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From the Desk of **Dr. Robin Dickinson MD**

Making More Humans

# ANSWER KEY

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Including the Family  
Conversation  
Companion



# LEVELING GUIDE FOR PARENTS/TEACHERS

To help you manage different ages using the same glossary, use this suggested completion guide:

- **Elementary (Level 1):** Students should fill out the **IDENTIFY** section for every word. This builds their "medical vocabulary."
- **Middle School (Level 2):** Students should fill out **IDENTIFY** and **INTERPRET**. This ensures they understand how the biology works.
- **High School/Adult (Level 3):** Students should complete all three: **IDENTIFY**, **INTERPRET**, and **INTEGRATE**. This connects the science to social safety, ethics, and self-identity.

**Note on Definitions with Immediate Real World Impact:** For words like Gender Identity, Rape, or Cycle of Abuse, the Integrate section is the most important part for older teens and adults, as it helps them navigate real-world situations and conversations with confidence, respect, and accuracy.

Making More Humans

**ANSWER KEY**

**RUBRIC**

**HIGHLIGHTS**



# SCORING GUIDE

For the glossary, we recommend giving points **based on your expectations for the grade level of the student** (i.e. a 3rd grader completing just the identify column would get full credit, a 9th grader might get 1 point for identify, 2 points for interpret, and 3 points for integrate to give a total of 6 points for each definition).



# 1.1 The Blueprint of Life

## Identify Key (Knowledge-Based)

- **The "smallest thing":** A cell.
- **The "cookbook":** DNA.
- **Chromosomes:** 23 pairs for a total of 46.

## Interpret Key (Comprehension-Based)

- **Mitosis vs. Meiosis:** Mitosis makes an exact copy (clone) for things like skin or growth. Meiosis makes cells with half the DNA (egg/sperm).
- **Why not Mitosis for babies?** If we used mitosis, the baby would have a double set of DNA (too many recipes), which would cause a "disaster" or prevent the baby from developing correctly.

- **Crossing Over:** It is when chromosomes swap parts of their DNA.
- **The Card Example:** Like shuffling a blue deck and a red deck together to make a new pattern that has never existed before. This ensures the child isn't an exact copy of either parent or grandparent.

## Integrate Key (Application-Based)

### Importance of the X Chromosome:

- **Success Marker:** Look for the student to acknowledge that the X chromosome is "essential for life" or "universal," rather than just a "girl part." They should realize that because it carries recipes for bones and blood, it is a foundational human blueprint that everyone (regardless of sex) requires.

# 1.1 The Blueprint of Life

## Integrate Key (Application-Based)

### Gender vs. Sex (City/Country Metaphor):

- **Success Marker:** The student should clearly differentiate between the "outside/labels" and the "inside/feeling."
- **Example of a strong answer:** "Sex is like where you actually live (city or country) or the traits a doctor sees (the physical stuff), while gender identity is that internal feeling of where you fit—like knowing in your bones you're a city person even if you live in the country."

## 1.2 From One Cell to Trillions

### Identify Key (Knowledge-Based)

- **A place that makes a gamete:** Gonad.
- **Cell with half the chromosomes:** Gamete.
- **The "shield" around an egg:** Zona Pellucida.

### Interpret Key (Comprehension-Based)

**"Cheap" vs. "Expensive" Strategies:** Eggs are "expensive" because they are large, complex, and finite (a set amount is made before birth); they are released sparingly. Sperm are "cheap" because they are tiny and made by the millions every single day—they are a high-volume delivery system.

**Mitochondrial DNA (The Maternal Clone):** When a sperm meets an egg, it only brings its DNA (the recipe). The egg provides the entire rest of the cell, including the mitochondria. Since the egg is a part of the mother's body, its mitochondria—and their unique DNA—are hers alone.

### Integrate Key (Application-Based)

#### Scientific Uniqueness:

- **Success Marker:** The student should synthesize two facts: 1) The "Crossing Over" (shuffling) of DNA creates a code that has never existed before, and 2) the specific timing of which sperm reaches which egg is a one-in-a-million event.

## 1.2 From One Cell to Trillions

### Integrate Key (Application-Based)

#### Scientific Uniqueness:

- **Example of a strong answer:** "Even though we all use the same human ingredients, the way the DNA shuffles like a deck of cards means the specific pattern that made me is statistically impossible to repeat. Even identical twins, who have the same code, grow and change differently from the moment they split."

## 1.3 Anatomy and Homologous Parts

### Identify Key (Knowledge-Based)

**Homologous:** Two structures that started from the same tissue (or "medical starter kit") but grew to be different structures.

#### Label the Pairs:

- Ovaries are analogous to Testicles (or Testes).
- Clitoris to Glans (or Glans Penis/Head of the penis).
- Labia majora to Scrotum.

### Interpret Key (Comprehension-Based)

**The Complexity of Sex Determination:** In nature, we all start with the same ball of cells. To develop boy parts, the baby must have specific instructions (usually the Y chromosome) and the right "ingredients" (hormones) to signal those starter tissues to change.

- **Intact vs. Circumcised (The Eyelid Metaphor):** An intact penis has the foreskin covering the glans; a circumcised penis has had that skin removed.
- **The Metaphor:** Like an eyelid protects and keeps the eye moist and sensitive, the foreskin protects the glans. Without it (circumcision), the glans becomes tougher and less sensitive because it is constantly exposed, just as an eye would if it had no eyelid.

## 1.3 Anatomy and Homologous Parts

### Integrate Key (Application-Based)

#### Challenging the "Opposites" Idea:

- **Success Marker:** Look for the student to use the evidence of shared origins. Instead of seeing two different "kits," they should see one kit that was put together in two different ways.
- **Example of a strong answer:** "Learning about homologous parts shows that boys and girls aren't opposites at all. We are made of the exact same stuff, it just moved to different places. It makes the 'wall' between the two sexes feel much thinner."

#### Accurate Names for Safety/Medical Use:

- **Success Marker:** The student should mention clarity and protection.
- **Example of a strong answer:** "Nicknames can be confusing or embarrassing. Using words like 'vulva' or 'scrotum' ensures a doctor knows exactly where the problem is. For safety, it's easier to tell a trusted adult if something is wrong when you have the right words to describe your own body."

## 1.4 Taking Care of Your Body

### Identify Key (Knowledge-Based)

- **The "Golden Rule" for girl parts:** Use only water (no soaps, rinses, or cleansers).
- **Most important step for an intact penis:** Always push the foreskin back over the tip (glans) when finished.
- **The medical name for "stuff":** Discharge.

### Interpret Key (Comprehension-Based)

- **Wiping "Front to Back":** It prevents germs from the "back" (the anus/poop) from being pulled toward the urethra or vagina.
- **The Biological Reason:** Germs from the digestive system can cause painful infections (like UTIs) if they get into the reproductive or urinary systems.

- **Why soap is a bad idea in some places but not others:** Soap is too harsh and can dry out sensitive tissue. Some areas have tougher skin and get more dirty and are prone to infection.
- **The Biological Reason:** The vagina and the area under the foreskin have a natural balance of "good" bacteria and moisture. Soap can kill those good bacteria, which actually makes it easier for "bad" things like fungus (yeast) to grow.

### Integrate Key (Application-Based)

#### The Toothbrush Comparison:

- **Success Marker:** The student should recognize that health is health, regardless of where it is on the body.
- **Example of a strong answer:** "It makes it feel like a normal chore instead of a secret. If my tooth hurt, I'd tell a dentist. If my private parts itch, it's just another part of my body that needs a professional to look at it."

## 1.4 Taking Care of Your Body

### Integrate Key (Application-Based)

#### Consumer Decision-Making (Vaginal Sprays):

- **Success Marker:** The student should identify the conflict between "marketing for profit" and "biological facts."
- **Example of a strong answer:** "A company wants my money, so they try to make me feel insecure. But science says the vagina is self-cleaning and soap makes it worse. Knowing that helps me save my money and protect my health instead of buying something I don't need."

## 1.5 Your Body Belongs to You

### Identify Key (Knowledge-Based)

- **Assent (Agreeing to it after understanding).**
- **Consent.**
- **Trusted Adult.**

### Interpret Key (Comprehension-Based)

**Secret vs. Surprise:** A surprise is meant to be told eventually and feels good/fun (like a gift). A secret about bodies often feels "heavy" or wrong in the tummy and is never okay. A "body secret" is a red flag because it usually means someone is trying to hide unsafe behavior.

**Boss of your body:** It means you have the final say in who touches you and how. It does not mean you never go to the doctor; it means you are a partner in your care. You have the right to ask "Why?", understand the process, and give your assent for medical help.

### Integrate Key (Application-Based)

#### The "Helpful Touch":

- **Success Marker:** The student should recognize that even though their intent is good, the other person still has bodily autonomy.
- **Example of a strong answer:** "I should use **consent** by asking, 'Hey, you have a thread on your shoulder, want me to get it?' If they say no, I respect their **autonomy** by leaving it alone, because it's their body and they get to decide."

## 1.5 Your Body Belongs to You

### Integrate Key (Application-Based)

#### Medical Advocacy: (Students should list at least two)

- A trusted grown-up/witness in the room.
- A clear explanation of what the doctor is doing and why.
- The right to ask questions.
- The right to have the doctor ask for permission before starting.

**Note to teachers:** in the lesson child sexual abuse is defined but not named. If you are needing to have your students define it to meet standards, make sure to include this in your glossary:

Term	<i>Identify</i>	<i>Interpret</i>	<i>Integrate</i>
Child Sexual Abuse	When someone touches, looks at, or shows private parts, or asks you to do the same.	It includes anything that makes you feel scared, confused, or uncomfortable regarding your body.	It is <b>never</b> the child's fault. If this happens, you should tell a trusted adult immediately and keep telling until you are helped.

## 1.6 Healthy Families and Friendships

### Identify Key (Knowledge-Based)

- **Commitment (or Care/Promise).**
- **"Light", safe, heard, and like you can be yourself.**
- **Good Friend Traits:** (Any two) Listening, sharing, being kind, respecting a "No," not pressuring you, using kind words.
- **At least 3.**

### Interpret Key (Comprehension-Based)

**Mistake vs. Dangerous Pattern:** A mistake is a one-time accident where the person feels bad, says "I'm sorry," and tries to fix it. A dangerous pattern is when someone hurts you, scares you on purpose, or ignores your needs over and over. Saying "I'm sorry" is important because it takes away the "heavy weight" and helps fix the relationship.

**The Stomach Test:** If telling a trusted adult makes you feel relieved (like a weight is lifted), it is a Secret that needs to be told. If you feel like the information is just "none of their business" and you don't feel scared or confused, it is likely Privacy.

### Integrate Key (Application-Based)

**Dignity & Respect:** Because feeling isolated or "left out" is bad for a person's physical health. When we respect all families, we make sure everyone feels they belong, which keeps the whole community's stress levels down and health up.

## 1.6 Healthy Families and Friendships

### Integrate Key (Application-Based)

#### Verbal Ways to Show Care: (Any three)

- "Can I give you a hug?" (Asking for consent).
- "I'm sorry I hurt your feelings."
- "Do you want to talk about it?"
- "I'll respect your 'No!'."
- "You're doing a great job."

