Trust, Transparency and Control Labs

Meta

Co-designing immersive social age-appropriate experiences

Insights from youth, parents and advisors

Executive summary

Meta is committed to building experiences that are valuable for parents and for youth across our technologies. We collaborate with third-party organizations, advisors and families to ensure we're meeting the unique needs of parents and their children aged 10-12, early teens and later teens.

As part of our commitment to build the metaverse responsibly while providing safe and age-appropriate experiences, this report shares learnings from multistakeholder exploration on the topic of social, multiplayer online games on mobile and immersive settings with families in the US, UK, Ireland, and Australia (36 parents and 36 youth - including children aged 10-12 and early teens aged 13).

This report focuses in particular on age-appropriate immersive social experiences. In these experiences, youth have the feeling of being synchronously present and able to communicate in a shared space that enables interactions with other people in mixed reality (MR) and virtual reality (VR) environments. Synchronous social experiences also might offer a degree of immersion on mobile or desktop surfaces, which the report also brings into relief. The report includes insights from research workshops with families and consultation sessions with third-party organizations and advisors, actions Meta has taken, as well as future-facing considerations for industry.

This report is intended for government, academia, civil society and industry. It presents the key findings from a global series of workshops with parents and their children aged 10-13, paired with observation and consultation sessions with third-party advisors. These sessions were facilitated by the Trust, Transparency and Control Labs (TTC Labs), a multi-year effort by Meta bringing together youth, parents, academics, policymakers, civil society, and industry to uncover relevant insights and considerations around the design of age-appropriate digital experiences. These insights are used in the policy and product development process at Meta, including:

- Family Center, which provides tools covering a range of different Meta technologies, from social media and messaging to MR and VR experiences to gaming, so families can connect with friends, discover immersive spaces and comfortably express their creativity online;
- Parent-managed Meta accounts, which give families even more ways to use and enjoy MR and VR experiences for children aged 10-12 on Meta Quest, our mixed and virtual reality device; and
- Child access to Meta Horizon Worlds on the Meta Horizon mobile app, on the web via horizon.meta.com, and on Meta Horizon OS via Meta Quest headsets, where people can connect with friends, explore a wide range of experiences, including quests, games, community and social spots, events and concerts, and also create their own places and spaces to express their creativity.

This report reflects work conducted by Meta to inform how to build age-appropriate immersive social digital experience for parents and their children aged 10-12. The report is neither comprehensive nor conclusive in terms of how digital services should be built for this age group. We are publishing insights and actions Meta has taken in this report to share openly with the broader community of expertise around age-appropriate design. This report is intended to be a living document. We invite you to provide continued feedback.

What you'll find in this report

1 Introduction

Introduction

Technology development in immersive social settings presents an emergent space for digital designers. These mixed and virtual reality spaces are gaining in popularity and their affordances make them well-suited to facilitate beneficial interactions (van Brakel 2023).

As digital experience developers and designers, it's critical to provide age-appropriate safeguards and create experiences that support youth and keep them safe, as they learn and develop responsible habits and encounter various situations in digital settings. And this is particularly the case for emergent mixed and virtual reality technologies, as we think about environments that allow for immersion and embodiment. It's also important that we provide parents with resources and tools to help support their children aged 10-12 and teens so that they can play an active role in their digital lives.

Designing digital experiences that serve parents and youth — such as providing opportunities for children aged 10-12 to safely explore and discover in age-appropriate ways that are actively managed by parents — requires accounting for a number of different perspectives, including those of third-party advisors as well as the lived experiences of families. At times, these differing points of view require us to navigate complex tradeoffs. These issues are complex and change alongside the evolving abilities of youth and parents to use, understand and have agency over ever-changing technology.

Most youth play online video games as a social experience, and the majority of young gamers play with their friends and family members (eSafety Commissioner, 2024). Youth are fans of popular gaming experiences across the industry both on mobile and in MR and VR settings. For example, many youth hang out with their friends in virtual games, in contrast to older generations who often see gaming as a social activity but spend time physically alongside one another while doing so (YPulse, 2024). Virtual settings are extensions of the playground where friendships are forged, and where younger generations are increasingly blending their physical world interactions into the digital realm.

Meta Horizon is a social platform that's optimized for the metaverse, including apps and content, tools and services that help people connect, making it possible for people to spend meaningful time together even when they're apart. Meta Horizon Worlds prioritizes real-time social connection, a variety of immersive content, and self-expression: people can discover fun things to do, seamlessly travel between destinations, and share experiences no matter what device they are on. People can dive into free experiences that connect people to their friends and interests, express themselves through embodied avatars, choose how they represent themselves across multiple experiences, and unlock progression and rewards.

We created an environment in Meta Horizon Worlds where parents are able to manage, have control and oversee the activity of their children aged 10-12, in order to help them support their child with an age-appropriate experience. It is crucial that we build age-appropriate, safe, and positive experiences for children aged 10-12 and teens. Doing so is core to the responsible innovation principles at Meta and our commitment to building safer experiences for youth. The privacy, safety and wellbeing of youth using our technologies is of paramount importance to us, and this is especially true for the youngest people. That's why we invested in a number of safety and privacy features, including always on back-end protections and parental management and supervision tools that allow parents, and their children aged 10-12 and teens, to help manage the Meta Horizon Worlds experience.

Our goal with this project was to elevate the perspectives of families and third-party advisors to inform our product design strategy for child access to age-appropriate immersive social experiences in Meta Horizon Worlds on mobile and in Meta Quest. We wanted the research workshops with families to inform how to:

- Focus on expansive age-appropriate safeguards for the safety, privacy and well-being of youth
- Empower youth to enjoy the benefits of our social technologies responsibly alongside providing meaningful tools for families
- Build innovative technologies responsibly so that they provide great experiences for youth and solve the defining challenges for our industry.

Glossary

- **Children:** For the purposes of this project and report on youth access to Meta Horizon Worlds, children are those aged 10-12 years old, in comparison to teens.
- **Metaverse:** The metaverse is the next evolution in social connection and the successor to the mobile internet. Like the internet, the metaverse will help people connect when they aren't physically in the same place and get them even closer to that feeling of being together in person. The attributes of the metaverse — ephemerality, embodiment and immersion — mean people will experience it in a way that is much closer to physical world interactions than to the experience of using a mobile app or website. In this way, the metaverse isn't analogous to a mobile app.
- **Mixed reality (MR) and virtual reality (VR):** The latest Meta Quest headsets are examples of MR as they create a simulated and immersive environment which can be explored in 360 degrees, as well as integrating Passthrough technology that allows people to step outside their view in VR to see a real-time view of their surroundings. Full-color Passthrough as available on Meta Quest 3, provides people with a more perceptually comfortable, high-fidelity, real-time representation of the physical world, and are also fundamental to new and upcoming features.
- **Worlds:** Experiences that people can choose to enter or create. Some worlds in Meta Horizon Worlds are created by Meta, and most are created by other developers, including members of the community. People can explore worlds or create their own worlds for others to visit. There can be public and members-only worlds.
- **Embodiment:** Communicating expressively and physically with avatars that reflect real bodily movements in immersive contexts, enabling interactions in synchronous virtual environments. This real-time, 3D synchronicity is a crucial difference with the way we interact on today's internet.
- **Ephemerality: A**s we build the metaverse, it will constitute a shift towards live, speech-based communication that will often feel as transient as face-to-face conversations.
- **Immersion:** The feeling of being and communicating in a shared space that enables social interactions with other people in virtual and mixed reality environments
- **Avatars: D**igital representations of people, letting them freely express their identity, personality and appearance. Avatars allow for a range of identities and self-expression and may or may not reflect people's physical appearance. Avatars are available across all first-party experiences on Meta technologies, including several of those built into Meta Horizon on Meta Quest.
- **Visibility settings: S**hows followers when a person is online or joinable across Meta Horizon including in Meta Horizon Worlds. When set to joinable, world location shows the people the person follows back, and which public world or event the person is visiting. And when set to "joinable" and this setting is turned on, people the person knows can meet up with them more easily.

2
Our methodology

What we did

Research and consultation play a major role in the product and policy development process at Meta. We regularly listen to and collaborate with third-party advisors, parents and youth to ensure we build technologies that support positive digital exploration and connection for families. We have advisory boards, conduct research, host collaborative workshops, and hold regular 1:1 discussions to get feedback and guidance that helps us build better technologies, policies and resources.

As we looked toward bringing Meta Horizon Worlds to younger age groups, we collaborated with families through co-design workshops, as well as third-party advisors , to identify specific opportunities around age-appropriate experiences as it relates to privacy and safety in multiplayer games on mobile and in VR.

Research methods and recruitment

As one example of a number of methods that Meta uses to get feedback, TTC Labs drives stakeholder collaboration for age-appropriate online experiences. TTC Labs leverages participatory methods like co-design to gather global insights on topics such as youth privacy and safety considerations, age assurance, online supervision, and age-appropriate transparency and education. Meta continues to leverage these and other research insights as we further develop age-appropriate experiences, including guardrails, tools and settings.

For this project, between August 2023 and May 2024 in the US, UK, Ireland and Australia, we conducted research workshops with a total of 36 youth aged 10-13 and 36 parents.

In the US, we conducted remote group conversations with youth and their parents to uncover early insights and opportunities and to inform topics to explore further. In London (UK), Dublin (Ireland) and Sydney (Australia), we conducted in-person research workshops where participants were divided into 4 groups of children aged 10-12, teens aged 13, alongside parents of these children, and parents of these teens - with a mechanism for third-party advisors to observe these interactive discussions with parents and youth. These workshops aimed to explore family attitudes, concerns, and behaviors regarding privacy and safety in multiplayer games on mobile and in VR in order to gain a more holistic understanding of the topic. Areas of inquiry included:

- Perceived developmental differences between children aged 10-12 and teens
- Multiplayer games and social aspects of immersive gaming
- Avatars as opportunities for self-expression and privacy control
- Privacy, safety, and supervision
- The ideal accounts for children aged 10-12 and teens
- Discovering and supervising new multiplayer games
- Exploring how youth graduate into different experiences as they get older
- Family education.

For these research workshops, we engaged a diverse mix of child, early teen and parent participants from various backgrounds to take part. We included different household types, such as single-parent households, divorced parents, and multi-generational households, along with a range of household incomes.

Preteen and teen criteria:

- Regularly play age-appropriate multiplayer online or VR games
- Have access to a gaming device (e.g., desktop or laptop computer, gaming console, smartphone, or VR headset).

Parent criteria:

- Varied attitudes towards VR, from optimistic to skeptical.
- Different home rules for video games and/or VR use, ranging from hands-on to hands-off.
- A range of tech literacy.
- At least 50% of participants' families own a VR headset, plan to purchase one in the next 12 months, or are open to the idea of VR.

We leveraged co-design as a qualitative, participatory, and small-sample research method for industry to work alongside the people who use digital services - including parents, youth, and third-party advisors from government, academia and civil society. By focusing on hands-on activities, co-design offers a creative and inclusive way to listen to and elevate diverse perspectives as part of the research and design process to inform digital product and policy development.

Workshop participants engaged in offline and virtual demo scenarios, discussions, ideation, and prototyping activities. TTC Labs partnered with research and design agencies including Smart Design and Craig Walker to recruit participants and deliver these workshops in the US, the UK, Ireland and Australia.

