

## Educator's Guide to Assisted Reproduction

Let's face it. Anytime a kid doesn't look like their parent(s) or when they don't have both a mom and a dad, their classmates ask. Sometimes students are willing and equipped to handle the situation and other times they don't appreciate being singled out with very personal questions.

Assisted reproduction refers to a number of ways to create a pregnancy, other than penis-in-vagina sexual intercourse. When educators understand assisted reproduction, they can proactively take the burden of explaining reproduction off the shoulders of the kids being questioned. Weaving the concepts into the curriculum helps normalize and value all students and their families equally. This can be particularly valuable for kids who don't even know they are donor conceived, but later discover they are. It also empowers LGBTQAI(+) youth to see a future they might not have imagined. The flip side is that when sexual intercourse is presented as the only means of reproduction, many kids and their families are left out of the conversation. Research shows that kids who are heard, seen and respected, do better emotionally, socially, and academically.

### Baby-Making 101

It takes three "ingredients" to make a baby: an egg cell, a sperm cell, and a uterus. When an egg and sperm cell joins together through fertilization, they can create an embryo. When an embryo implants in the uterus, it can continue to develop (gestate) into a fetus. If development continues for about nine months, a baby is usually ready to be birthed through the vagina or the abdomen (Cesarean delivery).

### Where do the baby-making ingredients come from?

- Sperm and egg cells (and embryos) come from a parent or a donor. A donor is a person who gives their eggs, sperm, or embryos to someone else so they can create a pregnancy. Sperm, eggs and embryos can be frozen and used at a later time or given to someone else.
- Gestation takes place in the uterus of a parent or a surrogate. A surrogate is a person who is pregnant with and gives birth to a baby for someone else. There are two types of surrogates. A genetic or traditional surrogate is genetically linked to the child (their eggs) and a gestational surrogate or carrier is not (eggs are from a parent or donor).

### How do the ingredients create a baby?

- **Penis-in-Vagina Sex** (PIV sex, sexual intercourse, vaginal intercourse). Once sperm are ejaculated into the vagina, the sperm move toward the egg. When a sperm and an egg cell join together in the fallopian tube (fertilization), they can create a brand new cell. As the fertilized egg travels through the fallopian tube, it divides to make more cells. When the bundle of cells (an embryo) reaches the uterus, it can implant (or attach), and can continue to develop into millions of cells over the course of about nine months.

- **Insemination.** Sperm are ejaculated into a cup or a container, suctioned out of the container and then released into the vagina or the uterus. Once inside the body, sperm and egg can unite in the fallopian tube — exactly the same way they do during sexual intercourse. Intracervical insemination (ICI) is when semen are placed into the vagina, near the cervix (with a needleless syringe) and can be done at home. Intrauterine insemination, or IUI, is when sperm are released into the uterus (with a flexible tube called a catheter) and is usually done in a medical setting. See graphic below.
- **In vitro fertilization (IVF).** Sperm are ejaculated or are surgically removed from the body and placed in a container. Eggs are also surgically removed from the body and placed in a container. An embryologist who is a medical professional specially trained to work with eggs and sperm when they are outside the body, joins the egg and sperm together. They either add sperm to the container with the eggs and sperm “swim” around until they find an egg to fertilize, or the embryologist selects a single sperm and injects it directly into the egg (ICSI). After the fertilized eggs, called embryos, grow in the container for a few days, an embryo(s) can be placed into the uterus where it can attach and continue to develop - just like it would have if fertilization had happened inside the body. But embryos can be frozen and used at a later time or given to someone else so they can grow their family. See graphic below.

### What families use assisted reproduction?

Infertility is one reason why people use assisted reproduction. Infertility happens when someone’s body is not able to get healthy eggs and sperm from where they are made to where they need to go to create a pregnancy. Others, such as single people, and those who identify as gay, lesbian, transgender, queer, asexual, and intersex (LGBTQAI+), don’t always have all the necessary baby-making ingredients. There are many instances where donors, surrogates, insemination and IVF help people form family. Here are just a few examples:

- Heterosexual, cisgender people who experience infertility can use insemination or IVF with their own baby-making ingredients, or with ingredients from donors and surrogates.
- A single cisgender woman (or women in a lesbian relationship) can be inseminated with donor sperm. Or, through IVF, she could have her eggs removed from her body, joined with donor sperm, and the resulting embryo(s) could be placed back in her body. If she can’t carry a pregnancy (e.g., due to miscarriages), the embryos can be placed into a gestational surrogate’s uterus.
- A single cisgender man (or men in a gay relationship) could use his sperm to inseminate a genetic surrogate. Or, through IVF, his sperm could be used to fertilize donor eggs and the resulting embryo(s) could be placed into the uterus of a gestational carrier.
- An intersex person with a vulva, vagina, and testes (but the testes don’t produce sperm), could use IVF with donated eggs, sperm and a surrogate.
- If a transgender woman or non-binary person (with sperm) wants to have a baby, she/they may need a partner with eggs and a uterus, or an egg donor and a gestational surrogate.
- If a transgender man or non-binary person (with eggs and a uterus) wants to have a baby, he/they may need a partner with sperm or a sperm donor.
- If people don’t have a partner or do not want to create a pregnancy with PIV sex, they can use donors, surrogates, insemination and IVF.

Students can think about the many combinations of parents, donors, and surrogates that can all help create family. What's important to emphasize is that sometimes the people who provide the ingredients to create a child are not the same people who are currently raising the child. This is often true for blended, multi-parent, single-parent, single-sex, extended, cohabitating, adoptive, chosen, and foster families. Families use different names for all the people that play a role in creating and raising children. It's up to each family to decide who is in their family and what to call them.

Student's feelings about their conception story and family are often complex and multi-layered, and often change over time. Recognizing, listening to and respecting student's experiences helps empower students to manage their feelings and develop a strong sense of identity.

### Tips for using inclusive language

Inclusive language simply means including all students and their families in the explanation of human reproduction. When you know the language that an individual prefers, use it! If you don't know, and can ask respectfully, do so! If not, stick with more neutral, affirming language. Unless an individual has told you otherwise, here are some best practices:

- Single-parent families, children with LGBTQAI+ parents, and cisgender heterosexual families often rely on egg, sperm and embryo donors, genetic surrogates (eggs and uterus) and gestational carriers (uterus). It's best not to assign the word parent, mother, or father to donors or surrogates. E.g., it's best not to refer to someone as a donor dad or a surrogate mother. Simply say donor or surrogate.
- When it's necessary to use the word parent when discussing donor-conception, instead of using words like real or natural parent, it is better to refer to a bio or biological mom/dad/parent or a genetic mom/dad/parent.
- Genetic and gestational surrogates do not consider the children they give birth to, as their children and they do not consider themselves to be the child's mother.
- Donor-conceived people often discover siblings that they are genetically related to through a donor. Common, respectful terms are half-siblings or donor-siblings.
- It's never okay to refer to assisted reproduction as unnatural or to refer to someone as a test-tube baby, a science experiment, or any of the other derogatory statements used to describe people who are conceived via assisted reproduction.

Developing a new language takes time, and we hope that students and teachers will give themselves grace as they become more comfortable and fluent in the language of assisted reproduction.

## Weaving Concepts Into the Curriculum:

Though the following points refer to assisted reproduction, please note that they also apply to adoptees, youth in the foster system, as well as any student not living with their genetic parents.

### **Anatomy, physiology and Reproduction**

Conversations about body parts, what they do, and how they work to create and maintain a pregnancy provide ample opportunities to mention egg, sperm and embryo donors, genetic surrogates, and gestational carriers, insemination and IVF. Don't wait for students to mention them — we encourage you to be proactive in providing lots of examples of all the different people who can play a role in human reproduction, family formation, and in raising children.

### **Diverse Families**

Families, kinship and chosen communities come in all shapes and sizes. When kids identify the important people in their lives, they may mention donors and surrogates and the families of the donors and surrogates. They might also talk about donor siblings. They might know who their donors and donor siblings are or they might not know anything about them. They might think about them a lot or not at all. How they feel about the donor, their donor siblings and their surrogate, the names they use, and how private or public they are about their family is going to vary greatly from student to student, and is likely to change over time for any one person.

### **Identity**

Conversations about what makes us the unique individuals that we are typically include discussions about our genetics (nature) and our experiences (nurture). When donor conceived children do not know anything, or much at all, about their donor, they can wonder what traits come from their donor, and which characteristics are uniquely their own. Other donor conceived people don't find out (by accident or on purpose) that they are donor conceived until they are older, and it can take some time for them to regain their sense of identity.