#### Building Your Team:

- **Names:** (Student lists three specific adults, e.g., Mom, Mr. Smith, Jean).
- **The Strategy:** If the first person is busy, you move to the next person on your list and keep talking until someone listens and helps.

## 1.7 Your Smart Brain and Your Survival Brain

### Identify Key (Knowledge-Based)

- **The Frontal Lobe (or Smart Brain).**
- **Fight, Flight, or Freeze.**
- **Pleasure Center.**

### Interpret Key (Comprehension-Based)

**The Group Survival Reason:** Thousands of years ago, humans needed to stay in a group to survive (we are "squishy" and don't have claws or shells). Being "kicked out" of the group by a mean friend feels to our ancient survival brain like we might be eaten by a wild animal or left alone in the wilderness.

**The Internet Trick:** The internet provides "instant hits" of excitement, likes, or notifications. Our pleasure center thinks these are as important as food or safety because they feel good right away, making it hard for our smart brain to say "stop."

### Integrate Key (Application-Based)

#### Smart Brain Question: (Any one of the following)

- "Will I be proud of this post tomorrow morning?"
- "Is this person just having a bad day?"
- "What will happen if I wait 10 minutes before I hit send?"
- "Does this help me build the kind of life and friendships I want?"

**Neuroplasticity:** We can "rewire" our brain by noticing when the survival brain takes over, taking a breath, and letting the smart brain explain the situation. If we do this enough times, the smart brain becomes the new "automatic" leader in those situations.

## 2.1 Embryology—The Construction Phase

### Identify Key (Knowledge-Based)

- **Embryology.**
- **Endoderm:** Digestive tract and Internal organs. **Mesoderm:** Muscles, bones, and blood. **Ectoderm:** Skin and nerves.
- **20 weeks (The "Anatomy Scan").**

### Interpret Key (Comprehension-Based)

**Conceptional vs. Gestational:** Conceptional age counts from the moment the sperm and egg met. Gestational age starts from the first day of the last period. Doctors use Gestational age because most people remember the date of their last period and are often unsure of the exact moment of conception.

**The Heartbeat:** The heartbeat is the "engine" or "pump." It has to start early because the rest of the body needs blood and oxygen to finish building the other organs and the brain. It is the beginning of construction, not the end.

**Intestines Storage:** The intestines are so long and fold so much that they don't fit in the tiny belly at first. They move into the umbilical cord area temporarily to "fold and twist" while the belly grows big enough to hold them.

### Integrate Key (Application-Based)

**Science vs. Magic:** Because of DNA. You have human DNA instructions. Even if the early stages look similar to other animals because all living things start as a "tube," you can only follow the human blueprint. Science follows the code, not the appearance.

## 2.1 Embryology—The Construction Phase

### Integrate Key (Application-Based)

**The Awareness Milestone:** A reflex is an automatic "program" handled by the spinal cord or brainstem (like a heartbeat or a twitch) that doesn't require thinking or feeling.

Awareness is the connection of the "power grid" (the cortex), which allows the body to actually process senses like touch, sound, and eventually, emotions. It is the difference between a machine running and a person experiencing.

## 2.2 Differences in Development

### Identify Key (Knowledge-Based)

- Spina Bifida
- Cleft Lip
- Limb Difference
- Sexual Development.

### Interpret Key (Comprehension-Based)

**Straw Experiment:** If the lip isn't sealed, you can't create suction. It's like trying to drink through a straw with a hole in the side.

**Fixes vs. Differences:** Doctors "fix" things that cause functional problems (like eating, pooping, or protecting internal organs). They should leave differences alone if they are just unique ways of looking and aren't hurting the person's health.

### Integrate Key (Application-Based)

**Smart Brain:** It says, "There's no danger here! This is just one of the millions of construction steps that went a different way. This person is a masterpiece, just like me."

**Dignity:** Because everyone's body belongs to them (Bodily Autonomy). Forcing surgery just to make other people feel "comfortable" is a violation of that person's dignity and can be painful or harmful.

## 2.3 Puberty—The Magnificent Upgrade

### Identify Key (Knowledge-Based)

- 1Nerve / Hormone
- Kisspeptin (the Hershey's Kisses hormone is also correct!)
- Stage 1

### Interpret Key (Comprehension-Based)

**The Remodel:** The brain is physically moving walls and upgrading wiring. This takes massive energy, which can make you feel exhausted or "moody" as your brain learns to handle new insights and feelings.

**Privacy vs. Secrets:** These feelings and actions are Private (information that belongs to you). They only become "red-flag secrets" if someone else tells you that you aren't allowed to tell your trusted adults.

**Blockers:** They hit the "pause button" to give a person more time. If stopped, the "on switch" simply resumes, and puberty starts naturally.

### Integrate Key (Application-Based)

**Rule of Two:** Success is measured by process, not perfection. Having an active and a creative hobby gives the brain a way to grow that isn't about social pressure or romance.

**Smart Brain:** It reminds you that a crush is just one part of life, and you are still a "Whole Person" with friends, hobbies, and goals.

**Diversity:** No. Adulthood is about maturity and responsibility, not just matching a specific biological "standard" path.

## 2.4 The Impact of Puberty: The Great Remodel

### Identify Key (Knowledge-Based)

- Brain / Remodeling
- Sleep / Snacks / Quiet Time
- Rule of Two
- Whole Person.

### Interpret Key (Comprehension-Based)

**The Energy Drain:** Growing bones and rewiring a brain at the same time takes a massive amount of energy. Feeling "moody" is often just a signal that your body is exhausted and needs better self-care.

**Hormone Blockers:** These act as a "pause button" on puberty. They don't break the system; they just delay the start. If the medicine is stopped, puberty resumes its natural path.

**Crushes and "Non-Feelings":** Having romantic feelings (crushes) is a normal part of the brain's rewiring, but not having them yet—or ever—is also completely normal. Everyone has their own unique "wiring" schedule.

### Integrate Key (Application-Based)

**Rule of Two:** By picking one active and one creative hobby, you give your brain a way to grow and achieve that has nothing to do with social pressure or your physical appearance. It helps you focus on the process of becoming yourself.

## 2.4 The Impact of Puberty: The Great Remodel

### Integrate Key (Application-Based)

**The "Whole Person" Shield:** Focusing on friendships, hobbies, and goals reminds you that you are more than just your physical changes. It keeps your identity strong regardless of what is happening with your hormones or romantic interests.

**Biological Variation:** Puberty's biological goal is reproduction, but not everyone will be able to reproduce easily, and that is okay. It doesn't make a person "less" of an adult; it's just one of the many ways human bodies are built.

## 2.5 Practical Tips for Periods

### Identify Key (Knowledge-Based)

- Menstruation (or Menses)
- Urethra (pee), Vagina (period), Anus (poop)
- Age 12
- (Any three) Pads, Tampons, Period Underwear, Menstrual Cups
- Hydrogen Peroxide

### Interpret Key (Comprehension-Based)

**Mirror Exploration:** Since the vagina is underneath the body, using a mirror helps you learn exactly where the period blood comes from so you aren't surprised and know where to place products.

**Toilet Paper Trick:** You wrap a long strip of toilet paper around the crotch of your underwear 10–15 times. You use this as a temporary pad if you are caught without a product.

**Tampon Safety:** Changing them regularly prevents bacteria from growing, which keeps you from getting dangerously sick.

**Asking for Help:** You can ask a teacher, school nurse, coach, babysitter, or almost any adult woman.

### Integrate Key (Application-Based)

**Healthy Colors:** Knowing that different colors (red to brown) are normal prevents unnecessary panic or the "Survival Brain" from thinking something is wrong.

## 2.5 Practical Tips for Periods

### Integrate Key (Application-Based)

**Dignity:** Periods are a normal biological process for half the population. Bullying about periods is a violation of dignity and should be handled by an adult to keep the community safe and respectful.

**Period Kit:** A spare pair of underwear, a few pads or tampons, a zip-lock bag. Answers may vary.

## 2.6 The Science of Periods

### Identify Key (Knowledge-Based)

- Uterine Lining (Endometrium)
- Follicular and Luteal
- Ovulation
- Progesterone
- Follicles

### Interpret Key (Comprehension-Based)

**Fresh Start:** If the lining stays in too long, the cells won't be healthy anymore. The body clears it out (the period) so it can start fresh with a brand-new, healthy lining for the next month.

**The Two Halves:** The Follicular Phase is the first half (run by Estrogen) where the body prepares the lining and matures an egg. The Luteal Phase is the second half (run by Progesterone) where the uterus is stabilized to wait for a possible guest.

**The Temporary Gland:** The Corpus Luteum is the burst follicle left over after ovulation. It makes progesterone. If no pregnancy occurs, it falls apart, progesterone levels drop, and the period begins.

**Moods:** Shifting hormones can affect the brain's "mood chemicals." This can make the Survival Brain feel extra sensitive or "loud," leading to feelings of grumpiness or sadness.

### Integrate Key (Application-Based)

**Healthy Body:** Seeing a period as a "level up" to adulthood and a sign of maintenance helps remove shame and highlights that the body is working exactly as it should.

## 2.6 The Science of Periods

### Integrate Key (Application-Based)

**Advocacy:** They should talk to a doctor or a trusted adult. Modern medicine can help manage pain and heavy flow; a period shouldn't stop you from living your life.

**Self-Care:** The Smart Brain can recognize that the feelings are just a result of shifting hormones. It can choose to "take the wheel" by scheduling a nap, a quiet break, or using a heating pad instead of reacting to every sensitive feeling.

## 2.7 Hygiene and Common Concerns

### Identify Key (Knowledge-Based)

- Sebum
- Front to Back
- Non-comedogenic
- Smegma
- (Any three) Itching, stinging when peeing, unusual odor, thick/grey discharge, redness

### Interpret Key (Comprehension-Based)

**Clean Clothes:** Socks and underwear soak up the extra oils (sebum) and sweat produced during puberty. Changing them daily prevents skin irritation and keeps "nuisance" germs from growing.

**No Popping:** Popping a pimple can push the infection deeper into the skin and lead to permanent scarring.

**Vulva Care:** The body has "good" bacteria that act as a self-cleaning system. Soap or sprays can wash those good germs away, making it easier to get an infection.

**Discharge:** This is a healthy, normal fluid produced by the body's self-cleaning system. It changes throughout the month to keep the area clean and protected.

### Integrate Key (Application-Based)

**Speaking Up:** These are medical conditions, not "embarrassing" secrets. Doctors see these issues every day, and getting treatment early stops the discomfort and prevents bigger problems.

## 2.7 Hygiene and Common Concerns

### Integrate Key (Application-Based)

**Dignity:** Understanding that acne and infections are medical/biological events prevents people from feeling "gross" or "dirty." It allows us to treat ourselves and our peers with more kindness.

**Maintenance Plan:** (Student answers vary) Examples include: rinsing stinky spots with gentle soap, using deodorant, changing dance/sports uniforms daily, and checking face products for "non-comedogenic" labels.