TTC Labs provided a mechanism for 28 representatives from third-party organizations and advisors, comprising multidisciplinary professionals from government, academia and civil society, to observe in-person workshops in London, Dublin and Sydney. None of these advisors, who were variously based in the UK, Ireland, Australia, New Zealand, Taiwan and Singapore, were remunerated, although for some who required travel to the workshops, we provided travel, accommodation and meal stipends, where appropriate.

We synthesized aggregate insights from youth and parents through an iterative process, summarizing key learnings. We played back initial insights to a wider group of over 50 global third-party advisors as part of roundtable discussions, also exploring related consultation topics.

Through this process of consultation and discussion with third-party advisors, we aggregated insights and summarized different points-of-view into “advisor viewpoint” sections, which are dispersed throughout the report.

We also provided some advisors the opportunity to review and provide feedback on an early version of this report, asking them to review the insights and viewpoints alongside providing quotes reflecting their involvement in the project.

What do third-party organizations and advisors think about our process?

"As technology continues to develop in new and exciting ways it is incredibly important to have youth and their parents front of mind. That's why at Parent Zone we were so pleased to see Meta actively listening to families. Designing with families in mind will make experiences more family friendly and that is ultimately good for platforms as well as families."
- Vicki Shotbolt, CEO, Parent Zone, UK

“Digital trust is key for technology use and adoption. This project shows that by providing parents and children with these tools for safe social VR experience to connect with others and engage in meaningful interactions, Meta is committed to building digital trust with and among its users, in VR technology itself, and between parents and their children too.”
- Professor Tammy Lin, National ChengChi University, Taiwan

“It is vital that youth’s needs are at the forefront in the design of online services and platforms. Too often the voices of families are not heard in important conversations about online safety, but in this case Internet Matters has welcomed the opportunity to feed into this research, alongside youth and parents themselves. Our evidence shows that parents play an absolutely critical role in supporting youth online, so we were pleased to see such extensive consideration given to their role in this piece of work. As recognised in the report, many parents want access to more tools and controls to help them monitor and mediate their children’s experiences online. But we also know that many parents have little time to get to grips with what their children are doing online and struggle to understand how to use technical controls. It is important that parents are empowered to support youth’s use of technology, but they cannot shoulder the burden alone, so tools and safety features must be easy and simple to use.

Before any roll-out of immersive social experiences to younger users, it is important that platforms can demonstrate how the design of their service prioritizes youth’s safety and wellbeing, through parental support but also through core safety by design features which apply regardless of parental involvement.”
- Katie Freeman-Tayler, Head of Research and Policy, Internet Matters, UK

"Thanks for co-design and insights sessions: the sessions yielded rich insights, the team did a great job of executing, and the depth of searching that Meta is doing is impressive.”
- Professor Brian O’Neill, Technological University Dublin, Ireland

“Netsafe attended the Sydney participatory workshop with a New Zealand perspective. The experiences and feedback we heard during the sessions aligns with what we have seen in our own parent sessions and youth feedback in New Zealand. We appreciate Meta’s investment in – and commitment to – welcoming constructive feedback directly from diverse families and trying to find the right balance around the subjectivity of parental control, age-appropriate experiences and youth privacy, as they develop new technologies.”
- Leanne Ross, Chief Customer Officer, Netsafe, New Zealand

“Foróige’s GoVirtual and GoSafely programs were delighted to be expert observers at the co-creation labs in Dublin. It is crucial that the safety of youth is of paramount importance to any technology/virtual space that is designed for them. Including parents, guardians and youth and experts in the design process is the first step to achieving this. The report is a faithful representation of what we experienced during the consultation process. It is very important that Meta continue its engagement with parents, guardians and youth as they develop new products with appropriate and robust safety features.”
- Foróige, National Youth Development Organisation, Ireland

This report reflects Meta’s commitment to fostering safety among youth in mixed and virtual reality environments. The research process was well-planned and executed, and through the involvement of both parents and children, the findings obtained were both insightful and practical. This report serves as a useful resource for designers, parents, policymakers and other stakeholders who aim to safeguard children and youth from online harms.
- Professor Dion Goh Hoe Lin, Nanyang Technological University, Singapore

"The research offers valuable cross-cultural insights into youth's online safety in social media and mixed/virtual reality contexts, highlighting global trends and the need for adaptable strategies across regions."
- Evangeline Lin, Taipei Computer Association, Taiwan

"Meta's use of participatory methods, including focus groups with stakeholders, represents an important step toward developing more age-appropriate immersive social experiences. This approach provides valuable insights that can begin to guide the future of safer digital environments for children. I look forward to continued efforts and actions in this direction, ensuring that future immersive experiences are safe and well-suited to the needs of young users."
- Helen Husca, PhD candidate, Trinity College Dublin, Ireland

“As media literacy becomes an increasingly important priority, understanding the needs of youth is essential for creating safer and more effective products. That’s why at VoiceBox, we were thrilled to see youth perspectives being considered in this research. We hope these voices will continue to be heard as future resources are developed.”
- VoiceBox, UK

"I was grateful to take part in this project and gain insight into Meta's research and consultation with youth. As part of the event, I sat in on one of the focus groups with parents/carers and felt the facilitator — an individual sourced from outside of the organization— conducted the research with ethical care and consideration. The findings from the focus group were truly fascinating and appreciated the efforts from Meta to bring external academics like myself directly into the work they are doing.”
- Ysabel Gerrard, Senior Lecturer, Sheffield University, UK

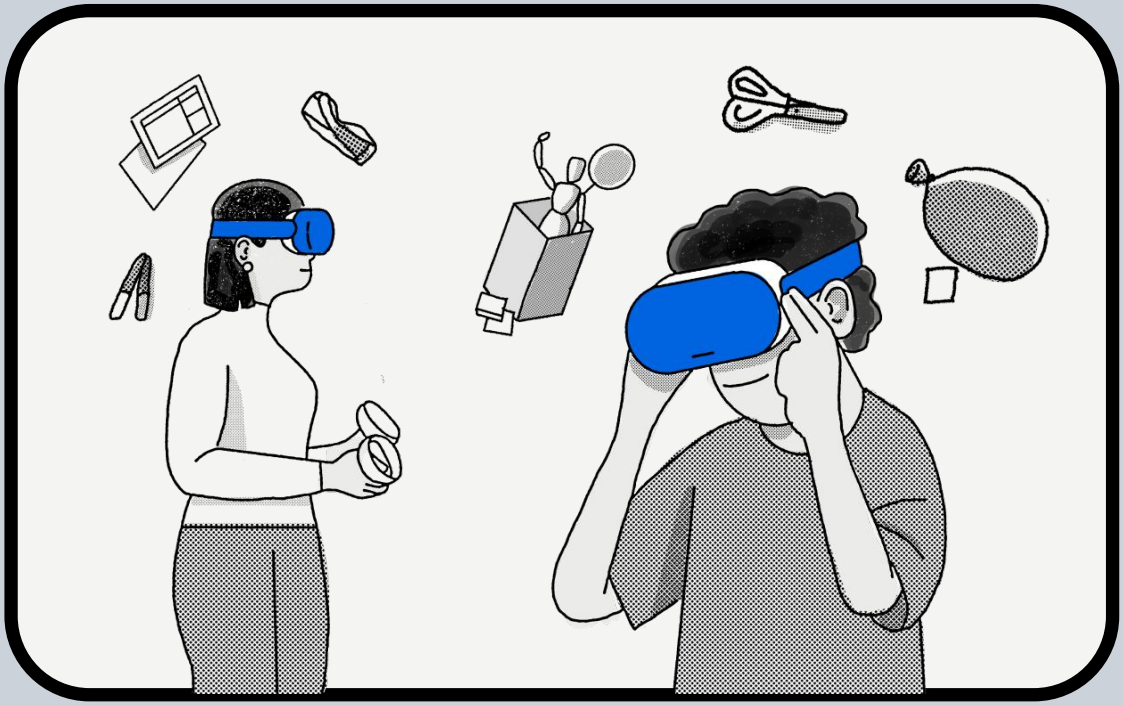
Additional research and ongoing consultation

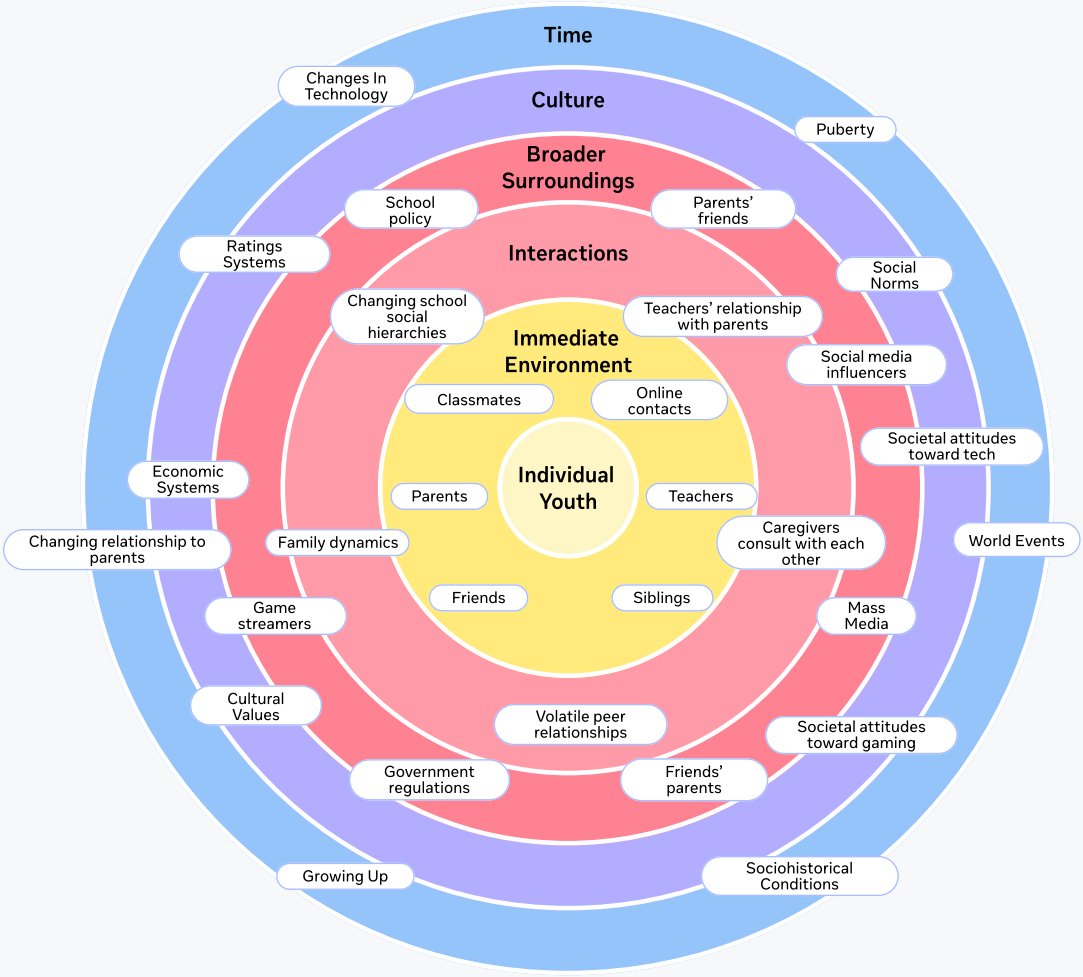
This program of co-design research workshops and consultation sessions provided helpful and durable reference points for digital product development, producing one set of learnings, in addition to internal research and external consultation activities, that Meta took into account when building age-appropriate immersive social experiences. We used several additional resources to accompany our learnings. These included related Meta user experience (UX) research initiatives as well as peer-reviewed academic articles, industry efforts and publications, and regulatory guidance.