### **Race/Ethnicity**

Some children conceived with egg, sperm and embryos identify with the race and/or ethnicity and/or culture of the donor. As students grow and learn more about racial, ethnic and cultural identity, some come to feel that lived experience is more meaningful than genetic ancestry, others feel that the genetic connection is more important, and many others land somewhere in the middle.

### **Disparities**

A **disparity** is a large difference between groups of people that is often unfair. When people can't access the fertility care they need, when they can't adopt children or be foster parents, it means there are great disparities in how people are able to make and raise family. Disparities can be about income, race, ethnicity, culture, social status, political views, ability/disability, gender, education, sexual orientation, age, and much more. Disparities in family formation can be added as examples to any class discussion on the topic.

## Celebrity Families

Though everyday people use assisted reproduction, famous families can serve as examples:

- Michelle and Barack Obama used IVF to create their two daughters, Malia and Sasha.
- Actress Gabrielle Union and NBA player Dwyane Wade used IVF and a surrogate.
- Songwriter dad Sir Elton John and dad David Furnish used an egg donor and a surrogate.
- Single mom Sarah Fain, producer of *The Vampire Diaries*, used donor insemination.
- Activist, trans dad Myles and author, trans mom Precious Brady used IVF with Precious's sperm and Myles' eggs.

For more information:

### **The Donor Conception Network**

Resources for families, teachers and the grade-schools about donor conception, cost: \$20

<https://www.dcnetwork.org/products/product/primary-school-resources-parents-children-and-teachers>

Most of the detailed information available on assisted reproduction is written either for people seeking reproductive health services or health care professionals providing those services. Very little exists to help educators and parents explain assisted reproduction to youth. The following are the most succinct and useful for educators:

### **British Fertility Society**

Has quick guides on any/all topics within assisted reproduction,

<https://www.britishfertilitysociety.org.uk/public-resources/>

Fertility Technologies Shaping Modern Families: A great video that summarizes different people who might seek fertility services, <https://youtu.be/dOi08g3CLOc>

### **American Society for Reproductive Medicine (ASRM)**

Offers education, advocacy, and standards in reproductive medicine and science. Has patient info sheets in English, Spanish and Chinese, videos and podcasts,

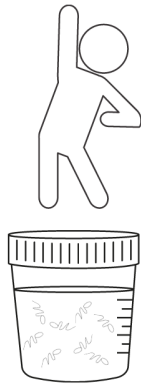
<https://www.reproductivefacts.org/>

### **Fertility IQ**

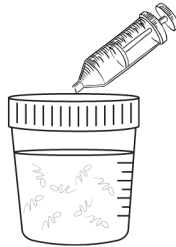
Offers many video-based learning modules on various topics of reproductive health

<https://www.fertilityiq.com/courses>

## FERTILIZATION: INSEMINATION



**Step 1**  
**Sperm ejaculated**  
**into a container**



**Step 2**  
**Sperm removed**  
**from container**

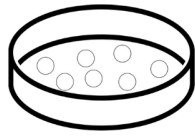
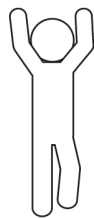


**Step 3**  
**Sperm released into**  
**the vagina or uterus**

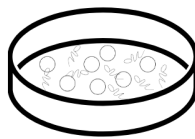
## FERTILIZATION: IN VITRO FERTILIZATION (IVF)



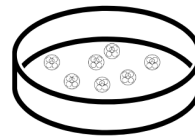
**Step 1**  
**Sperm is**  
**placed into a**  
**container**



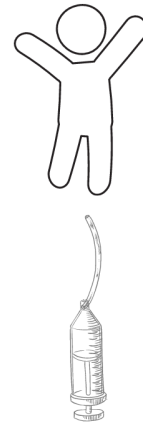
**Step 2**  
**Eggs are**  
**placed into a**  
**container**



**Step 3**  
**Sperm and eggs**  
**in same container**  
**OR**  
**Sperm injected in**  
**egg**



**Step 4**  
**Embryos develop**  
**for a few days**



**Step 5**  
**Embryos placed into**  
**uterus**