## 2.8 Pregnancy and Birth

### Identify Key (Knowledge-Based)

- Placenta
- Relaxin
- Breech
- C-section (Cesarean section)
- Colostrum

### Interpret Key (Comprehension-Based)

**Nutrient Priority:** The baby's growth is prioritized. If the mom doesn't eat enough, the body will pull calcium from her bones and iron from her blood. Folic acid is essential to ensure the neural tube "zips up" correctly.

**The First Breath:** The lungs are like collapsed balloons that have never been used. That first breath is a massive physical transition that expands the lungs so the baby can get oxygen from air instead of the umbilical cord.

**Heel Stick:** It tests the baby's blood for dangerous medical problems that might not be visible on the outside. Catching these early allows for life-saving treatment.

**Hormone Shift:** Just like in puberty or periods, birth causes a massive shift in "mood chemicals." This can make the brain feel overwhelmed or anxious as it tries to find a new balance.

### Integrate Key (Application-Based)

**Body Shifts:** Examples include: internal organs (stomach/intestines) moving out of the way, hair and nails growing faster, or joints becoming "wobbly" to allow the pelvis to stretch.

## 2.8 Pregnancy and Birth

### Integrate Key (Application-Based)

**Medical Monitoring:** Birth is natural but unpredictable. Doctors/midwives watch for signs of stress so they can perform an emergency C-section or use tools like forceps if needed. A successful birth is one where both mom and baby are healthy.

**Support:** New moms are physically healing and emotionally overwhelmed. Doing "unpleasant" chores (like trash or cleaning) or making food allows the mom to focus on resting and recovery, which is the best way to support the new family.

## 2.9 Tea and Consent

### Identify Key (Knowledge-Based)

- No (if it isn't a clear "Yes," it's a "No")
- False
- No
- No
- Communicator

### Interpret Key (Comprehension-Based)

**Pressure:** If someone says "yes" just to make the pestering stop, they don't actually want the tea. Consent must be given freely, not because someone felt forced or exhausted by asking.

**Checking In:** People's feelings can change in the middle of an activity. Checking in ensures the "tea" is still enjoyed and that boundaries are being respected every step of the way.

**Obligation:** Even if you boiled the water and picked out the best tea, no one owes it to you to drink it. You are responsible for your own effort; they are responsible for their own comfort.

**Friendship/Trust:** It means the person trusts you enough to be honest. It shows the relationship is a safe place where no one has to pretend to like something just to be polite.

### Integrate Key (Application-Based)

**Safety:** When you prove that you won't get mad or pushy when someone says "No," that person feels safe being around you. They know their "No" will be respected, which makes the relationship stronger.

## 2.9 Tea and Consent

### Integrate Key (Application-Based)

**Clear Boundaries:** (Examples) "I'm not really in a hugging mood right now," or "I don't like wrestling, let's play tag instead."

**Smart Brain Leadership:** The Smart Brain can say: "It's okay that they don't want to do this right now. Their 'No' isn't a mean thing; it's just them being honest. I value this friend more than this one activity, so I'll say 'No problem!' and find something else to do."

## 2.10 The Science of Your Brain on Tech

### Identify Key (Knowledge-Based)

- Pleasure
- Dopamine
- It stopped eating and sleeping to just push the lever
- Stronger
- If you wouldn't wear it in public, don't take a picture in it

### Interpret Key (Comprehension-Based)

**The Lever Trick:** They use "Super-Normal Stimuli" like auto-playing videos, notifications, and small rewards to keep the pleasure center firing so you stay on the screen.

**The Dopamine Crash:** The brain likes balance (equilibrium). After a big "burst" of dopamine, the brain pushes back hard in the other direction. This causes the "flat" or bored feeling once the screen is off.

**Pornography/Staging:** It is designed specifically to trap the pleasure center for money. It isn't real life; it's like a superhero movie with special effects. It doesn't show how people who truly care for each other behave.

**Digital Footprint:** Once a photo is on a phone or the internet, you lose control of it. It can stay there forever and impact your life or career many years in the future.

### Integrate Key (Application-Based)

**Taking the Lever Away:** Use external controls like app timers, set a specific "reward" time for tech, or ask a trusted adult to help you set boundaries.

## 2.10 The Science of Your Brain on Tech

### Integrate Key (Application-Based)

**Finding Balance:** (Any two) Playing outside, reading a book, riding a bike, or engaging in your "Rule of Two" creative/active hobbies.

**Speaking Up:** Close the app/window and tell a trusted adult. It's important to tell because keeping it a secret makes it feel "heavier," and adults can help you process what you saw and stay safe.

## 3.1 Intercourse and Implantation: The Great Odyssey

### Identify Key (Knowledge-Based)

- Semen
- Swim upstream
- Chemical
- Zygote
- Implantation
- 46 (23 from each parent)

### Interpret Key (Comprehension-Based)

**The DNA Lock:** The shell hardens to ensure only one sperm enters. If two sperm entered, there would be too many chromosomes, and the cells would not have a working blueprint to grow.

**Hitchhiking (Cilia):** The zygote is moved by millions of microscopic hairs called cilia that line the fallopian tube. They wave in one direction to push the zygote toward the uterus.

**Ectopic Pregnancy:** This is when a zygote gets stuck and grows in the fallopian tube instead of the uterus. Because the tube cannot stretch, it can burst, which is dangerous for the mom.

**Kin Selection:** This is the biological idea that adults who don't have their own children provide extra food, protection, and wisdom to their nieces, nephews, and community, strengthening the whole family line.

## 3.1 Intercourse and Implantation: The Great Odyssey

### Integrate Key (Application-Based)

**The Filter:** The hard journey ensures that only the strongest, healthiest sperm reaches the egg, which helps ensure the resulting baby has the best start possible.

**Bonding:** It helps us respect that human relationships are built on more than just reproduction. Bonding and pleasure help people stay together, reduce stress, and build stable homes.

**Value of Non-Parents:** No. The lesson explains that non-parents (mentors, specialists, "Gay Uncles") are critical to the community. They focus on resources and skills that help the whole group move forward.

## 3.2 To Conceive or Not Conceive: Managing the Journey

### Identify Key (Knowledge-Based)

- Conceive
- In a lab dish
- Snowflake
- Parenting, Adoption, Abortion
- Barrier (condom), Hormonal (pill, patch, ring), making the uterus inhospitable to the sperm (spermicide, IUD), Surgery (vasectomy, tubal ligation)

### Interpret Key (Comprehension-Based)

**IUI vs. IVF:** IUI places sperm directly into the uterus (a "head start"). IVF happens outside the body in a lab, and then the ball of cells (blastocyst) is placed in the uterus.

**Prenatal Care:** It catches medical problems early. Doctors check blood pressure to see how the heart is handling the extra work and use ultrasounds to ensure organs like the heart and brain are developing correctly.

**Hormonal Control:** It uses estrogen and progesterone to "quiet" the signal so the ovaries do not release an egg (ovulation doesn't happen).

**Adoption vs. Fostering:** Adoption is a permanent, legal transfer of parenting rights. Fostering is often temporary, providing a safe home until a child's birth family is able to care for them again.

## 3.2 To Conceive or Not Conceive: Managing the Journey

### Integrate Key (Application-Based)

**Family Value:** A family is defined by love, care, and commitment, not just genetics. Whether a child is related by DNA or brought in through adoption, the bond of a family is built on the choice to care for one another.

**Planning:** Contraception allows people to decide when they are ready to provide the massive amount of resources a child needs. It helps ensure that children are brought into homes where parents are prepared.

**Community:** It allows families to help each other. One family provides the "start," and the other provides the "growth" and "home." It shows how science and community can work together to build families.

## 3.3 Understanding Chromosomes

### Identify Key (Knowledge-Based)

- 23 / 46
- X
- SRY
- Inactivation
- Down

### Interpret Key (Comprehension-Based)

**Calico Cat:** Females have two X chromosomes. To prevent "overload," the body randomly turns off one X in every cell. In calico cats, some cells turn off the "black" X and show orange fur, while others turn off the "orange" X and show black fur, creating a map of that inactivation.

**Chromosome Size:** Chromosomes 1 and 2 are huge and carry too much information; an extra copy is more than the body can handle. Chromosome 21 is very small, so the body can still function with the extra instructions.

**The "Hidden" Extras:** Because the Y chromosome is tiny and because females already have a "system" (inactivation) for handling extra X's, XXX and XYY conditions often don't cause visible differences in development or health.

**Receptors:** Receptors are like "catchers" on the outside of cells. If they aren't working, hormone signals (like testosterone) just float around with nowhere to go, so the body doesn't follow those instructions.

### Integrate Key (Application-Based)

**Boy Pathway:** 1. A Y chromosome must be present. 2. The SRY gene must work to send a signal. 3. The body must have receptors to receive and use the male hormones.

## 3.3 Understanding Chromosomes

### Integrate Key (Application-Based)

**Spectrum:** It shows that biology isn't always a binary "on/off" switch. There are many unique combinations of chromosomes and hormones that lead to different, healthy ways of being a person.

**The Smart Brain Perspective:** While the Survival Brain might focus on a label or a struggle, the Smart Brain realizes that a single trait doesn't define a person. It chooses to look past the "first impression" to recognize a whole individual with unique talents and goals, treating them with the same respect and curiosity we would give anyone else.

## 3.4 The Four Buckets of Identity

### Identify Key (Knowledge-Based)

- Biological Sex (C), Gender Identity (B), Gender Expression (A), Sexual Orientation (D)
- Cisgender
- Pansexual
- Dysphoria

### Interpret Key (Comprehension-Based)

**Transition Types:** Social Transition involves changing names, pronouns, or clothes; it is completely reversible and is the only type used for children. Medical Transition involves puberty blockers (for teens), hormones, or surgery (mostly for adults).

**Affirming Care:** Gender-affirming care is simply helping the body match the brain's identity. When a cisgender woman gets breast reconstruction after cancer, doctors are helping her feel like herself again—which is the same goal as transition care.

**Expression & Culture:** Culture often dictates what is "masculine" or "feminine." Someone might change their hair or clothes to fit into a certain environment (like a job) or to find a style that makes them feel most comfortable.

**Separate Locations:** Biological sex is determined very early in pregnancy (the first 6–7 weeks) and located in the genitals and hormones. Gender identity is located in the brain, which is a separate organ and develops later. Because they are in different parts of the body, they don't always match.

## 3.4 The Four Buckets of Identity

### Integrate Key (Application-Based)

**Clarity:** Terms take away confusion. They give us a way to speak accurately and respectfully about our own experiences and the experiences of others.

**Term Accuracy:** Correctly applies gender identity, expression, and orientation to the proposal. **Specificity:** Proposes a concrete action (e.g., specific form changes or dress code edits) over vague goals. **Impact:** Clearly identifies who the policy protects and how it improves student safety. **Smart Brain Pitch:** Uses logical, professional reasoning to show how the policy benefits the whole school's wellness.

## 3.5 Consent and Boundaries in Difficult Situations

### Identify Key (Knowledge-Based)

- No
- Coercion
- Some variation of step in, intervene, interrupt
- Blackmail/Bullying

### Interpret Key (Comprehension-Based)

**The Sales Pitch:** Consent is about internal desire, not external popularity. Just because others are doing something doesn't mean you are "thirsty" for it.