3 Considerations for digital experience designers

Developmental context

When building for youth and their parents, we repeatedly heard from third-party advisors that we consulted that it's crucial to consider not only the immersive social interactions within the digital experience but also the real-world social contexts that parents and youth are navigating.





The following theoretical framework on the social context for younger age groups is illustrative, bringing together new user research and external developmental psychology theories (Brofenbrenner 1978). Systems theory frameworks have been used to improve the lives of youth in public health and education. Digital designers might use a similar framework to meet the goal of designing safe, appropriate, and engaging experiences for youth.

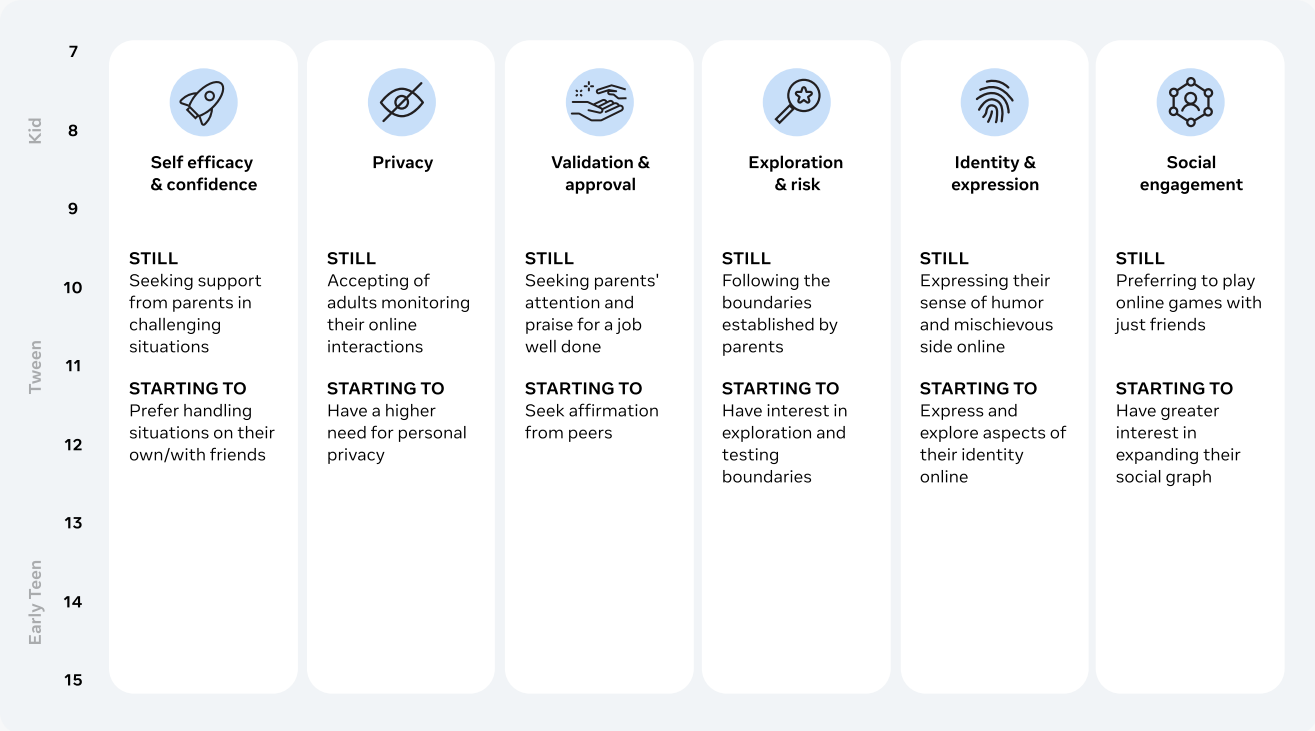
When designing a new digital feature, designers might consider how it will be affected by various levels of this framework, including:

- Individual young person: A child or a teen's personal characteristics, including for instance their age, gender, and likes and dislikes.
- Immediate environment: People who directly interact with the individual, including: parents/caregivers, siblings, peers, and teachers.
- Interactions: The interactions between the people in the young person's immediate environment. For example: parents' relationships with each other.
- Broader surroundings: People and systems who exist around youth but who don't interact with them directly. For example: parents consult with other parents when making decisions about their own children aged 10-12 and teens.
- Culture: The wider culture in which the individual young person lives. For example, rating systems are one way that the cultural context openly communicates to youth what kind of content is and isn't appropriate for them to consume.
- Time: Changes over time include personal transitions and changes in the wider world, such as socio-cultural and socio-economic events and the invention and adoption of new technology.

Digital designers might check that they've adequately addressed challenges at each level, within their means, before deploying or launching features. When identifying areas for future UX research, digital designers might see if they've fully investigated all of these areas.

Social context framework for youth

Children aged 10-12 are in transition to adolescence, and they may hold on to some of the characteristics of younger children while beginning to emulate and adopt some of the defining qualities of teenagers. Child participants may experience several developmental shifts that shape their needs around and relationship to digital products:



Children aged 10-12 undergo several developmental shifts that parent participants said required both the management of digital experiences alongside helping their child to build self-monitoring skills needed for teenhood. As they mature and become more aware of the potential downsides of social online experiences including social gaming, child participants started to more proactively shape safer digital habits and intuitions around how to stay safe online.

Parent participants viewed the years for children aged 10-12 as an important time to build a foundation of good habits before they become teens. As children began their shift into teenagers, parent participants had two goals: keeping them safe (from third-party bad actors and experiences that aren't age-appropriate) and helping them build positive skills they will need to navigate online spaces safely and responsibly on their own. Parent participants said that they are hoping to build their children's ability to identify and respond to challenges in social online gaming, communicate with others safely, conduct themselves positively, and self-regulate screen time.

As children aged 10-12 are less experienced offline and online and are still building these skills, they typically expect and sometimes want more parental oversight and protections than those in their teen years - and they are more accepting of it. Parent participants and advisors mostly thought that it was appropriate to have increased oversight for children aged 10-12, so it's important for digital services to strike a balance when building experiences that meet the needs of this younger audience.

It's important to remember that age is just one piece of the puzzle. Each young person, regardless of their age bracket, has unique needs and experiences shaped by their maturity, life journey, and family situation.

"With all parenting, you're trying to put things in place that helps your kids build skills. You're building trust and putting safeguards in place throughout the years, and then you let loose as they get older." S., parent of a 12 year-old, Ireland workshop participant

Consideration 1:

Building parent managed accounts and controls, tools and education to enable positive oversight of children in virtual settings

Learning 1:

Parents want tools and education to understand their children's digital experiences and relevant privacy and safety considerations

Across many internal and external studies, we hear that parent participants struggle to keep up with the pace of technological change and the array of apps, games and workarounds their teens use. This is especially true of mixed and virtual reality. As a nascent technology that may be unfamiliar to parents, it can be especially challenging for parents to anticipate safety and privacy risks and support their children in navigating them. Parent participants pointed out that the type of over-the-shoulder monitoring of their children's online activities that they might conduct on gaming consoles, desktop or mobile devices does not apply in mixed and virtual reality because of the nature of the headset experience.

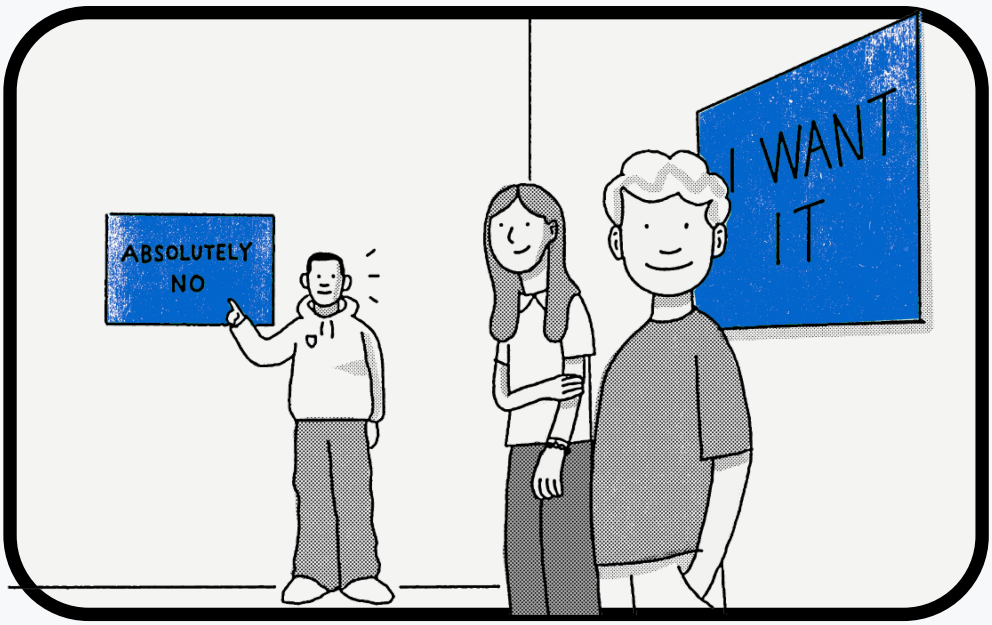
Advisor viewpoint Third-party advisors emphasized the digital literacy gap between parents and teens, with the former experiencing a continued difficulty keeping up with understanding new technology.

Parental controls (e.g. time limits, content restrictions, and insights about product use) can be one opportunity for parents to get a handle on their children's online experiences. However, parents may not take advantage of these tools because they may find them difficult to set-up, overly restrictive, or burdensome to manage. In VR, parent participants sometimes felt the lack of information available regarding virtual apps left them unsure of what to expect until they used the device for the first time.

Parent participants wanted a way to set up parent managed VR accounts and supervision and manage it from their phones, which they anticipated would be more comfortable, enabling them to do it on their own time without interrupting their children's aged 10-12 playtime. The idea of parent-managed VR accounts for children was of interest to parent, child and early teen participants: the perceived value was that in turn these accounts would offer access to viewing experiences that enhance self-expression, are social, creative and skill-enhancing as beneficial and, over time, would require less direct intervention. Parent, child and early teen participants valued the social benefits of multiplayer games and sought to balance parental management and supervision with opportunities for identity formation, self-expression, confidence building and socialization.

Third-party advisors were excited about the potential of immersive social experiences to enable play and social connection for youth. However, advisors cautioned that VR is a relatively early medium such that mental models and best practices from social media may not directly translate into mixed and virtual reality settings. In some cases, they observed that parents sometimes saw social immersive experiences as analogous to real world social interactions in parks, playgrounds and shopping malls. Other times, parents might view social virtual experiences as more analogous to 2D gaming experiences. However, advisors reflected that these analogies might make it difficult for parents to appreciate some of the novel opportunities and challenges that accompany social interactions within an immersive digital context.

Third-party advisors saw digital literacy around virtual social experiences as a key enabler of effective parental supervision, and encouraged providers of these experiences to play a more active role in educating parents and caregivers about the capabilities and limitations of this technology.



What is Meta doing?

