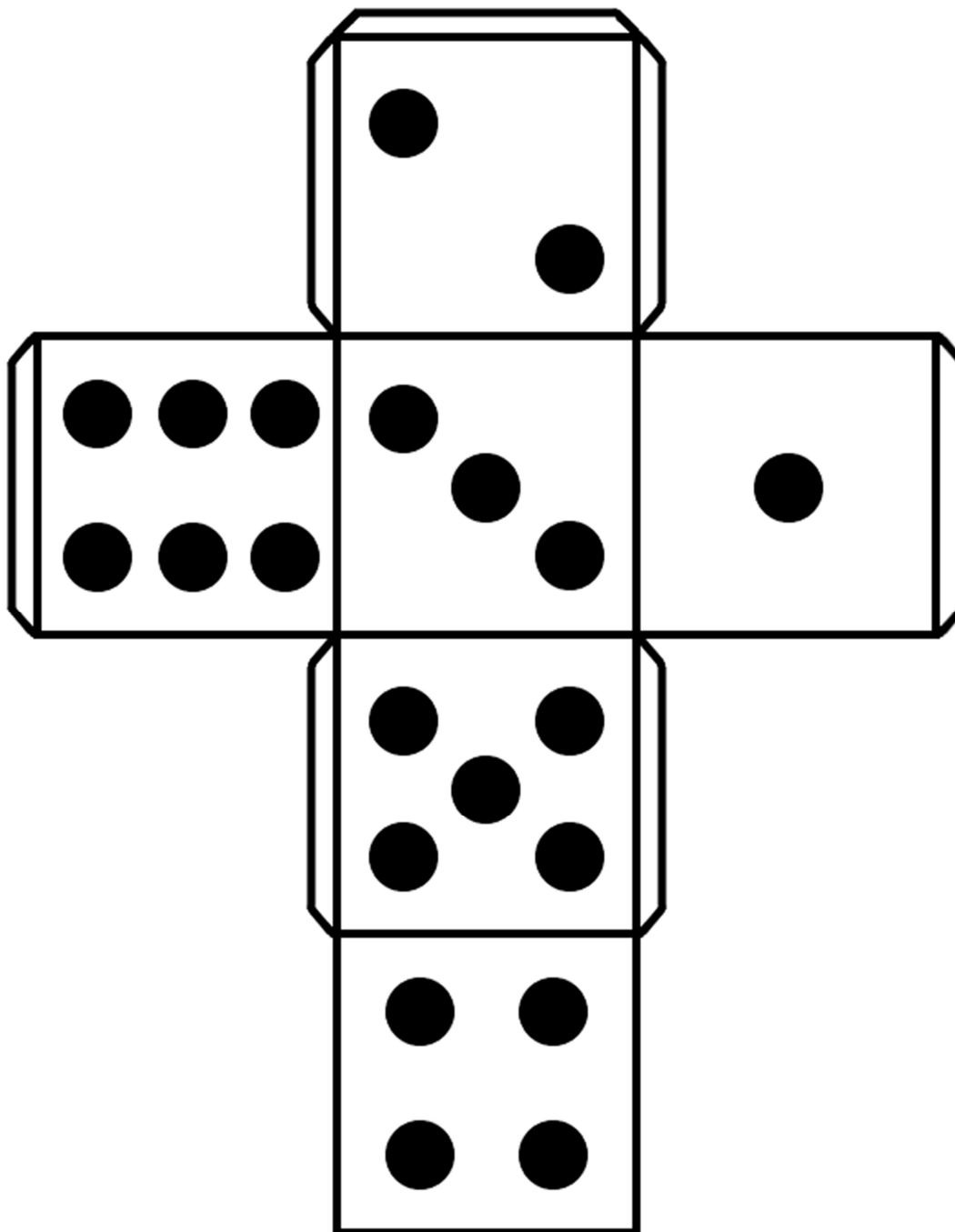
In 1939, Kahlo and Rivera ended their marriage. They split up but stayed friends. Kahlo returned to her childhood home in Mexico, where she made her most popular paintings. A year later, she and Rivera got back together and remarried.

In Kahlo's final years, her health got worse and she became very sad. Still, she continued to paint. Kahlo died on July 13, 1954, at the age of 47.

Legacy

Kahlo's fame continues to grow. She is now recognized as one of Mexico's greatest artists and is known around the world for her bold paintings.



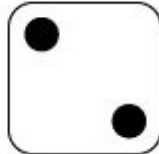








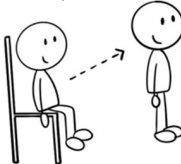
Cut this out to make a dice.
Use this dice for your "Let's Move Brain Breaks" each day.





Let's Move!

Roll a Brain Break: Roll the dice 10 times and do each movement.

	Day 1
	10 Jumping jacks 
	Touch your toes 20 times 
	10 sit-ups 
	Make 20 arm circles 
	Run in place for 1 minute 
	Sit down and stand up 10 times 



Reference Sheet

LENGTH

Metric	Customary
1 kilometer = 1000 meters	1 mile = 1760 yards
1 meter = 100 centimeters	1 mile = 5280 feet
1 centimeter = 10 millimeters	1 yard = 3 feet
	1 foot = 12 inches

CAPACITY AND VOLUME

Metric	Customary
1 liter = 1000 milliliters	1 gallon = 4 quarts
	1 gallon = 128 ounces
	1 quart = 2 pints
	1 pint = 2 cups
	1 cup = 8 ounces

MASS AND WEIGHT

Metric	Customary
1 kilogram = 1000 grams	1 ton = 2000 pounds
1 gram = 1000 milligrams	1 pound = 16 ounces

TIME

1 year = 365 days
1 year = 12 months
1 year = 52 weeks
1 week = 7 days
1 day = 24 hours
1 hour = 60 minutes
1 minute = 60 seconds



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