**Feelings:** Your body belongs to you. If someone is upset by your boundary, that is a "them" problem. You do not owe anyone a physical interaction to manage their emotions or keep them happy.

**Breaking the Cycle:** Coercion relies on silence and fear. Once a parent or counselor knows, the person can no longer use that secret or threat to control you because you are no longer alone.

**Friendly Interruption:** You can use a "distraction" like asking them to help you with a task, go for a walk, or get a drink of water. This gives the person a "graceful exit" from the pressure.

### Integrate Key (Application-Based)

**Physical Signals:** That "heavy" feeling is the survival brain (or limbic system) sensing a boundary violation. The Smart Brain should recognize this as a "Red Flag" and reach out to a trusted adult immediately.

## 3.5 Consent and Boundaries in Difficult Situations

### Integrate Key (Application-Based)

**Friendship:** Protecting others shows you value people more than social status. It builds a community where everyone feels safe because they know their friends have their back.

**Self-Regulation:** The Smart Brain can say: "Their 'No' isn't about me being bad; it's about their comfort. If I push them, I'm not being a good friend. I'll say 'No problem!' and suggest a different activity."

## 3.6 Plain Speaking About Consent and Boundaries

### Identify Key (Knowledge-Based)

- False
- Oral sex
- Sex (Vaginal or Anal sex)
- Boundary
- Enthusiastic (or gives an enthusiastic yes)

### Interpret Key (Comprehension-Based)

**The Loophole Lie:** Reasons might include guilt, peer pressure, downplaying risks in order to go ahead with something, or others. What they should do is have an open conversation and ensure enthusiastic consent.

**Digital Boundary:** Examples include: being pressured to send a photo of your private parts, receiving unwanted sexual texts, or being forced to look at someone else's photos.

**The "Yes" Rule:** No. Silence or "I guess so" are not "Yes." Real consent is a choice made because you actually want to participate, not because you feel you have to.

**Responsibility:** The person who ignores the boundary or uses force is 100% responsible. The person who was harmed is never to blame.

### Integrate Key (Application-Based)

**Protection:** If you know that "everything counts," no one can trick you into thinking a certain act doesn't have rules. It allows you to say "No" with confidence.

## 3.6 Plain Speaking About Consent and Boundaries

### Integrate Key (Application-Based)

**Removing Shame:** Shame often keeps people from asking for help. By making it clear that the victim is never at fault, we make it easier for people to speak up and get the support they need.

**Seeking Help:** They should tell a trusted adult immediately. They aren't in trouble because they did nothing wrong; telling is the way to get safety and support from people trained to help.

## 3.7 Introduction to Infections

### Identify Key (Knowledge-Based)

- Sexually Transmitted Infection
- False
- HPV Vaccine
- HIV
- Abstinence

**Note to teachers:** While 'abstinence' is the factually correct answer, the lesson immediately follows with a 'real plan' for students who are or become sexually active. The goal is honesty and a plan, not abstinence as the only answer.

### Interpret Key (Comprehension-Based)

**Skin-to-Skin:** Germs like HPV can live on the skin of the private parts, not just in body fluids. Since a condom doesn't cover every inch of skin, the virus can still be passed along.

**Asymptomatic:** This means the person has the infection but has zero symptoms. They feel and look fine, which means they might unknowingly pass the infection to others unless they get tested.

**HIV Progress:** Modern medicine (like PrEP and PEP) can prevent infection, and daily medication can lower the virus in a person's blood to "undetectable" levels, meaning they can live a long life and cannot pass the virus to others.

**STI vs. Nuisance:** STIs are spread from person to person through sexual activity. Nuisance infections (UTIs/Yeast) happen when the body's natural balance is off; you don't "catch" them from someone else.

## 3.7 Introduction to Infections

### Integrate Key (Application-Based)

**Reducing Shame:** By treating STIs as medical issues (like a cold or a cut) rather than a judgment on someone's personality, it makes it easier for people to be honest with partners and doctors.

**The Plan:** Having a plan (using condoms, getting tested) ensures you are leading with your Smart Brain and protecting your future health and goals, rather than letting the Survival Brain take over in the moment.

**Smart Brain vs. Google:** Google often provides scary or wrong information. The Smart Brain knows that a doctor sees these issues every day and can provide a simple, safe fix (like antibiotics) before a small problem becomes a big one.

## 3.8 Understanding Pornography

### Identify Key (Knowledge-Based)

- Naked bodies / private parts
- Dopamine
- Addiction
- False
- Trusted adult

### Interpret Key (Comprehension-Based)

**Loud Stereo:** Just as ears "turn down" hearing to protect against a loud noise, the brain shuts down pleasure receptors to protect against a dopamine flood. Eventually, the person needs more "volume" just to feel anything.

### Escalation/Gray World:

- **Escalation:** Normal things don't feel good anymore, so the person looks for more extreme things.
- **Gray World:** Real life (hobbies, friends) feels flat and boring because the brain's "volume" is set too low to enjoy them.

**Hijacking:** The system was designed to reward us for survival (eating, starting families). Pornography triggers that system without any real effort or relationship, tricking the brain into wanting more of the "fake" signal.

**Objectification:** It trains the brain to skip personality and kindness and focus only on the body, turning whole people into objects for pleasure.

## 3.8 Understanding Pornography

### Integrate Key (Application-Based)

**The Bait:** Recognizing it as a "trap" helps the Smart Brain realize that the urge to click isn't a real need, but a trick being played on the limbic system.

**Switching/Naming:** Switching to a math problem or a song forces the Smart Brain to activate and focus, which tells the survival brain the image isn't important. Naming it out loud takes the "mystery" or "power" away from the image.

**Empathy:** Clicking supports a system that often involves harm or lack of consent. Choosing not to click is an act of respect for the dignity of others and helps maintain your ability to see real people as whole beings.

## 3.9 The Truth About Sexting

### Identify Key (Knowledge-Based)

- If you wouldn't wear it in public/school, don't take a picture in it
- Digital Footprint
- Blackmail (or Sextortion)
- Forward/Share it
- False

### Interpret Key (Comprehension-Based)

**Power Dynamics:** Once a photo is sent, you lose all control. The other person can save it, share it, or use it to threaten you, even years after the friendship has ended.

**Blackmail:** Giving in almost never works; it only proves to the blackmailer that their threats are effective, which usually makes them demand more.

**Bystander vs. Helper:** Forwarding a photo is participating in a violation of privacy (and often a crime). A helper stops the spread and tells a trusted adult to help the person in the photo.

**Long-term Impact:** Employers, colleges, and even future spouses can find old digital footprints. A single photo can put a professional career (like teaching or medicine) at risk decades later.

### Integrate Key (Application-Based)

**Smart Brain vs. Jolt:** The Smart Brain can say: "This is a real person with a real life. Sharing this could ruin their reputation and get me in legal trouble. I'm deleting it right now."

## 3.9 The Truth About Sexting

### Integrate Key (Application-Based)

**Dignity:** Treating others as human beings rather than objects for entertainment is a mark of high character. Respecting others' privacy even when they aren't looking shows that you are a person of integrity.

**Trusted Adults:** Adults have access to resources—like the police, digital forensics, and reporting tools—that kids don't have. They can take the "secret" away, which is what gives a blackmailer their power.

## 4.1 Building Your Internal Shield

### Identify Key (Knowledge-Based)

- Limbic
- Self-awareness
- Resilience
- Don't Even kNow (Know) I'm Lying

### Interpret Key (Comprehension-Based)

**Physical Therapy:** Just as a broken leg needs work to walk again, our minds need work to heal from hard experiences. It's not "weird" to train your brain any more than it's weird to go to the gym for your muscles.

**The Creek:** Feelings are like flowing water. If you try to stop them (dam them) or run from them, you waste energy. "Letting it run over you" means acknowledging the feeling, letting it exist, and waiting for it to pass while you stay grounded.

**The Abscess:** Trauma can stay hidden and make you "sick" (tired, feverish, low energy) for years. Healing is painful and "nasty" at first—like draining an infection—but once it is cleaned out, you stop suffering and can finally move on.

**Self-Esteem:** Healthy self-esteem is simply accepting the truth of who you are—strengths and weaknesses combined—without feeling ashamed or superior to others.

### Integrate Key (Application-Based)

**The Bike Lock:** The thief is responsible for stealing. You aren't responsible for the "thief," but you can do things to protect your own property.

## 4.1 Building Your Internal Shield

### Integrate Key (Application-Based)

**Normalization:** It shows that emotional work isn't a "fix" for "broken" people; it is a standard part of being a responsible, healthy human being throughout your entire life.

**Application:** (Student answers vary) The goal is to describe staying present with the emotion rather than reacting impulsively or trying to "numb" the feeling.

## 4.2 Communication Skills: The Toolbox of Connection

### Identify Key (Knowledge-Based)

- Physical Therapy
- Weather Report
- Engaged
- I-Statement
- Intent / Impact

### Interpret Key (Comprehension-Based)

**Valuing Close Ones:** We often save our best behavior for strangers. Giving our daily family/partners the same "engaged" attention shows they are truly valued and keeps the foundation of the relationship strong.

**Family Meetings:** It's a framework to slow down and work as a team. Starting with Appreciation ensures everyone feels seen and valued before tackling chores or problems, making people more willing to cooperate.

**Apology Nuance:** "I'm sorry you got hurt" shifts the blame to the other person's reaction. "I'm sorry I stepped on your foot" takes Responsibility for the action itself, which is the only way to begin mending the relationship.

**Brain Hijack:** A racing heart, hot face, or the urge to "win" the argument at any cost. These signals mean the Survival Brain is in a "Fight" response and the Smart Brain is no longer in control.

### Integrate Key (Application-Based)

**I-Statement Practice:** "I feel frustrated when the floor is cluttered because I'm worried I'll trip." (Focuses on self, not the "You".)

## 4.2 Communication Skills: The Toolbox of Connection

### Integrate Key (Application-Based)

**Impact Rule:** A "broken foot" is still broken regardless of intent. The person who caused the impact must acknowledge the hurt first. Healthy people help carry the weight of their mistakes rather than making the victim deal with it alone.

**Timeout:** It prevents the Survival Brain from saying something damaging. By saying, "I need 15 minutes to cool down, and then I want to try again," you reassure the other person that you are coming back to solve the problem once you are calm.

## 4.3 Finding Love, Not Limerence

### Identify Key (Knowledge-Based)

- Limerence
- False
- 18 months to 3 years
- Communication
- Validation

### Interpret Key (Comprehension-Based)

**Survival Alarm:** The shaky feeling comes from uncertainty. The Survival Brain senses that you don't know where you stand with the person, so it triggers anxiety to get you to "win" their approval.

**Boring is Stable:** In medicine, a stable heart rate is good. In relationships, "boring" often means predictable, safe, and secure. It's the foundation that allows you to build a life without constant drama.