Parent-managed accounts

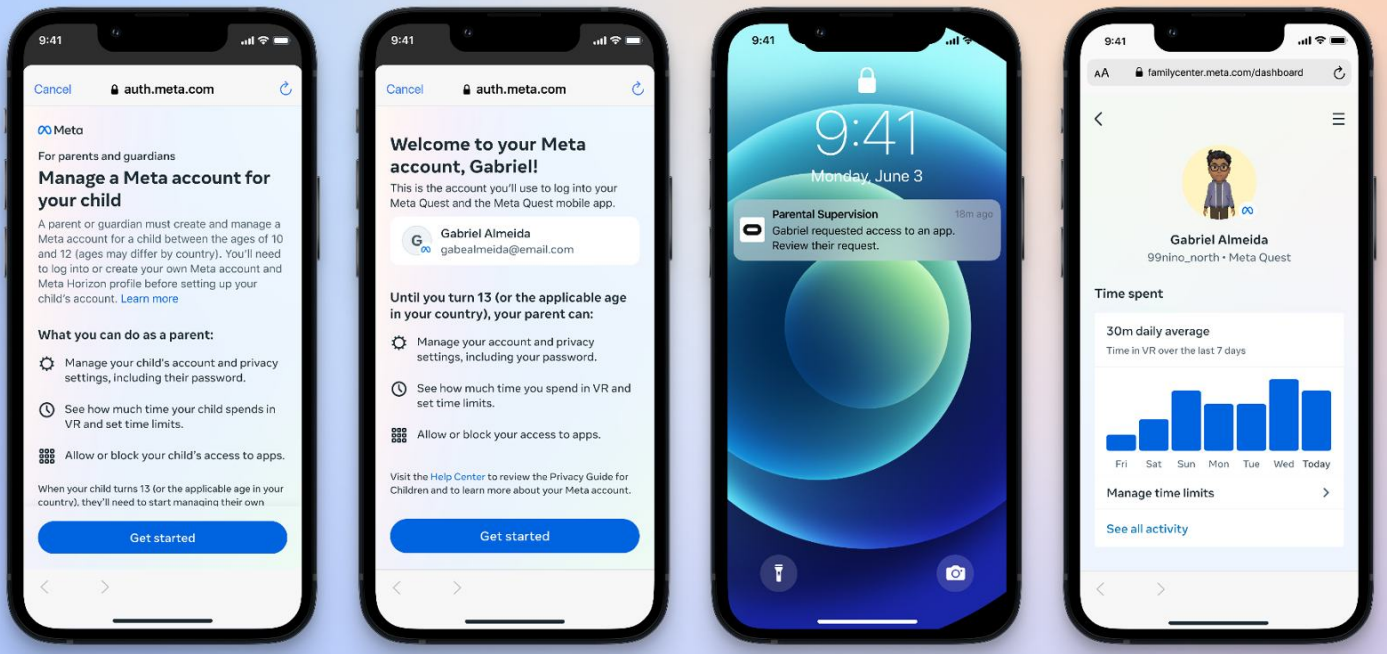
Meta provides parents with information to decide whether Meta Quest 2 and 3 are right for their children aged 10-12, and how to make their experience with the headset comfortable and safe. We'll also continue to introduce additional tools and resources so children have an age-appropriate experience in Meta Horizon on Meta Quest that parents can easily manage.

Parent-managed Meta accounts allow parents to create an account for their child aged 10-12, which can be used on headsets and the Meta Horizon mobile app to allow them to partake in age-appropriate virtual experiences in an environment managed by their parents. Parents can also convert an existing account into a Meta account for a child aged 10-12. Parents verify the parental relationship by using a credit card at account setup.

With parent-managed Meta accounts, the parent must approve their child's use of the Meta Quest device or Meta Horizon mobile app and manage their experience. We require children to get their parent's approval to set up an account, which gives parents control over the apps their children download from the Meta Horizon Store.

Parent-managed Meta account features

- Parent-managed access to content: Parents control whether their child can download, purchase, or use an app, and parents can view all the apps the child owns and block access to apps at any time. There's a vast array of engaging and educational apps, games, and more across the Meta Horizon Store, the majority of which are rated for ages 10 and up by both the Entertainment Software Ratings Board (ESRB) and the International Age Rating Coalition (IARC). Parents and their children can enjoy interactive experiences from virtually visiting faraway places to seeing significant moments in history firsthand. Families can explore the depths of the ocean, tour Machu Picchu, visit the International Space Station, orbit Jupiter, or simply play their favorite games. We're working closely with our developer community to bring even more age-appropriate apps and games onto Meta Quest for this age group to learn from and engage with. We'll be providing parents with the ability to approve Meta Horizon Worlds access for their children
- Time limit controls and casting: Parents are able to manage how long their child can use the headset each day, schedule breaks from their device, and cast virtual experiences onto compatible screens so that parents can monitor what their children are viewing while they're using the headset
- Education: We produce guidance for parents on VR in our Family Center, Safety Center, the ConnectSafely guide to parent managed accounts and VR safety tips for parents.



Age Appropriate Accounts within Meta Horizon on Meta Quest

Once people enter their birthdate, they are guided to create the right account type, which is designed with specific defaults and tools based on their age.

- Children (10-12): Children in this age group have the most restrictive account settings. Child accounts are called parent-managed Meta accounts, and they require parents to set up an account for their 10-, 11-, or 12-year-old. Children must have their parent's approval in order to set up an account. Child profiles are automatically set to private and their visibility settings are set to offline, with parents given control over these default settings. Parents control whether their child can download or use an app, and parents can block access to specific apps at any time.
- Teens (13-17): A teen Meta account is defaulted into age-appropriate and privacy-forward settings. By default, visibility settings are automatically hidden to others unless the teen decides to share them. Teens can be monitored through parental supervision tools - we have optional parental supervision tools for teens aged 13-17 on Meta Quest that both teens and parents must opt into, making it easier for parents to customize their teens' experience and support healthy conversations about safety in VR.
- Adults (18+): When adults set up a Meta account, they choose if they want a private or public Meta Horizon profile and who can see the app they're currently using and their activity.

For more information on what we do to support evolving parent-child relationships in Meta Quest and Horizon Worlds at different ages and stages, see section 2.

Learning 2:

Parents want controls and insights that establish trust and support positive supervision practices around technology use

Parents see communication as the centerpiece of their supervision strategies and wanted intuitive tools that that supported conversations without becoming burdens on time and attention

Parent participants used a mix of supervision and management strategies to protect and build positive habits for children and early teens. The supervision strategies parent participants used depended on many factors, with the age of their child being just one. Other factors included their relationship with their child, their child's maturity level, the time they're willing to dedicate to supervision, and their level of game-savviness. The gap between parent participants' stated current strategies and their ideal tools revealed new opportunities for digital experience designers in mixed and virtual reality settings.

Parents we spoke to aspired to a form of supervision rooted in communication and trust. Conversation is a strategy parents said they used, regardless of support from tech tools. Most parent participants indicated that their primary approach to supervision is based on trust and having open conversations with their child. All parent participants in Australia, for instance, said that they have conversations with their children and early teens about what is appropriate and inappropriate in multiplayer games, seeking to support their safety and privacy.

Many parent participants saw tools that enabled monitoring as an indirect way to know what topics to bring up in discussions. Some parent participants in the UK and Ireland used reports on their children's screen time or activities. Some manually spot checked their children's direct messages and friend lists. Activity summaries that participants received today provide overviews of time spent playing and lists of games played, but lack more meaningful insights.

Almost every parent participant desired better insights that provide more relevant summaries and/or alerts for profanity, inappropriate content, interactions, and emotional impacts. Parent participants wanted helpful insights about their children's virtual experience, without more time and effort.

Third-party advisors didn't have unanimous views around parental management and child access to social virtual experiences. A minority of them thought that children shouldn't have access to social immersive experiences at all, while the vast majority of advisors said children should be able to have these experiences with their friends. Some advisors thought that the continued development of parental management tools for children in immersive social settings should be balanced with ways for parents to be involved without intervention. Some advisors thought that given the relative novelty of virtual settings, it is necessary to focus on parental management and intervention for children.

Some third-party advisors we spoke to thought that digital services should help parents shape experiences that align with their parenting approach and what matters to them, and that services should help provide parents with the information they need to make decisions about what specific controls match their values. Advisors tended to note a tension between parents stating that they want more controls but who lack the time consistently to find and use them.

Parents want controls and insights that can respond to the individual needs of their children
Our research workshops with parent participants indicated that parental tools need to accompany more conversation-based supervision techniques to help parents feel more comfortable about children's gaming activities without being intrusive. Parent participants wanted to stay informed about children's online lives, but some parents said that they didn't want to always spend time reading every chat or reviewing every follow request. Parent participants wanted helpful analysis that goes beyond playtime and game titles to provide synthesized data on what they should be looking out for, including what games or worlds their children are exposed to, language used in chats and games, who children interact with, and what might have happened in a gaming session that could impact how their child feels. This would ease their concerns, spark meaningful conversations with their children, and ultimately build trust.

Some parent participants already used controls to set time limits and restrict game downloads. Some parent participants in Australia wanted automated time controls that would lead to less conflict with their child, which would help lessen parents' load so that they wouldn't be seen as the "bad guy in these scenarios.

Parent participants preferred to approve worlds in bulk and monitor retroactively to avoid burnout. Parent participants noted that as their children get older, approval requests often become more frequent and burdensome, which they recognize is disruptive for both themselves and their children.

Most parent participants were comfortable with their children finding and requesting to add their own friends, but acknowledged that some form of monitoring and approval might be necessary to ensure positive interactions. The ability for children to see and add friends of friends brings more apprehension for parents as they are aware that there might be the potential for less positive interactions, viewing it as analogous to a party or social media connections. As their children became teens, parent participants wanted to increasingly enable them with more trust and control.

Third-party advisors we spoke to understood the complexity of designing parental controls that meet a wide range of needs and expectations for different families, and the subjectivity of what constitutes age-appropriate immersive and online social experiences. They encouraged companies like Meta to consider different family structures, parent-child relationships, and ranges of maturity among children aged 10-12 and teens when designing these experiences and building controls. Many advisors noted that the patterns they observed during the research workshop align with the existing literature and their own research on youth's experiences online and expectations around parental controls.

Parent participants in the UK and Ireland wanted some additional support in terms of accessible oversight tools and controls that would help block certain words and actors from contacting their children. Ensuring their children aren't using or exposed to harmful language in virtual settings was a universal goal for these parent participants. They often listened to their children aged 10-12 play or looked through their chats to see if they encountered inappropriate language, but didn't feel confident they're catching it due to the fleeting nature of gaming. Parent participants wanted digital services to proactively censor certain words or be able to have specific words and topics to be brought to their attention if their child encounters them in virtual content, music and interactions.

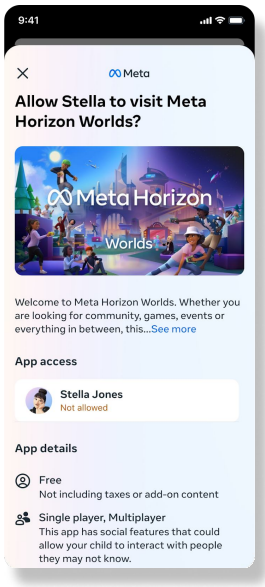
In the UK and Ireland, 6 out of 18 concepts parent participants created in the "Build your own ideal supervision tool" activity included a feature to filter, highlight or flag instances of poor language in chat and audio communication. Parent participants wanted gaming and VR platforms to automatically safeguard their children but skepticism about functionality lingers, especially when it comes to protecting children from bad actors and harmful language. Features that parent participants wanted as default for child experiences included vetting other players as well as detecting, preventing and blocking harmful speech and certain behaviors.