**Flaws:** In limerence, flaws are ignored or seen as "quirky" positives. In healthy love, flaws are acknowledged, accepted, and dealt with honestly.

**Real Life Shift:** Limerent relationships often crumble when the "spark" fades and chores begin because the relationship was based on a fantasy. Healthy love transitions into becoming a "team" that shares the weight of life's tasks.

### Integrate Key (Application-Based)

**Self-Sufficiency:** If your life is already full, you don't need another person to feel happy or valid. This makes you less likely to tolerate a "human drug" relationship and more likely to wait for a healthy "plus-one."

## 4.3 Finding Love, Not Limerence

### Integrate Key (Application-Based)

**Mismatch:** While "opposites attract" sounds romantic, it often leads to one person feeling smothered and the other feeling lonely. It's better to find someone with shared emotional values.

**Smart Brain Questions:** (Examples) Do they share my core values? Do they communicate clearly and honestly? Are they actually interested in who I am, or just how I make them feel?

## 4.4 Emotional Closeness and Compatibility

### Identify Key (Knowledge-Based)

- Compatibility and Commitment
- Emotional
- Mental
- Compatibility (or "the right fit")
- True

### Interpret Key (Comprehension-Based)

**Boring is Healthy:** Low friction means the couple isn't constantly negotiating or fighting. "Boring" means predictable, safe, and stable—the foundation that lets you actually build a life together.

**The Bait-and-Switch:** If you pretend to love kayaking to impress someone, eventually the real you shows up. You're then stuck either performing forever or dealing with a partner who feels deceived.

**Helping vs. Sharing:** "Helping" means one person owns the task and the other pitches in when asked. "Sharing" means both people track, plan, and initiate equally—including the invisible Mental Load of noticing what needs to be done in the first place.

**The Tuesday Night Test:** Curated dates are highlight-reel moments. Seeing how someone handles a missed flight, a sink of dishes, or a boring Tuesday reveals their actual character—how they manage frustration and show up when nothing exciting is happening.

## 4.4 Emotional Closeness and Compatibility

### Integrate Key (Application-Based)

**The Values List:** Limerence temporarily blinds you to incompatibility. Knowing your non-negotiables (kids, money, religion, lifestyle) before you fall gives your Smart Brain a checklist to run even when your Survival Brain is flooding you with excitement.

**The Three Types:** A Friendship is emotional connection without romantic or sexual attraction. A Romantic Relationship adds romantic feelings. A Sexual Relationship involves physical intimacy. Hurt feelings happen when two people assume they're in the same category but aren't—open communication prevents that mismatch.

**Smart Brain Survival Check:** The "shaky, anxious alarm" is the Survival Brain signaling uncertainty—it's in "win their approval" mode, not love mode. The Smart Brain asks: "Do I feel calm and safe with this person, or do I feel like I'm constantly auditioning?"

## 4.5 Influences on Relationship Dynamics

### Identify Key (Knowledge-Based)

- Power Difference (or Power Gap)
- Transaction
- Immigration
- True
- Share (or Post)

### Interpret Key (Comprehension-Based)

**Tilted Playing Field:** The person in authority holds power over the other person's future (grades/paycheck). This "muffles" the Smart Brain because the Survival Brain is worried about the consequences of saying no.

**Financial Debt:** If one person pays for everything, the other may feel a sense of "debt." They might feel obligated to provide intimacy or time because they rely on the other person for survival (food/home).

**Caregiver Gap:** A person with a disability may feel they must agree to a caregiver's romantic or sexual demands to ensure they don't lose the physical support they need to navigate the world.

**The Thick Fog:** These influences make it impossible to see the real person or your own true feelings. You are reacting to the pressure or the substance rather than making a clear-headed choice based on connection.

### Integrate Key (Application-Based)

**Social Power:** One partner may feel pressure to "stay in line" or avoid conflict because the other person has the "social advantage." It requires both people to be honest about these external forces to keep the relationship healthy.

## 4.5 Influences on Relationship Dynamics

### Integrate Key (Application-Based)

**Self-Esteem:** If you think you aren't "good enough" for someone, you might allow them to cross boundaries just to keep their validation. Healthy relationships require two equals who respect themselves.

**Clarity:** Alcohol and drugs cloud the brain's judgment. Making decisions in the "sunlight" (while sober and without pressure) ensures that your choices belong to you, not to the substance.

**The Bigger Systems:** (Student answers will vary by chosen system.) Success markers:

- 1) Identify a specific power mechanism (not just name the system).
  - 2) The concrete action should be specific and achievable—not "be nicer."
- A strong answer names the system, explains the specific power imbalance it creates, and proposes an action that addresses the root rather than just the symptom.

## 4.6 Attachment and Boundaries

### Identify Key (Knowledge-Based)

- Attachment Style
- Secure (3), Anxious (1), Avoidant (2)
- Fence
- Problems
- Failure

### Interpret Key (Comprehension-Based)

**The Chase:** The Anxious person pursues closeness to feel safe, while the Avoidant person feels threatened by that pursuit and runs away. This creates a cycle of "emotional havoc" where neither person feels secure.

**Dog Poop:** This is when someone refuses to take responsibility for their own "muck" (bad moods, mistakes, or consequences) and instead makes it their partner's problem to deal with.

**No Contact:** Checking an ex's social media "rips the wound open." The brain needs time for the "limbic alarm" to quiet down and for the chemistry of the relationship to fade so you can heal and move on.

**Red vs. Yellow:** A Red Flag makes you feel scared or unsafe (danger). A Yellow Flag makes you feel lonely or like a "ghost" because the partner lacks the capacity for deep connection.

### Integrate Key (Application-Based)

**The Investigation:** You cannot know who someone truly is just by their "wrapping paper" (appearance). You have to "open the box" and see their character in different situations over time before you know if they are a fit.

## 4.6 Attachment and Boundaries

### Integrate Key (Application-Based)

**Smart Brain Growth:** The Smart Brain recognizes that a healthy partner is a "teammate" who cheers on your development. If a partner tries to keep you "small," the Smart Brain realizes the friction is a sign that the relationship is no longer a fit for your future.

**Safety Protocol:** In a dangerous situation, "closure" is not the goal—exit is. Politeness is a social tool for safe people. When safety is at risk, you use different tools: secrecy, trusted adults, and police support.

## 4.7 Recognizing Abuse and Getting Help

### Identify Key (Knowledge-Based)

- Control
- Love Bombing
- True
- Isolation
- Tension / Incident / Reconciliation / Honeymoon

### Interpret Key (Comprehension-Based)

**Concern vs. Isolation:** A protector focuses on your safety and wants to expand your support system (urging you to talk to mom/counselor). An isolator focuses on their own jealousy and wants to shrink your support system so they are the only person you trust.

**Emotional Thermostat:** This is when you feel you must edit your own life or "manage" your partner's mood to prevent an explosion. You are constantly scanning their face to see if you need to "adjust the temperature" to keep the peace.

**Blame-Shift:** A real apology is about the person's own behavior ("I'm sorry I yelled"). A blame-shift apology makes the victim responsible for the abuser's actions ("I only yelled because YOU made me mad").

**The Honeymoon Trap:** This phase uses flowers, tears, and promises to convince the victim the person has changed. It makes the victim doubt their own judgment. Having a baby doesn't fix the cycle; it adds stress that usually makes the cycle turn faster or become more violent.

## 4.7 Recognizing Abuse and Getting Help

### Integrate Key (Application-Based)

**The Shield:** Fixers think they can "save" someone with a dark past, which keeps them trapped in bad behavior. People-pleasers (fawn response) will comply with demands just to avoid conflict, allowing the abuser to push boundaries further.

**The Interview:** If you go in "locked in," you feel like a "quitter" for leaving. If you go in as an "interviewer," you are looking for evidence of compatibility. This gives you "Internal Permission" to walk away as soon as you see a Red Flag.

**Safety Exit:** You don't owe an abuser "closure" or a face-to-face talk. To stay safe: 1. Don't tell them you are leaving ahead of time. 2. Tell a trusted adult. 3. Change all passwords and have a "go-bag" ready.

## 4.8 Decision Making: The Strategy of Your Life

### Identify Key (Knowledge-Based)

- Interview
- Cognitive Distortion
- Sunk Cost
- Two items for good/bad about staying + two items for good/bad about leaving
- Friend Filter

### Interpret Key (Comprehension-Based)

**Not Locked In:** Dating is an evaluation period. You are the manager of your own life, and you have the right to "fire" a partner who isn't a good fit for your values or your peace of mind.

**Mind Reading:** This is a distortion where you assume you know what others are thinking ("They'll think I'm a monster"). Real communication involves asking and listening, not guessing based on fear.

**The "No" Test:** By saying "no" to something small, you see how a person handles a boundary. If they respect it, it's a green flag. If they guilt-trip or pressure you, they are showing you how they will handle big boundaries later.

**Not a Sample:** You are a person with inherent value, not a product at a grocery store. You don't owe anyone your time or a "chance" if you aren't interested. Being honest early is kinder than leading someone on.

## 4.8 Decision Making: The Strategy of Your Life

### Integrate Key (Application-Based)

**Demonstrate:** The student identifies two possible paths and completes all four quadrants of a decision grid with at least two items each. They draw a line through any cognitive distortions and reflect on what they learned. A strong response names at least one item they crossed out and explains why it was a distortion rather than a real reason—showing the difference between fear-based and value-based thinking.

## 4.9 You Are Already Complete

### Identify Key (Knowledge-Based)

- False
- Road trip
- Direction
- Safe
- Non-negotiable

### Interpret Key (Comprehension-Based)

**The Completion Myth:** If you believe you are only "half" of a person, you become desperate to keep a partner even if they treat you poorly. If they leave, you feel like you've lost your "wholeness." Realizing you are already 100% complete protects you from this fear.

**Changing Lanes:** You have the right to take a different exit, stop at a rest area, or move away from the other driver. You are the only person who belongs in your driver's seat.

### Building Your Life:

1. Invest in friendships.
2. Nourish your hobbies.
3. Protect your peace (learn to be alone).

**Selectivity:** If your life is already full and happy, you aren't "hungry" for attention. You will only let someone in if they add to your happiness, rather than letting in a "thief" just to escape boredom.

## 4.6 Attachment and Boundaries

### Integrate Key (Application-Based)

**Companion vs. Soulmate:** A companion is a teammate who helps with the journey of real life. A "soulmate" or "other half" is often a fantasy that ignores the practical work of compatibility and respect.

**Own Work:** Happiness and self-worth are internal jobs. Another person can support you, but they can't fill an internal hole. Using a person to "fix" yourself is using them as a "human drug."

**Personal Engine:** (Student answers vary) The goal is to identify a source of self-validation that is independent of external relationship status.

## 5.1 Detailed Anatomy

### Identify Key (Knowledge-Based)

- Ilium, Ischium, Pubis
- Pubic Symphysis
- Pelvic Floor
- Epididymis
- A hard-boiled egg
- Pap Smear

### Interpret Key (Comprehension-Based)

**The Coccyx:** It is a vital attachment point for the "slings" of muscle that form the pelvic floor. Without it, the organs in the abdomen would have no support.

**Pelvic Floor Tension:** A weak floor might cause leakage, but a tight floor can cause chronic pain or difficulty with bowel movements. Doing Kegels on a tight floor can make the pain worse; sometimes the muscles need to learn to relax rather than squeeze.

**Endometriosis:** This is when tissue similar to the uterine lining grows outside the uterus. It causes internal inflammation and scarring every month. It's not just a "cramp"; it's a physical disease that needs a real medical evaluation.

**Testicular Lumps:** Pain is often caused by minor infections or injury. A firm, painless lump is a common early sign of testicular cancer, which is why "smooth and firm like a hard-boiled egg" is the baseline to look for.

## 5.1 Detailed Anatomy

### Integrate Key (Application-Based)

**Not Inevitable:** Dismissal happens because women's pain is historically undertreated, symptoms feel embarrassing, and "toughing it out" is seen as part of motherhood. Key facts: the pelvic floor is a muscle system that can be treated like any other injury; both weakness and tightness are real conditions requiring different approaches; Pelvic Floor PT is a necessary treatment that gets results.

**Baseline Knowledge:** Knowing what your body feels like when it is healthy allows you to spot "New Lumps" or "New Changes" immediately. This helps you catch problems (like cancer or hernias) while they are still highly treatable.

**Overcoming Shame:** Embarrassment is a Survival Brain reaction to privacy. The Smart Brain recognizes that doctors see these conditions every day and that staying quiet only leads to unnecessary suffering.

## 5.2 Preventative Healthcare

### Identify Key (Knowledge-Based)

- Preventative
- Stress
- No symptoms
- 45 (Note: updated from age 50; if students have heard 50, this is not incorrect for older guidance)
- Determinants

### Interpret Key (Comprehension-Based)

**Reactive vs. Preventative:** Reactive medicine waits for a crisis (pain or injury) to act. Preventative medicine finds problems (like high blood pressure or pre-cancerous cells) while they are small and easy to fix, often years before symptoms appear.

**Social Determinants:** These are non-medical factors like housing stability, access to green space, and healthy food. For example, living near a highway with air pollution or lacking a safe place to exercise can cause measurable physiological stress and damage.

**Weathering and Racism:** It shows that outcomes are not just about genetics or individual choices; they are about the cumulative biological cost of living in a society with systemic racism, which affects heart health and pregnancy even for wealthy individuals.

**The Oil Change:** You don't wait for your car's engine to smoke before you change the oil. Similarly, you check your blood pressure when you feel fine to prevent the "engine" (your heart or brain) from failing later.

## 5.2 Preventative Healthcare

### Integrate Key (Application-Based)

**20s Screenings:** Blood pressure, STI screening, and Pap smears (starting at 21).

**Advocacy:** Keep looking for a provider who listens to you. You deserve a partner in your care. While caution is a natural response to a flawed system, skipping screenings like mammograms or Pap smears allows preventable diseases to progress.

**Relationship Building:** A doctor who knows your "baseline" (what is normal for you) is much more likely to notice when something is slightly off. If they only see you in a crisis, they don't have a "before" picture to compare your symptoms to.

## 5.3 Deciding to Become a Parent

### Identify Key (Knowledge-Based)

- 85%
- Healthy family (Accept 'safe relationship' or 'safe home' as equivalent answers)
- Honeymoon
- False
- Education

### Interpret Key (Comprehension-Based)

**Safety First:** A baby adds massive pressure, exhaustion, and financial stress. In an abusive situation, these factors usually make the situation more dangerous, not better.

**Internal Work:** You cannot "improvise" mental health. If you haven't healed your own trauma or learned to regulate your emotions, the "relentless" nature of a child will push you to a breaking point where you might repeat unhealthy patterns.

**Space and Values:** There is no "correct" size for a home or type of location. What matters is how the environment fits the family's values (e.g., independence, access to nature, or being near helpful relatives).

**Health Risks:** Chronic conditions, genetic conditions, or physical risks to the parent are all valid reasons to explore alternative paths to parenthood.

## 5.3 Deciding to Become a Parent

### Integrate Key (Application-Based)

**Pressure Testing:** Practicing "I-statements" and "Timeouts" while calm makes them "muscle memory" for when you are at your limit with a crying infant.

**Smart Brain Planning:** In the US, leave is not guaranteed. Planning for stability and support before a pregnancy helps prevent a survival-mode crisis later.

**Grace and Growth:** Dr. Robin's message is one of hope. Healing is a journey, and modeling the "work" of growth for your children is a powerful way to be a mentor, even if you didn't start perfectly.

**Know Your State:** (Research-based; answers will vary by state.) A strong response gives specific designated locations and the correct age limit for their state. Look for the student to connect the law to infant safety and the recognition that crisis situations exist. A strong answer acknowledges that knowing this information protects babies even if the student never personally needs it.

## 5.4 Contraception

### Identify Key (Knowledge-Based)

- 85%
- Condom
- Long-Acting Reversible Contraception
- False (It only prevents a pregnancy from starting)
- Vasectomy

### Interpret Key (Comprehension-Based)

**Relative Risk:** While the Pill slightly raises the risk of clots (to 5–9 per 10,000), pregnancy raises that risk significantly more (45–85 per 10,000). By preventing pregnancy, the Pill actually reduces a person's overall risk of life-threatening clots.

**IUDs and Ectopics:** An IUD makes pregnancy so rare (only 2 in 1,000) that the total number of ectopic pregnancies is much lower than in couples using no contraception, where pregnancy is common.

**Dual Protection:** It means using a high-efficacy method (IUD/Pill) to prevent pregnancy PLUS a barrier method (Condom) to prevent STIs. One manages the risk of pregnancy; the other manages the risk of infection.

### Hormonal Roadblocks:

- 1.They stop ovulation (no egg).
- 2.They thicken cervical mucus (sperm can't get through).
- 3.They thin the uterine lining.

## 5.4 Contraception

### Integrate Key (Application-Based)

**Life Logistics:** Stopping a period can reduce the "monthly burden" for athletes, military personnel, or those with endometriosis. Since the "period" on birth control isn't a "real" buildup of the lining, it is medically safe to skip it.

**Accountability:** Hormonal methods rely on steady levels in the bloodstream. Forgetting a patch or a pill creates a "dip" in hormones that can allow ovulation to occur.

**Family Responsibility:** A vasectomy is a 20-minute office procedure, while tubal ligation is an invasive abdominal surgery. Choosing the lower-risk path is a "Smart Brain" decision for the whole family's safety.

## 5.5 Pathology, Prevention, and Treatment of STIs

### Identify Key (Knowledge-Based)

- Bacterial
- Fallopian tubes
- HPV (Human Papillomavirus)
- False (many have no symptoms)
- Herpes

### Interpret Key (Comprehension-Based)

**Fluid vs. Skin:** HIV and Gonorrhea are spread through body fluids, which a condom blocks. HPV and Syphilis are spread through skin-to-skin contact, and a condom does not cover all the skin in the pelvic area.

**PrEP vs. PEP:** PrEP (Pre-Exposure) is a daily pill to prevent catching HIV. PEP (Post-Exposure) is emergency medicine taken after a possible exposure.

**Cancer Prevention:** Certain strains of HPV cause cell changes that lead to cervical, throat, and anal cancers. Getting the vaccine before any sexual activity ensures the body is immune to those strains before exposure.

**Chronic Management:** With modern antiretroviral therapy, people with HIV can live long lives and reduce their "viral load" to zero, meaning they cannot pass the virus to others.

## 5.5 Pathology, Prevention, and Treatment of STIs

### Integrate Key (Application-Based)

**Female Anatomy Risk:** Because the fallopian tubes are open to the abdomen, bacteria can travel from the vagina into the internal body cavity, leading to Pelvic Inflammatory Disease (PID) or infertility.

**Partner Safety:** Your partner might have zero symptoms while the infection is damaging their body. Telling them allows them to get treated, prevents reinfecting you later, and stops the spread to others.

**Removing Shame:** Stigma often prevents people from getting tested or being honest. Recognizing that these are common biological organisms (like a cold or the flu) makes it easier to use medical tools and communication to manage them.

## 5.6 Clinical Management of Pregnancy Termination

### Identify Key (Knowledge-Based)

- Abortion pill
- Suction aspiration
- Movement
- Ectopic
- True

### Interpret Key (Comprehension-Based)

**Prevention:** Comprehensive sexual education, access to affordable, modern contraception, and programs to address rape and domestic violence.

**Management Types:** Medication involves two pills—one to stop growth and one to empty the uterus (similar to a heavy period). Procedural involves a minor clinical procedure like suction or D&E to safely remove tissue.

**Ectopic Emergency:** The fallopian tube is not stretchy like the uterus. As the embryo grows, the tube will burst, causing life-threatening internal bleeding. There is no way for the embryo to survive outside the uterus.

**Respect and Nuance:** These are not flippant choices. They involve complex factors like maternal health, fetal anomalies, or personal safety, and are managed by board-certified physicians.

## 5.6 Clinical Management of Pregnancy Termination

### Integrate Key (Application-Based)

**HELLP Syndrome:** Because the condition is triggered by the pregnancy and causes liver failure and clotting issues, the mother will die if the pregnancy is not ended.

**Breaking the Cycle:** A baby adds stress to abuse. Terminating allows the person to escape the tie to the abuser and prevents a child from being raised in a violent environment or having a traumatizing father.

**Education as Empowerment:** Once the patient understood that the embryo could not survive and would not suffer and that her own life was at risk due to the medical reality, her "Smart Brain" was able to choose the life-saving medical procedure.

## 5.7 Infertility and Assisted Reproduction

### Identify Key (Knowledge-Based)

- Pregnant / Pregnant
- Testes
- Androgen
- Outside
- In glass
- Genetically

### Interpret Key (Comprehension-Based)

**String of Pearls:** These are small follicles that started to grow but "stalled" because the hormonal signal to release an egg (ovulation) never happened. If an egg isn't released, pregnancy can't happen.

**Slope vs. Cliff:** While fertility declines with age, it is a gradual slope. Most people can still conceive in their late 30s or early 40s; it just may take longer or require more monitoring.

**Paternal Age:** Older sperm can have fragmented DNA. This increases the risk of miscarriage and complications like preeclampsia, showing that the age of the person providing the sperm matters just as much as the age of the person carrying the pregnancy.

**IVF Intensity:** It requires shutting down the natural cycle, weeks of hormone injections to swell the ovaries from walnut-size to grapefruit-size, frequent blood draws, and a surgical procedure to retrieve the eggs.

## 5.7 Infertility and Assisted Reproduction

### Integrate Key (Application-Based)

**Testing:** Many STIs have no symptoms. Regular testing is the only way to catch and treat them before they cause permanent scarring that leads to infertility years later.

**Advocacy:** "Pain that stops your life is not normal." Knowing this clinical truth gives you the confidence to seek a second opinion or a specialist if a provider dismisses your symptoms.

**Family Diversity:** It shifts the focus from "genetics" to "bravery and love." Whether a family is formed through traditional means or assistive technology, the commitment to the child is what defines the family.