Live monitoring is popular and parent participants wanted easier ways to observe what is going on in their child's or teen's headset. Many parent participants preferred to monitor their children's social online gaming by keeping consoles in common areas so they can watch, or leaving doors ajar so they can easily listen in on their children's gaming experience. More than half of parent participants wanted additional support casting their children's VR experience to get a better sense of what's going on inside the headset. Parent participants wanted tools that would let them peek into their teens' virtual experiences, not just listen from the sidelines. Many parent participants without a lot of VR experience didn't know that casting exists, so they struggled to wrap their heads around how they would monitor their children in VR if they can't see what they are doing. The few parent participants who have tried casting found it to be relatively difficult to set-up.

What Is Meta Doing?

Parent management and defaults

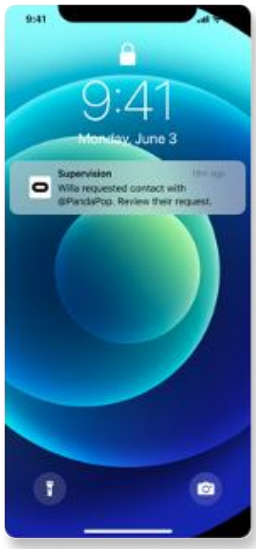
Later this year , we're introducing the ability for parents to approve access to Meta Horizon Worlds for their children aged 10-12 (age may vary by region). This will allow children to explore age-appropriate and enriching experiences in Meta Horizon Worlds, with parental oversight and management. Children will have a parent-managed Meta account and their Meta Horizon profiles are automatically set to private, meaning people won't be able to follow them without their or their parent's approval. We won't show children recommended people to follow, and children's status and visibility settings will be set to show as offline to others.

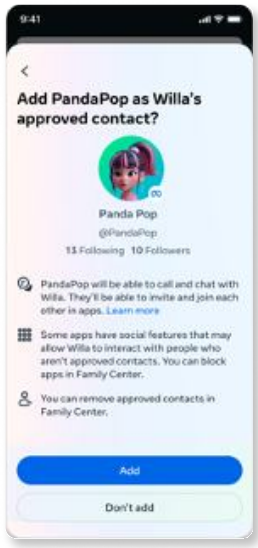


Children can interact with followers on their Meta Quest headset, on the Meta Horizon mobile app or on desktop, but social features for children will be limited.

Approved contacts

We want to respect parents' wishes to let their children add their own friends. To achieve a balance so that children are connecting with people that are known to them in real life, we developed the functionality for parents to approve people that children can chat to and call.



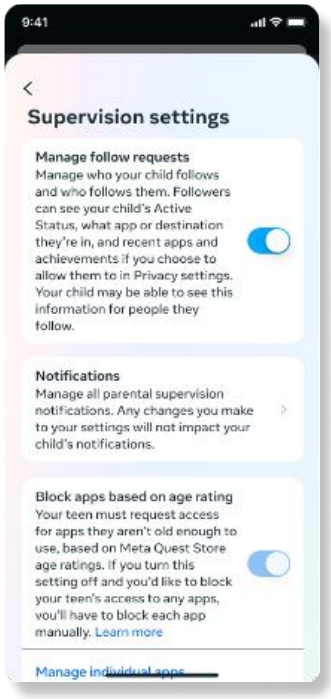


Children can ask their parents to add someone as an approved contact. Only parents can add approved contacts. Children will get a notification when the person becomes their approved contact, or if their parents decline the request. Children must be following or be followed by someone before they can become an approved contact.

Only approved contacts can hear or talk to children in Meta Horizon Worlds. All other people will be inaudible for children, and the child will be inaudible for them. Parents can remove or block an approved contact at any time.

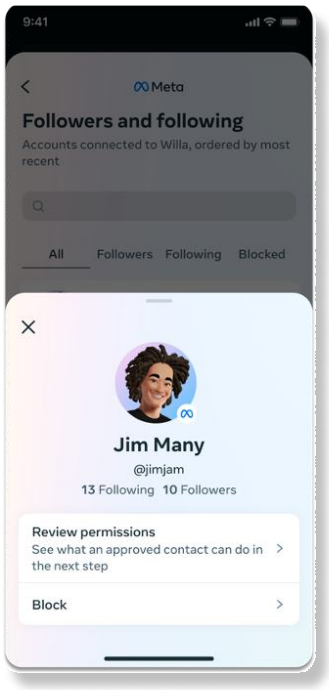
Follow requests

Parents can choose to manage their children's follow requests in Family Center or the Meta Horizon mobile app. Parents can approve or decline their children's requests to follow other people. Parents can also approve or decline requests from people who want to follow their child. Children's mutual followers can join them in Meta Horizon Worlds. Following another person also lets children see that person's recent apps and achievements. Examples of destinations include Meta Horizon Home and destinations within apps like worlds. The children's followers may be able to see their status and visibility settings, including what app or destination they're in, if parents turn on these settings.



Managing child interactions

Parents can block people for their child and can also block people discreetly. Where possible, we will prioritize interactions between children and approved contacts. Children may interact with other people who are not approved contacts in parent-approved multiplayer apps or destinations.

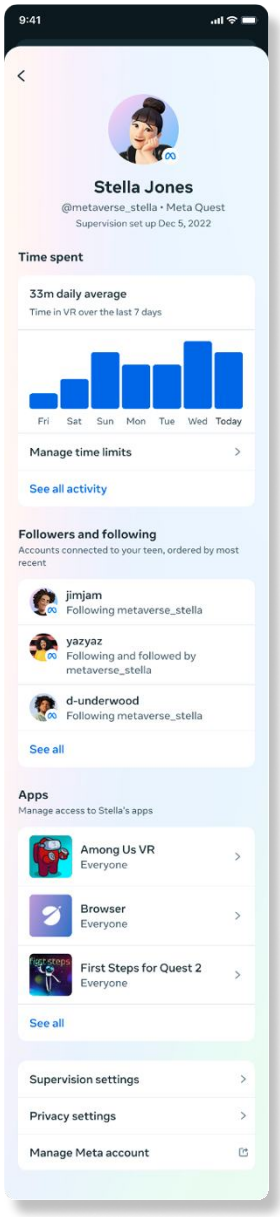


Experts are split as to whether casting and live monitoring on other devices is a useful or desirable parental control tool or a potential privacy violation. Experts noted that Meta's approach should balance youth privacy with safety. Some experts and parents suggested that co-play might be a more balanced alternative to casting - see "future considerations" section for more detail

Family Center and supervision tools

We're continuing to invest in Meta's Family Center so that it's as easy as possible for parents to manage their children's online experience, and we're supporting parents and youth with all the information they need. On Family Center, parents can access supervision tools, tips, and resources from advisors and other information about online privacy, safety and well-being. With parent-managed Meta accounts, parents can go to Family Center to get started and set up an account for their child or teen. Family Center includes educational content and supervision controls. Together, parental supervision on Meta Horizon and worlds lets parents:

- Set daily time limits and schedule breaks for Meta Quest overall and Meta Horizon Worlds
- Cast Meta Horizon experiences on Meta Quest to a compatible screen, so that parents can monitor what their children are viewing while they're using the headset
- See, adjust and lock safety features
- Enable a safe in-game environment. Children will have their personal boundary always on in Meta Horizon Worlds, which means no one can get too close to their avatar (even people they know). Neither children nor their parents can turn this off
- See their child's contacts, who their child follows and who follows their child
- See which apps their child has used and how much time they've spent on Meta Quest and Meta Horizon Worlds in the past seven days
- See and control which worlds they have access to
- Give permission to allow or block their child from using apps, including Meta Horizon Worlds
- Access resources about our available safety features in Meta Horizon Worlds.n. Family Center includes educational content and supervision controls.



Family education

At Meta, community safety is a core value that's built into the technologies that we create. Our goal is to make information on VR safety readily accessible, transparent and easy for parents to understand. We've built tools, features and resources that help teens have safe, positive experiences, and give parents easy ways to set boundaries for their children. More information about these features is in our Help Center. We encourage parents to talk with their children about healthy online interactions and ways that they can feel safer. We have a ConnectSafely guide for VR parental supervision tools from Meta. Our Family Center and education hub includes resources, tips and articles from subject-matter experts and trusted organizations to help support family experience across Meta technologies, including Meta Horizon and Meta Quest.

Learning 3:

Parents want better tools and trusted sources for game discovery and approvals

Parent participants who researched VR prior to purchase were looking for virtual demos and previews of the features specific to young people. Instead, they were only able to find summaries of benefits and high-level features. The lack of information available left them unsure of what to expect until they used the device for the first time. For the sake of getting to the fun stuff with their kids, parent participants said they might skip through early moments to learn about parental controls and set them up. While they were eager to dive in, some parent participants later put effort into backtracking this step on their own time, finding it harder to introduce controls later on. Explicit guidance on setting up parental features was of interest ahead of the first time game play experience.

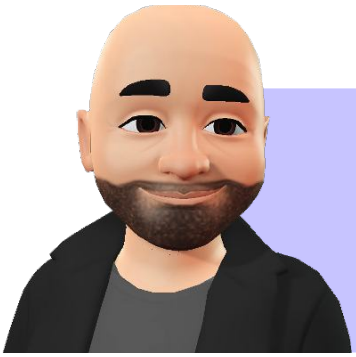
Parent participants desired unbiased information on VR from sources they can trust. When seeking out information about new gaming opportunities, parent participants leaned on information from other parents as well as online resources such as third-party reviews, science backed research, influencers and demos on social media to get unbiased and credible information so they can make their own judgements. Because the technology is so new, parent participants felt they couldn't rely on finding answers to their biggest question through their usual searches.

Here are some of the trusted sources that parents said they would use:

Parent participant question	**Trusted source**
Is the content age appropriate?	Third party reviews Game descriptions/trailers Media groups Other parents
What is the experience like?	Platform resources (website) Social media demos Trying it myself Word of mouth from other parents
What privacy and safety features are available?	Platform resources (website)
Will VR impact my child's health or development?	Science backed research from third parties
What headset should I get for my child?	Social media demos, game clips Social media influencers

Parent participants in Australia said that they wanted a better understanding of VR to be able to make informed decisions about game discovery controls. They are mostly involved in assessing new games before purchase, considering ratings, feedback from older siblings or other parents, and previews to gauge appropriateness. After purchase, they trusted ratings or their children's judgment, showing less concern about specific in-game activities or purchases. They wanted to prevent unauthorized purchases, preferring non-saved payment methods and gift cards. Additionally, parent participants wanted the ability to block specific game features, create pre-approved game lists, access game previews, and allow their children to try games before purchase. Parent participants with low knowledge of VR were unsure of what effective discovery controls could look like, suggesting a need for digital literacy to make informed decisions about relevant features.

When it comes to a range of different worlds that players can choose from, parent participants considered that more detailed descriptions and information about player communication and interaction types in the game would be useful to assess and understand their children's experience. While confident in their judgment of age-appropriateness for their child, many parent participants expressed skepticism towards platforms providing solely positive feedback and preferred a broader range of opinions, including those of advisors and diverse parent perspectives, to feel assured in their decisions about content approval. Eight out of 9 parent participants in the US, for instance, said they would look at parent reviews and approval ratings first to understand if a world was right for their child.



"The whole idea of gaming is fun for them - if they had to come in and ask me every time to approve it I think we would find it too much effort."
- C., parent of a 13 year-old, Ireland workshop participant

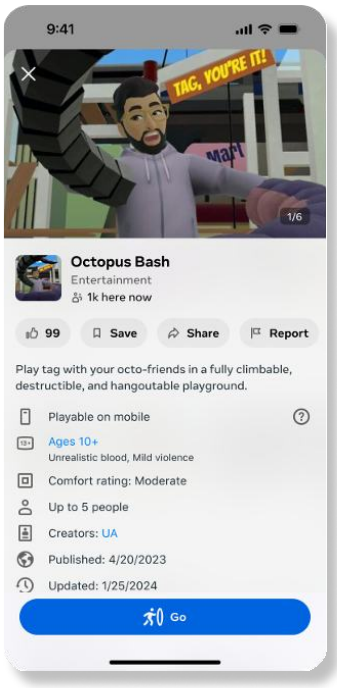
Sixteen of the 18 parents we spoke to in the UK and Ireland prefer to approve a category of worlds to approving multiple games individually. Parent participants preferred the option to batch approve a category of worlds based on recommended age range, content themes, and types of experience. Despite preferring bulk approval, parent participants acknowledged a concern for inappropriate content slipping through the cracks. Parent participants wanted the ability to monitor game activity and fine-tune approvals, whether it's to make an exception for a blocked world or retroactively remove an approved game if it's unsuitable for their child.

"When I first set up games to play on her own, I did have an approval system for what games were downloaded. But I was getting these alerts all the time. So then I developed my level of trust with us. Now I don't do anything." - D., parent of an 11 year-old, UK workshop participant

What is Meta Doing?

Parent-managed app access and data use

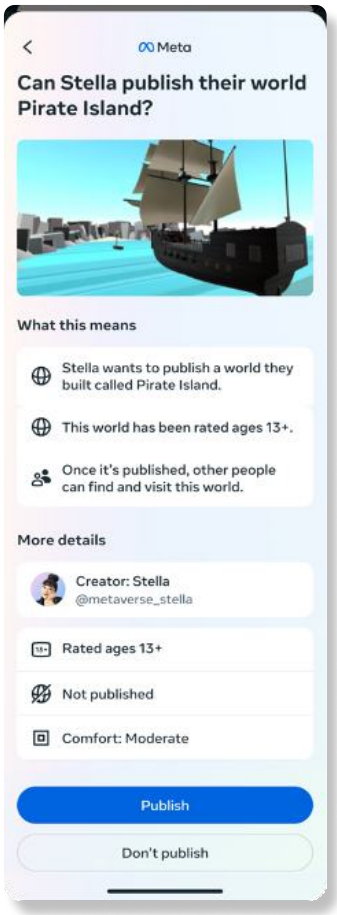
Parents control whether their child can download or use an app, and parents can block access to apps at any time. To help parents decide whether to allow their child to use an app on Meta Quest, all apps have a product description page that provides information on what data is collected and how it might be used, whether the app has social features, as well as an age rating provided by the IARC. All of these same features will apply when we provide parents with the ability to approve Meta Horizon Worlds access for their children with parent-managed Meta accounts later this year.



Meta Horizon Worlds ratings and integrity

We use content ratings to help children aged 10-12 and teens have an age-appropriate experience in Worlds:

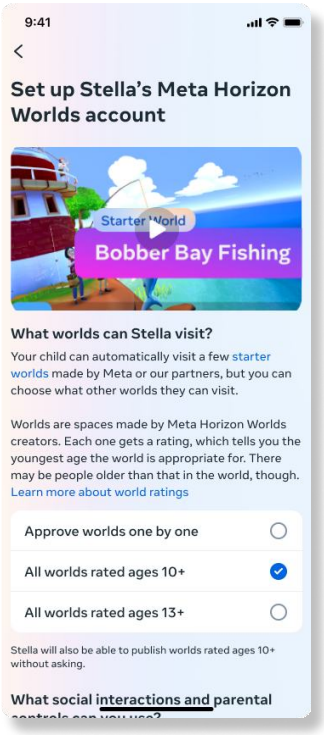
- Worlds in Meta Horizon will be rated according to our new Meta content ratings policy with three age categories: ages 10+, ages 13+, and ages 18+
- Ages 10+: These worlds and events are appropriate for ages 10 and up. They may have mild language, minimal suggestive themes, and/or cartoon, fantasy, or mild violence
- Ages 13+: These worlds and events are appropriate for ages 13 and up (or older in some regions) and may have violence, suggestive themes, crude humor, minimal blood, simulated gambling and/or infrequent use of strong language
- Ages 18+: These worlds and events are generally appropriate for people ages 18 and up and may include intense violence, sexual content, strong language and/or regulated goods like tobacco or alcohol
- Ratings will initially be generated based on a world creator's answers to a survey about world content and experiences before they publish (or re-publish) their world
- People can report worlds with content that they think might be inappropriate or have a rating that is not accurate
- Children and teens can't find, see, enter or publish worlds and events rated ages 18+.

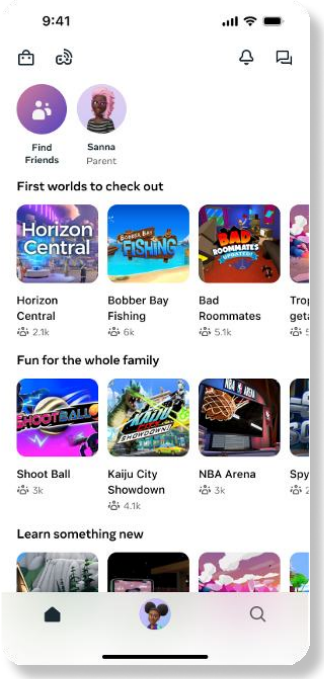


Meta Horizon World access, approval,collaboration and starter packs

Upon access approval, children will initially be offered a starter pack of worlds: a select group of worlds for children aged 10+ as the default worlds they have access to. The starter pack is an easy way to get started on Meta Horizon Worlds with high quality and appropriate experiences for young audiences.

Parents will also be able to see and control additional worlds their child can access. They'll have the option to approve or restrict individual worlds, and approve an entire age rated category of worlds for their children. Children will be able to collaborate on world construction with approved contacts. Parents will be able to see all world collaborators and remove their child from collaborating on a world if they choose to.





Consideration 2:

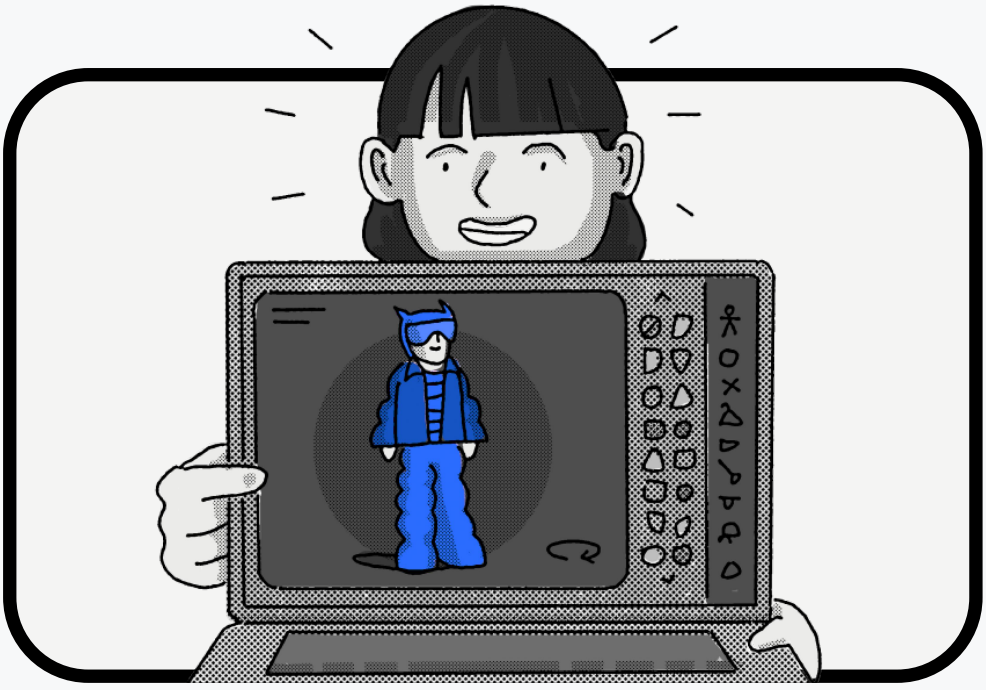
Designing for the unique needs of children to enable positive social experiences in virtual settings

Learning 1:

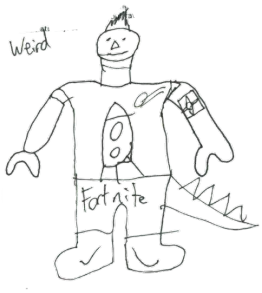
Children want accounts, controls and tools that enable safe connections and fun communication

Children undergo developmental shifts that impact their experience of aspects of multiplayer games

We asked child, early teen and parent participants to reflect on their experiences within multiplayer games on mobile and in virtual settings, which provided insights around child and early teen behaviors as individuals and within their immediate environment and interactions.



Insights	*Child participants are still...*	*Late child and early teen participants are starting to...*
Self-efficacy and confidence	*Seeking the support from parents and adults in challenging situations* In many instances, child participants were still open to pulling their parents in to help when with challenging online situations, like dealing with aggressive players or strangers who try to contact them. Many child participants understood the value of keeping their parents in the know of what is going on with them while gaming. "I would tell [my parents if I blocked someone.] It's probably important to let them know." - A., 12 years old, Ireland workshop participant	*Prefer handling situations on their own or with friends* *Some late child and early teen participants increasingly preferred to handle online challenges alone, using built-in tools or friends' support. They were less likely to bring in their parents because they worry they will overreact or create stricter rules.* *Some younger teen participants said they still benefited from parental supervision tools to help keep them safe.* *"Sometimes if a random person adds me as a friend and if my parents see it, they may question it. If my parents ask about it, I'll say I don't know them." - S., 13 years old, Ireland workshop participant*
Privacy	*Accepting of adults monitoring their online interactions* Child participants were often more open with their parents, which gives their parents a sense of security that they will know if something is going on with their child. Child participants often didn't mind parents listening in while they were gaming or looking through their play history. They were comfortable sharing chats and friends lists with their parents. "I don't mind [if my parents could read my messages] because I wouldn't say many bad things that my parents wouldn't want me to say." - A., 12 years old, UK workshop participant	*Have a higher need for personal privacy* Some late child and early teen participants were starting to develop a higher expectation of privacy, especially when it comes to who they are talking to and what they are saying in chats and conversations. Younger teen participants said that they still sometimes wanted tools and defaults to help keep them safe. This included a broader range of privacy and safety settings and controls with stronger defaults initially alongside parental controls..
Validation & approval	*Seeking parents' attention and praise for a job well done* Many child participants embraced the chance to "show off" their gaming skills to their parents. They wanted opportunities to get their parents help in games and show them cool things that are happening. Some child participants wished they could talk more about their gaming hobby with their parents, but didn't because they didn't think they would be interested. "If I'm playing an intense game and I'm about to win, I call my parents in and have them watch me." - K., 11 years old, Ireland workshop participant	*Seek affirmation from peers* As some late child and early teen participants dived deeper into online gaming worlds, they started to seek validation from peers, which they got by dominating leaderboards, rising in game rankings and building an online persona that commands respect. Peer influence drives in-game behaviors, where participants said that they often took actions based on recommendations or because their friend had done similar. "[It's important for people to know] my authority. I'm in a lot of groups with a high ranking, so I want them to know that." - A., 13 years old, UK workshop participant