## 5.8 Understanding Pregnancy Loss

### Identify Key (Knowledge-Based)

- Instructions (or Blueprints)
- False
- Medical
- Reflexes
- Healthy

### Interpret Key (Comprehension-Based)

**Biological Event:** If the DNA instructions for the heart, brain, or circulatory system are missing or incorrect, the pregnancy simply cannot sustain life. The body recognizes this and stops the process naturally.

**The Two Truths:** One truth is the emotional loss of the dream and the future the family imagined. The second truth is the biological reality that the baby never suffered and the process was peaceful.

**Absence of Pain:** Pain requires a fully connected nervous system and a brain developed enough to process sensations. In the early stages, those "wires" are not yet in place.

**Physical Recovery:** Even if the loss is natural, the uterus needs to be completely clear to prevent life-threatening infections or blood clots. The doctor or midwife will monitor that everything goes smoothly.

### Integrate Key (Application-Based)

**Comforting Others:** Knowing the science allows you to reassure them that it wasn't their fault and that the baby didn't suffer. You can hold space for their sadness while removing the fear that they did something wrong.

## 5.8 Understanding Pregnancy Loss

### Integrate Key (Application-Based)

**Protecting the Shield:** When you know that the loss was predetermined by the "blueprints" (DNA) from the moment of conception, it prevents you from blaming your daily actions (like exercise or stress) for the outcome.

**Grief Management:** The Smart Brain can recognize that emotional healing isn't a straight line. By naming the grief and allowing the "creek" of feelings to flow, you prevent the emotions from becoming a crisis.

## 5.9 Sexual Pleasure and Sexual Response

### Identify Key (Knowledge-Based)

- Excitement, Plateau, Orgasm, and Resolution
- Clitoris
- True
- Brake
- Reflex

### Interpret Key (Comprehension-Based)

**Anatomy of Pleasure:** The vagina is built for durability and stretching (childbirth). It does not have a high concentration of pleasure-focused nerves. The clitoris is the homologous partner to the penis and contains the necessary nerve endings for orgasm; therefore, clitoral stimulation is usually required.

**The Brake:** The "Brake" responds to signals of "Stop." Things like stress, fear, feeling unsafe, or pain engage the brake. No matter how much you "floor" the accelerator, pleasure cannot happen until the brake is lifted.

**UTI Prevention:** Urination flushes bacteria out of the short female urethra that may have been pushed toward the bladder during activity, preventing urinary tract infections.

**Flexibility:** The brain can rewire pathways. When traditional pathways are blocked by injury, the skin or other sensory areas can become new "zones" for pleasure and connection.

## 5.9 Sexual Pleasure and Sexual Response

### Integrate Key (Application-Based)

**Decision Making:** Because the body has automatic reflexes, you cannot trust "how you feel physically" as a sign of what you want. The Smart Brain evaluates safety, values, and enthusiasm.

**Reflex vs. Desire:** The body responds to physical stimulation through nerves automatically. A reflex does not equal consent or enjoyment, just as your mouth watering at the smell of food doesn't mean you have given permission to eat.

**Risk Management:** Media is a "performance" and often ignores medical reality. The Smart Brain recognizes that restricting blood flow to the brain (strangulation) is a life-threatening risk of stroke or death, not a safe experiment.

## 5.10 Sexual Assault, Rape, and Your Rights

### Identify Key (Knowledge-Based)

- Sexual Assault
- False
- SANE (Sexual Assault Nurse Examiner)
- Grooming
- Stop sign

### Interpret Key (Comprehension-Based)

**Handling Uncertainty:** You stop and ask. Consent must be clear, willing, and enthusiastic every single time. If it isn't, you do not have permission to proceed.

**Medical Options:** A SANE exam allows for the collection of DNA and evidence while it is fresh. It also provides preventative treatment for STIs and emergency contraception. Getting the exam keeps your legal options open for the future.

**The Seatbelt Analogy:** Safety tips (like staying with friends) are tools to reduce risk, but they don't control other people's behavior. Just as a driver is responsible for a crash even if the other person wasn't wearing a seatbelt, an aggressor is 100% responsible for the assault.

**Secrets vs. Surprises:** A surprise is fun and eventually shared (like a birthday). A secret feels "heavy" and is used by groomers to isolate a person and keep them from telling adults who could help.

## 5.10 Sexual Assault, Rape, and Your Rights

### Integrate Key (Application-Based)

**Rejecting Shame:** Accepting blame for something done to you adds a "second injury." Understanding that the aggressor made a choice to violate a boundary helps the survivor focus on healing rather than self-punishment.

**The Interruption:** "Hey, I've been looking for you, I need help with something in the other room," or "Our ride is here, let's go."

**Breaking the Cycle:** Groomers and blackmailers rely on isolation and fear. Involving a trusted adult or the authorities "breaks the spell" by taking away the person's power to keep you quiet.

**Upstander Policy:** (Student design; answers will vary.) A strong response identifies a specific, real problem, proposes a concrete mechanism (not just "more awareness"), identifies who benefits, and makes a persuasive case. Watch for students who propose punishment-only solutions—a strong answer includes prevention, not just consequences. Goal is systems thinking: moving from "one person steps in" to "the environment makes stepping in easier for everyone."

## 5.11 Exploitation, Coercion, and the Digital Landscape

### Identify Key (Knowledge-Based)

- Grooming
- True
- Sextortion
- Trafficking
- Algorithm

### Interpret Key (Comprehension-Based)

**The Gut Check:** It's a biological signal of discomfort. If you feel the need to hide a relationship from people who truly care about your safety, it's a sign that the relationship is crossing a boundary or is manipulative.

**Digital Speed:** Because someone can be in your pocket (on your phone) 24/7, they can become a massive part of your emotional life much faster than someone you only see at school.

### Warning Signs:

1. Pushing to move to private/encrypted apps.
2. Asking for your home address or when you are alone.
3. Offering "too good to be true" gifts or money.

**Algorithmic Pressure:** Platforms want engagement. Since sexualized content gets more "clicks," the algorithm shows that content to more people. This tricks users into thinking they must act that way to be valued or seen.

## 5.11 Exploitation, Coercion, and the Digital Landscape

### Integrate Key (Application-Based)

**Stopping Sextortion:** Giving in proves you can be controlled and usually leads to more demands. You should stop responding, document the evidence, report to the platform, and tell a trusted adult.

#### Meeting Safety:

1. Never go alone.
2. Meet in a very public place.
3. Tell multiple people where you are going and have an exit plan.

**Scripted No:** "I'm not comfortable with that, so the answer is no." (Then block/ignore). The key is realizing that "Blocking is a complete sentence."

## 5.12 Through the Lifespan

### Identify Key (Knowledge-Based)

- Perimenopause
- Twelve (12)
- Grandmother Hypothesis
- False (It is a disease, not a normal part of aging)
- J-curve

### Interpret Key (Comprehension-Based)

**Reverse Puberty:** Just as puberty is a time of hormonal fluctuation as the body starts reproduction, perimenopause is a time of fluctuation as the ovaries wind down. Both can involve unpredictable periods, mood shifts, and sleep changes.

**HRT Consensus:** The original study used older women and high doses. When researchers looked at younger women starting lower doses of body-identical hormones near the onset of menopause, they found the benefits (for bones, sleep, and heart) often outweighed the small risks.

**The Post-Menopause Brake:** Because the risk of unintended pregnancy is 100% gone, the "Brake" of pregnancy anxiety is lifted, allowing many people to find sex more pleasurable and less stressful.

**Testosterone Balance:** High testosterone drives risk-taking and competition, which are more useful in youth. In older age, a lower (balanced) level is natural. The goal is medical balance, not "maximizing" to recapture youth.

## 5.12 Through the Lifespan

### Integrate Key (Application-Based)

**Future Skeleton:** Weight-bearing exercise (lifting weights, hiking, dancing) and adequate calcium/vitamin D intake.

**Lifelong Protection:** Desire for connection doesn't disappear. If an older adult enters a new relationship after divorce or loss, they are still susceptible to STIs, so testing and protection remain clinical necessities.

**The J-curve:** It shows that while the "middle years" are high-stress, the later years are often reported as deeply satisfying, with less anxiety about others' opinions and deeper personal clarity.

## 6.1 Evaluating Evidence in the Digital Age

### Identify Key (Knowledge-Based)

- Correlation / Causation
- Relative / Absolute
- Placebo
- Blinded
- False (A risk can double from 1 in a million to 2 in a million and still be extremely rare)

### Interpret Key (Comprehension-Based)

**Lighters vs. Cancer:** Lighters and cancer are correlated because smokers carry lighters. However, the lighter is "along for the ride"—smoking is the actual cause. Finding a pattern doesn't prove one thing created the other.

**Drama in Headlines:** Percentages (Relative Risk) sound more dramatic. "100% increase" sells more papers than "1 extra person in a million," even if they describe the exact same thing.

**The "Secret" Red Flag:** Doctors have families and friends they love; if a better treatment existed, they would use it for their own loved ones. Science is a collaborative, peer-reviewed process, not a collection of hidden secrets.

**Algorithmic Echo Chambers:** Algorithms show you what you click on. If you engage with a specific health myth, your feed will fill with similar posts, making it look like everyone agrees with that myth, even if 99% of scientists disagree.

## 6.1 Evaluating Evidence in the Digital Age

### Integrate Key (Application-Based)

**Absolute Risk Calculation:** The Pill has a lower absolute risk. While it increases risk compared to doing nothing, it dramatically decreases risk compared to the alternative (pregnancy).

**Evaluating Influencers:** The influencer might feel better because of the Placebo Effect (believing the tea works) or because other things in their life changed (sleep, diet) at the same time. Without a blinded study, you can't be sure the tea did anything.

**How to Check:** Is this correlation or causation? Who is the source and what do they gain? What do the actual numbers (Absolute Risk) look like? Is this someone claiming a secret? What do qualified experts say? Does this source care about my health?

## 6.2 Being Your Own Advocate

### Identify Key (Knowledge-Based)

- 15%
- Priorities
- Doing nothing
- False

### Interpret Key (Comprehension-Based)

**Competence over Niceness:** Like a mechanic, you need a doctor who is competent and treats you like an intelligent partner. A "nice" doctor who doesn't explain the why or dismisses your concerns is less helpful than a professional one who respects your questions.

**Routine vs. Reason:** "Routine" means it's just a habit. You deserve to know what the test is screening for and how it applies to your specific age, history, and risks. If a doctor says 'it's routine,' the appropriate follow-up is: 'What specifically is this screening for, and why is it recommended for me?'

**Functional Impact:** Doctors need to know what is at stake. Telling them "I can't play soccer" or "I can't focus on my homework" helps them understand the severity of the problem and prioritize your treatment.

**Allergy Severity:** "Allergy" is a broad term. Anaphylaxis is a life-threatening emergency (throat closing/tongue swelling). Knowing the specific reaction prevents the doctor from underestimating or overestimating a risk.

## 6.2 Being Your Own Advocate

### Integrate Key (Application-Based)

**Reproductive Justice and Intersectionality:** (Student answers will vary.) A strong response connects barriers specifically to the three rights. Intersectionality means these barriers compound—race, income, and geography together create a harder situation than any one factor alone. The policy should be specific and tied to a real gap (sliding-scale doula services, paid family leave, bias training for OB providers).