Exploration and boundaries	*Generally following the boundaries established by parents* Child participants and their parents typically wanted the similar things when it comes to online gaming safety. Child participants were careful about sharing personal information with others and tend to avoid playing with strangers, older people, players who act or speak aggressively and games with high levels of violence. This shared understanding made child participants receptive to parental supervision, and they saw it as helpful to navigate potential challenges. "I don't like gory games. Like blood is fine, I do not care, but like I don't think realistic gore makes a game good." - A., 11 years old, US workshop participant	*Have greater interest in exploration and testing boundaries* The gap between what parent, child and early teen participants viewed as appropriate experiences widened as they became more interested in exploring new games and friendships. They wished to explore more results in expanding social circles both online and offline, and growing interest in more mature games. Younger teen participants said that they still wanted age-appropriate tools and defaults to help keep them safe. This includes a broader range of privacy and safety settings and controls with stronger defaults initially alongside parental supervision tools
Identity & expression	*Expressing their sense of humor and mischievous side online* Many child participants preferred expressing themselves in games through playful, fantastical avatars that help them prank other players or make them laugh. These child participants opted for meme avatars which are often embodied as inanimate objects. "Sometimes I have a meme avatar. It may not be funny anymore so I change it, for example, a bottle of Fanta."- Z., 11 years old, UK workshop participant  	*Express and explore aspects of their identity online* Friendships at the late child and early teen age and stage are dynamically evolving, often characterized by frequent changes and emotional intensity. Child and teen participants were looking for flexible social tools that accommodate the evolving nature of these relationships, providing ways to manage conflicts and change social circles within the gaming context. Some child and early teen participants were becoming more aware of how they are perceived by others. Many were starting to use their avatars as a tool for self-expression and social identification, helping them find others who share their interests by customizing their avatars to reflect their gender and interests. "My avatar would be a person with leggings and a Nike shirt because I like the brand" - S., 13 years old, Ireland workshop participant
Social circles	*Preferring to play online games with just friends* Friendships formed in games often reflected or extended those in the physical world, such as schools or sports teams. Recognizing these transitions between physical and virtual spaces can enhance the safety, privacy, and richness of gaming environments. Child participants tended to favor friends-only experiences compared to more public games where they might be playing with strangers who are older. They were highly aware of the concerns around potential bad actors, but they found it more valuable to play with friends they feel comfortable being funny with. "I only want my real life and online friends to see if I'm online. I don't need strangers knowing if I'm online or not. Why do they need to know?" - B., 10 years old, US workshop participant	*Have greater interest in expanding their social graph* Some child and early teen participants were starting to view multiplayer games as an opportunity to build connections with like-minded peers, venturing beyond their real-life friends when seeking new people to team up with. Positive experiences, like being matched in a game with a skilled and respectful player in their age group, can spark new friendships and level up their skills. "I'd want to talk to people online so you can talk to people abroad and stuff. I do that now." A., 13 years old, UK workshop participant

Some experts thought preteens shouldn't have access to social virtual experiences at all, while a majority of experts said they should be able to have social virtual experiences with their friends.

Children want parental involvement and controls over social interactions
The relationship between parents and youth is a balance of support and autonomy, which continually evolves as youth grow. Child and early teen participants have distinct preferences for discovering new multiplayer games and sharing them with their parents. Both child and early teen participants wanted accounts that include controls around safety and social wellbeing in gaming experiences. They expected seamless integration with other platforms and personalized and timely game recommendations, avoiding distractions during gameplay.

Child and early teen participants said that they brought their parents in for certain situations, but not necessarily for everything. Child and early teen participants were looking for support when they asked for it, but worried that parents might over-react if they have too much visibility.

Child and early teen participants wanted some controls to manage everyday social experiences and interactions with friends independently, without parental involvement. However, for situations that could potentially impact their privacy or safety, whether with friends or strangers, they wanted to involve their parents or a trusted person, such as an older sibling.

	Interactions that participants might have in their social circles	**Interactions that participants perceived to potentially pose risks**	**Interactions that participants perceived potentially to be serious**
Desired control	Mute, block, temporarily limit interactions with someone	Block and report	Facilitated conversation with parents
Desired autonomy	High autonomy, don't want to involve parents	Medium autonomy, might want to involve parents	Low autonomy, want to involve parents

Child participants desired controls including personalized game ratings to adjust content aspects like scariness, detailed social controls to mute, block, or limit interactions without reporting, and age-based safety measures to ensure interactions with participants of similar age. Early teen participants wanted preventive controls to choose who can enter their game, enhancing safety.

Child participants wanted controls to manage how they interact with others in games. Over half of child participants in the UK and Ireland wanted to

- Have some control over who they could approve to talk to or play with, compared to parents approving everyone
- Be able to hear friends of friends in group settings if they weren't an approved contact, since they felt that not hearing them would be uncomfortable if others were talking about them.

"If anything bad happens, I'd tell my parents, but I don't want them knowing every detail." - A., 10 years old, Australia workshop participant

Child and early teen participants blocked and unblocked people liberally and considered it a normal part of managing their shifting relationships. The reasons that child and teen participants blocked or unblocked in multiplayer games included disagreements, swearing, or changes in friendship (which are sometimes temporary). Child and early teen participants indicated that they appreciated being able to block or unblock others by themselves, giving them the decision-making power to manage their friendship circles and act as intermediaries between their parents and their online contacts. Child participants appreciated the status and visibility settings feature as it simplified finding friends to play with. However, they wanted the flexibility to easily turn off their visibility settings when they're not in the mood for social interaction. The needs of children and young teens, who preferred flexible, temporary and reversible controls to handle their dynamic social relationships, were sometimes in tension with the concerns of parent participants or third-party advisors we consulted.

"Sometimes I play my games console offline if too many people are annoying me." - K., 10 years old, Ireland workshop participant

For most child participants, interacting or sharing their status and visibility settings with strangers didn't offer much appeal. They preferred to keep their experiences such as worlds private for friends only. For child and parent participants, merely being co-present in a game with an unaccepted friend in a children's age group didn't raise significant concerns as long as their abilities to interact were limited to seeing and being seen. Red flags for parent participants were raised with the possibility of children interacting more intimately with unaccepted friends, from sending emojis or making gestures, to text chatting and voice. Child participants didn't see a lot of benefit in interacting in a world with someone they didn't know and in most cases, preferred to keep worlds a friends-only space.

"I only want my real life and online friends to see if I'm active. I don't need strangers knowing if I'm online or not. Why do they need to know? What are they gonna do? Join me?" - B., 10 years old, USA workshop participant

As teens expand their social circles, their online interactions evolve. We heard from early teen participants who were starting to seek greater privacy and autonomy, preferring activities like playing in separate virtual rooms. These teens were hesitant to talk about certain situations with their parents — they were starting to desire more independence and proactive measures to improve digital safety.

Principles that are based on insights from research workshops when creating family-oriented immersive social experiences for children and their parents include:

Make management supervision accessible

Enable account level parent management to lower the barriers to supervision, ensure features are easy to learn about and simple to bring into practice

Provide robust education for families on how to use the technology and the supervision features

Support child growth

To prepare children for their next stage in life, support their ability to learn self-monitoring and safe habits

Adapt to different families and their evolving needs

To guarantee efficacy for different contexts, create an experience that can flex to serve different family dynamics and stages of youth development

Provide a safe baseline experience

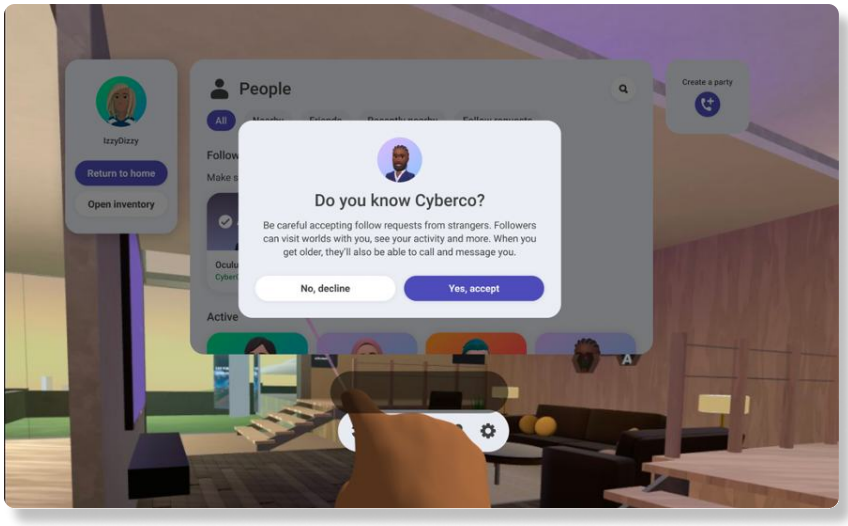
To make sure children are protected with or without adult supervision, defaults should aim to ensure a safe and positive experience

Third-party advisors we spoke to tended to describe parental supervision ideally as a two-way conversation between parents, their children aged 10-12 and teens, noting that teens in particular will have gained knowledge through experience and interactions with their peers that can help parents better understand where controls or supervision may be needed.

What Is Meta Doing?

Default child settings in Meta Horizon Worlds

- Audio chat: A child's mutual followers can join them on Meta Horizon WorldsHorizon Worlds, but audio chat will be limited to approved contacts.
- Visibility settings: Children are automatically defaulted to offline so they will look like they are offline to other people. Children won't be able to change default privacy and safety settings - only a parent can. For people that children follow, the child may see their visibility settings and what app or destination they're in, depending on those people's settings. We won't show children recommended people to follow.



Additional child controls, connections and communication on Meta Horizon Worlds

- Reporting, blocking and muting: These help protect children from anyone who makes them uncomfortable.
- World access and collaboration: Children will be able to collaborate on building a world with approved contacts. Children will be blocked from members-only worlds. In-world purchases will be disabled for children. World feedback and posts are disabled for children (meaning that they can't see them or post them). Children can only be in a closed space with an approved contact, such as on Meta Horizon Home.
- Code of Conduct: As Meta Horizon Worlds is an open space where people are hanging out in real time, we have rules to help keep everyone safe. Our Code of Conduct for Virtual Experiences and Content Guidelines outline how we expect everyone to act,give examples of what kinds of behavior that is not allowed, and the type of content that all users may interact with.