**Know Your State — Minors' Healthcare Rights:** (Research-based; answers will vary by state.) A strong response lists specific services and the correct age threshold—not just "some things."

Look for the student to identify the core reasoning: requiring parental consent for sensitive care causes some minors to avoid care entirely, which leads to worse health outcomes. A strong answer recognizes this as a public health decision, not a statement about parental rights.

## 6.3 The Future of You

### Identify Key (Knowledge-Based)

- System
- True
- adolescence / mid-twenties / 40s and 50s / 60s / learning / changing / growing
- Pilot
- Construction project

### Interpret Key (Comprehension-Based)

**Passenger vs. Pilot:** A passenger just goes where they are told and hopes for the best. A pilot understands the "controls" (their body and rights), asks questions, makes informed decisions, and advocates for their own destination.

**Variety as Norm:** Biology rarely produces "identical" results. Understanding that variation is normal replaces the Survival Brain's fear of "being different" with a Smart Brain's respect for diversity.

**Scientific Process:** It means the system is working. As we get better tools and more data, we refine the "Clinical Truth." Being comfortable with this allows you to stay informed rather than clinging to outdated information.

**Construction Project:** It removes the pressure to have everything figured out now. It reminds you that resilience, joy, and physical capacity are things that grow over time, not things you are born with in a fixed amount.

## 6.3 The Future of You

### Integrate Key (Application-Based)

**Reference Manual:** A strong answer names a specific module and connects it to something real in the student's current life—not just 'all of them' or 'relationships.' Look for specificity and self-awareness.

**Curiosity vs. Fear:** A frightened patient might ignore a symptom or just nod along without understanding. A curious patient asks, "Why is this happening?" or "What does the evidence show for this treatment?" They seek understanding to reduce anxiety.

**Final Affirmation:** Student choice. The goal is a concrete, achievable commitment—not 'be healthier.' Examples: schedule a doctor's appointment, get more sleep this week, have a specific boundary conversation. Vague answers should be gently pushed toward specificity.

Making More Humans

**THE FAMILY**  
**CONVERSATION**  
**COMPANION**

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# A NOTE TO PARENTS AND GUARDIANS

**You don't need to be an expert to have these conversations**, you just need to be available. Research consistently shows that young people who can talk openly with a parent or trusted adult about bodies, relationships, and health make better decisions, seek help sooner when something goes wrong, and feel less alone. This guide gives you a simple starting point after each module.

You don't need to cover everything. **One good conversation is worth more than ten awkward ones.** If a prompt doesn't feel right for your family right now, skip it and come back later or use the **universal opener** below instead.

*"What was one thing from this module that surprised you, or that you'd never thought about before?"*

This question has no wrong answer, puts no pressure on either of you, and opens a door. Sometimes that's all you need.

You also have **printable conversation cards** that you can use with your family. These are good for keeping at the dinner table if that's a place you already talk.

My personal favorite? The car, bus, or train. When you're all facing the same direction and stuck sitting together, it's a great time to talk. Especially with my teenage son, our best conversations often happen when he needs a ride somewhere.

Keep the cards somewhere convenient for those moments, whatever works for your family!



## MODULE 1

# Building Blocks & Basics

Age 7+

## What Your Child Covered

- ✓ How cells work, DNA and chromosomes, anatomy and homologous parts, basic hygiene, body autonomy, healthy relationships, and how the brain handles danger and pleasure.

## Why This Module Matters

- ✓ "This module uses **clinical language throughout** — words like vulva, penis, clitoris, and scrotum. Dr. Robin teaches that using accurate names from a young age is a safety tool, not just a formality. Children who know the correct words are better able to report concerns to trusted adults. "
- ✓ The **Smart Brain/Survival Brain framework** introduced here will be built on throughout the entire course — it's worth making sure your child understands it from the start.

### Conversation Starters

#### Blueprint of You

What's one trait that you're glad got passed down to you?

#### The Smart Brain Logic

When you're in a high-pressure situation (like a big game or a tough test), what are some strategies you use to help your Smart Brain stay in charge when your Survival Brain wants to take over?

## MODULE 2

# Construction & Calibration

Age 9+

## What Your Child Covered

- ✓ Embryology and fetal development, differences in development, puberty (the science and the practical side), periods, hygiene, pregnancy and birth, consent (the tea metaphor), and how the brain responds to technology.

## Why This Module Matters

- ✓ The puberty lessons are split intentionally — **one on the biology, one on the emotional and practical experience**. Both sexes learn about both sides of puberty. Dr. Robin's approach is that everyone needs to understand half the population.
- ✓ **The tech lesson** is particularly important for families with children who have access to devices — it approaches screen time as a brain science issue, not a rules issue, which often lands better with kids.

## Conversation Starters

### Brain Rewiring

Your brain is always changing and growing. What are some ways you feel like your brain is starting to see the world differently than you did when you were a little kid?

### The Digital Dopamine Loop

We talked about how tech can "hijack" the brain's reward system. Which apps or games are the hardest for you to put down? How are they designed to make your Survival Brain feel like it needs them?

## MODULE 3

## Origins &amp; Agency

Age 12+

## What Your Child Covered

- ✓ How conception and implantation work, contraception and assisted reproduction, chromosomes and genetic conditions, sexual orientation and gender identity, consent in difficult situations (pressure, coercion, blackmail), what counts as sex, introduction to STIs, pornography, and sexting.

## Why This Module Matters

- ✓ This is the module where **content gets most clinically direct**. The lessons on pornography and sexting are designed to be **protective** — Dr. Robin addresses them as brain science and digital safety, not moral lectures. If your child has already encountered pornography, this module gives them language to talk about it.
- ✓ The lesson on **what "counts as sex"** is specifically designed to close loopholes that predators use to convince young people that certain acts "don't count."

**A note on Lesson 3.4 (Sexual Orientation and Gender)**

This lesson defines biological sex, gender identity, gender expression, and sexual orientation as four separate things. If your family has specific beliefs about these topics, this is a natural moment to share them — the lesson itself presents the science; you can add your family's values as context.

**A simple opener:** "Did anything in that lesson bring up questions for you? I want to make sure you know what our family believes about these things, too."

**MODULE 3****Origins & Agency****Age 12+****Conversation Starters****Consent in Movies and Books**

Can you think of a scene in a movie or book where a character was coerced or pressured into something, but the story tried to make it look romantic? How would it look if they actually got consent?

**Planning Ahead**

Let's brainstorm how you'd handle things like pressure to send a photo, a friend ignoring your "No," a doctor dismissing your pain, or a situation where you need a quick exit strategy.

## MODULE 4

## Chemistry and Connection

Age 13+

## What Your Child Covered

- ✓ Emotional health and building an "internal shield," communication skills, limerence vs. healthy love, emotional compatibility, power dynamics in relationships, attachment styles and boundaries, recognizing abuse, decision-making frameworks, and the "You Are Already Complete" message.

## Why This Module Matters

- ✓ This module is arguably **the most protective content in the entire course**. The lessons on love bombing, the cycle of abuse, and how to exit a dangerous relationship are clinically grounded and specific. Dr. Robin also directly addresses students who may recognize controlling behaviors in themselves — without shaming them.
- ✓ **The communication skills lesson** is one of the most practical in the course and applies as much to your family's daily life as it does to future romantic relationships.

## Conversation Starters

## A Movie or Book Critique

Think of a couple in a book or movie. Do you think they actually have compatibility — shared values and teamwork — or are they just in limerence, the "spark" phase?

## The Yard and the Fence

We talked about "tending your own garden" versus fixing someone else's. Have you ever felt like you were spending too much energy on a friend's drama while your own "lawn" (school, hobbies, sleep) was getting ignored? Or has someone ever expected that from you?

**MODULE 5**

# Advanced Systems and Risk Management

Age 14+

## What Your Child Covered

- ✓ Detailed anatomy, preventative healthcare, deciding to become a parent, contraception, STIs, pregnancy termination, infertility and assisted reproduction, pregnancy loss, sexual pleasure and response, sexual assault and rights, exploitation and the digital landscape, and the full human lifespan through menopause and aging.

## Why This Module Matters

- ✓ This is **the most clinically comprehensive module in the course**. Dr. Robin's approach throughout is medical and non-judgmental — the lessons present facts, options, and patient stories. Several lessons touch on topics where your family may have strong values of your own. Those values matter, and this guide points out the natural moments to share them.
- ✓ The sexual assault lesson in particular contains **information that could be genuinely protective for your child at any point in their life**.

### On Lesson 5.6 (Pregnancy Termination)

This lesson presents the medical facts and several patient stories representing a range of circumstances. If your family has strong views on this topic, this is a natural moment to share them alongside the clinical information.

**A simple opener:** "That lesson covered a topic our family has beliefs about. I'd love to talk about what you thought and share what we believe as a family."

**MODULE 5****Advanced Systems  
and Risk Management****Age 14+****Conversation Starters****Relative Risk Reality**

Why do you think people get so scared of side effects (like with the contraceptive pill) but forget to look at the risk of doing nothing (like the risks of pregnancy)?

**The Future You**

Imagine yourself at 35. What are two things you hope you've prioritized — like your career, a healthy family, or your physical fitness — to make that future version of you happy?

## MODULE 6

## Lifelong Literacy &amp; Next Steps

All Ages

## What Your Child Covered

- ✓ How to evaluate health information online (correlation vs. causation, relative vs. absolute risk, the placebo effect), how to be their own medical advocate (preparing for appointments, knowing their rights, getting second opinions), and a closing reflection on everything the course has built.

## Why This Module Matters

- ✓ This module is essentially a toolkit for lifelong health literacy. **The advocacy lesson (6.2) is immediately usable** — the skills apply to your child's very next doctor's appointment. You may want to read that lesson yourself, because the same skills apply to you.
- ✓ **The evidence literacy lesson (6.1)** is also something the whole family can practice together the next time a scary health headline shows up in your feed.

## Conversation Starters

## The Headline Challenge

If you saw a video claiming blueberries cure everything, what would you need to find out before you believed it? If someone says doctors are hiding a "secret cure," what should you ask yourself?

## Finding a Doctor

What qualities are most important to you in a doctor? What would make you feel respected in the exam room?

## The Wrap-Up

A closing conversation for the whole course

This is the most important conversation of all. It signals that the learning doesn't stop here, that you're still a resource, and that curiosity is always welcome.

*"Now that you've been through the whole course — is there anything you learned that changed how you think about something? And is there anything you're still curious about or that you'd want to look into together?"*

# THE CLINICAL TRUTH OF YOUR WHOLE BODY

## More from Dr. Robin's School

This course is one part of a larger curriculum built by Dr. Robin Dickinson for students who want to understand how the human body works.

### MedPath



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From the Desk of  
**Dr. Robin Dickinson MD**

# Making More Humans

**Answer Key | Family Conversation Companion**

The **Family Conversation Companion** is a supplement to the full curriculum. It is not a replacement for the lessons themselves or for professional medical care.

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