Turning 13

When turning 13 (age may vary by region), teens will be prompted to start managing their own Meta account. They'll have 30 days after their birthday to review what will change when they start managing their own account and agree to the Meta Terms of Service to continue using their Meta Quest. Teens who start managing their accounts will automatically be opted in to parental supervision, but teens and their parents have the option to remove supervision at any time. When a teen starts managing their own account they'll:

- Be in charge of their own account (including privacy settings) — teens' Meta Horizon profiles are also automatically set to private, and their active status settings are set to offline, but with flexibility over this setting.
- Approve all follower requests on their own by default — they'll be able to approve or decline anyone who requests to follow them, and they'll start managing their own follow requests if they weren't managing them already.
- No longer need someone to be an approved contact before they can chat with, call, invite and join them in an app or destination. Parents can use the parent dashboard to see the usernames of people their teen is connected to.
- Be able to create and explore more on Meta Horizon Worlds, including visiting worlds and events rated ages 13+, and they can decide who they want to collaborate with. They'll be prevented from finding, seeing, entering or publishing spaces that contain mature content, including worlds and events.

Learning 2:

Children want education and want avatars that combine elements of personality, appearance and privacy

Children want support with education opportunities and methods
Child participants we spoke to in the UK had an innate understanding of some of the unique characteristics of qualities building towards the metaverse:

- Embodiment — “With a [gaming] console, it’s more restricted – it’s more about what you do with your body”
- Immersion — “You’re like, moving around in the space so it’s like you’re actually in the game”
- Ephemerality — “I can meet someone and talk to them on the spot and it would kind of ruin the game if I had to wait for [approval from] my parents”

When VR is used for playing games and having fun, educational moments that interfere with entertainment will be tolerated at best and skipped at worst. Child participants had safety-related questions about their virtual social experiences: who they’ll be able to interact with in worlds, how they should behave, and how to appropriately find people to play with.

Instead of traditional educational methods that are boring and intrusive, participants preferred learning that is seamlessly integrated into the games themselves, which would make the learning process more engaging and less disruptive to their enjoyment. Teen participants we spoke to in Europe considered how platforms might build interstitials to drive awareness of, and control over, privacy and safety settings in virtual social settings.

Children understand avatars in ways that support identity, self-expression and privacy
Child participants in the US, the UK, Ireland and Australia said that they express their interests and personalities through creative and imaginative avatars across different contexts. Teen participants, being more conscious of the risks in online gaming, started adopting safer behaviors.

When creating avatars for multiplayer games, child and teen participants had different preferences in their interactions with friends, strangers, and family. Child participants reflected their interests and personalities in their avatars, making their games more enjoyable or allowing them to connect with others based on shared interests.

"Instead of just like a voice or something, there could be like a fake character there just explaining to you." - A., 12 years old, UK workshop participant

Almost all child participants wanted their avatars to express their gender and obscure their age for privacy reasons. They were split on wanting their avatars to reflect their appearance. On the one hand, they wanted to use their avatars to attract like-minded players, but they also wanted to maintain a level of anonymity. Wanting their avatars to be both familiar and fantastical, they often mixed personal touches with playful disguises to create an avatar that reveals the most important aspects of their identity while hiding others, and often incorporated elements their friends would wear. Avatars were viewed by child participants as creative expressions regardless of context.

Early teen participants were beginning to recognize the potential downsides of social online gaming, starting to adopt practices when creating their avatars such as reflecting their physical likeness among close friends. They were also choosing more cautious and anonymized avatars when interacting with strangers and family, prioritizing privacy, safety, and navigating family dynamics more comfortably. Teens reflected that they might use avatars to put themselves out there and express themselves and reflect sides of themselves that they want to explore. Child participants tended to use the same avatar with all audiences, but early teen participants preferred different avatars for different audiences:

- An avatar that blends real characteristics with creative, playful elements with their friends
- A true-to-life representation of themselves with family
- An anonymized avatar to protect their privacy with strangers

Children want more expressive voices that support self-expression and protection

Child participants wanted more expressive voices without revealing other characteristics they view as private. While voice chat was mentioned as the easiest way to communicate and strategize in games, many child and early teen participants recognized that masking or hiding aspects of their identity, like their voice, can serve as intuitive privacy controls, particularly in embodied and immersive contexts. Most children and early teens we spoke to reserved their real voice for when they're playing with friends, using messaging apps, their phones, or a private setting for a direct line to their friends. In public and social settings, however, muting was their go-to defense against unwanted attention. Some child and early teen participants indicated a desire to alter or change their voice when gaming with others they don't know to make it sound more authoritative or anonymous.

"I try to make my avatar as tall as I can because I'm the tallest in my class. I want to look like how I am in real life." C., 10 years old, UK workshop participant

“My avatar would sound like Siri so you can stay anonymous.” - S., 13 years old, UK workshop participant

“I would want to have a different voice than my own, but still a girl.” - S. ,13 years old, Ireland workshop participant

“If I play with my friends, I'll use a deep voice. I tell my friends I do that so they know who I am.” - C., 10 years old, UK workshop participant

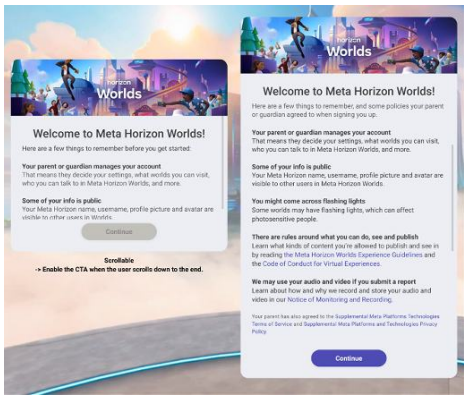
"My avatar looks like me but I cover my eyes because when someone can see your eyes they can see who you are. I want goggles” - J., 13 years old, UK workshop participant

“My avatar would have a very deep voice because my voice cracks.” - R., 13 years old, Ireland workshop participant

What Is Meta Doing?

Audio chat in Horizon Worlds

Children's audio in worlds where others are co-present will be limited to approved contacts. All other people will be muted for children, and the child will be muted for them. Non-approved contacts will see an ear icon above the children's name tag that shows they can't hear them. In-world sound effects will remain audible. Teens automatically have their Voice Channel set to "People you know", where other people's voices are filtered and sound like quiet, friendly sounds, giving them more control over who can hear and communicate with them.

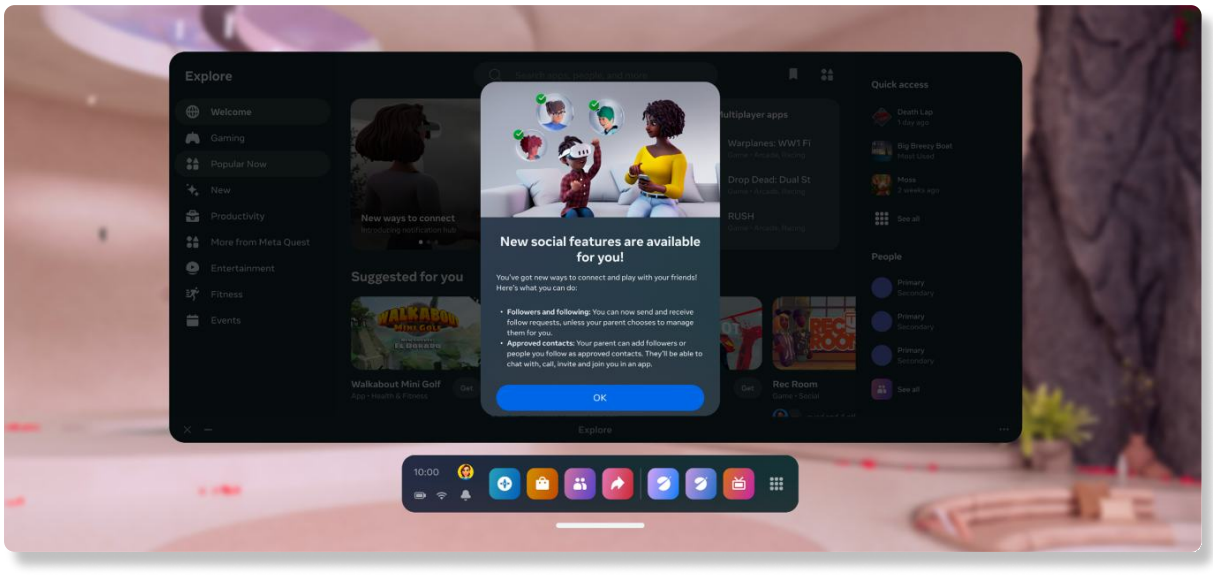


Avatars

Recognizing that avatars are an important tool for both privacy and self-expression for children aged 10-12 and teens, we will continue to refine our Meta Avatars style and creation tools and provide parents and youth with resources to safely, authentically, and respectfully represent themselves in immersive social experiences.

Education

- Welcome World and Welcome Island will be accessible by default, as these destinations are essential to using Meta Horizon Worlds and function as places to start out and review helpful tutorials about how to navigate and play.
- We've built in-product educational safety tips into the Worlds experience specifically for children aged 10-12 and teens to remind them of safety best practices. For example, we'll remind them to only accept follow requests from people they know.
- We have community guides in a few key public spaces to help answer questions and report and remove people who aren't following our Code of Conduct for Virtual Experiences.
- See also Parent Zone's Reality Check series for teens, where we developed resources for parents and teens about navigating Meta Horizon Worlds.
- Teens can find information on how they can review privacy settings and learn more about safeguards in the teens section in our Privacy Center.



4
Future considerations

What else can we learn about this subject?

Enhancing play and playing together

In addition to continuing to explore how to best design for play which is a core focus of Meta Horizon Worlds, a few parent participants said that they played or shopped for games together as a form of keeping an eye on their child. Parent participants wanted to connect with their child through virtual social experiences, but they were often hesitant due to their perceptions that they will be outmatched by their children's gaming abilities and unable to catch up, sharing one headset might be clunky and frustrating, and buying multiple headsets was too big a financial commitment. Many parent participants were excited, yet intimidated, by the idea of gaming with their child. They saw learning together as a way to reduce the knowledge gap with their child, understand experiences to get a sense of what to look out for when monitoring their child, or facilitate a real-time dialogue so parents can feel confident children understand the topics before they start playing.

For parent participants, playing alongside their children seemed like a fun way to connect and also gain perspective on their children's virtual and social experiences. This context would help build understanding and openness, making it easier for parents to have better conversations and know how to support their child.

Many child participants were still interested in sharing gaming experiences with their parents, making it a prime opportunity for parents to cultivate more open and communicative relationships. Though somewhat lukewarm about spending time learning about digital safety and privacy with their parents, preeteen participants shared an interest in these topics, which could be good candidates for shared learning experiences, if presented in a lightweight and engaging way at key moments. Child participants saw co-play as a chance to hang out with their parents, gain a backup player when their friends are busy, and show their parents why they love games so much. However, based on the research insights, as children become teenagers, their interest in playing with their parents tends to decrease.

Emerging technologies and age-appropriate design

As Meta continues to build a next-generation immersive social and spatial technology in mixed and virtual reality and beyond, it is important to continue to focus on present and future-facing opportunities for age-appropriate design around

- Social capabilities that help people connect, engage, and fluidly move between spaces with friends
- Content experiences in which people really feel like they're there, enjoying their time and are co-present with others
- Expressive embodiment so people can represent themselves and foster their sense of individuality.

This includes the intersection between AI and mixed and virtual reality, where we consulted some advisors around age-appropriateness with regard to the future development of AI-enabled characters and experiences in social immersive settings. More exploration is required around the differences between more tutorial-style experiences and more social, conversational interactions with AI characters, as well as considerations around awareness and data use and transparency, parental supervision, digital literacy and education, and developer guidance.

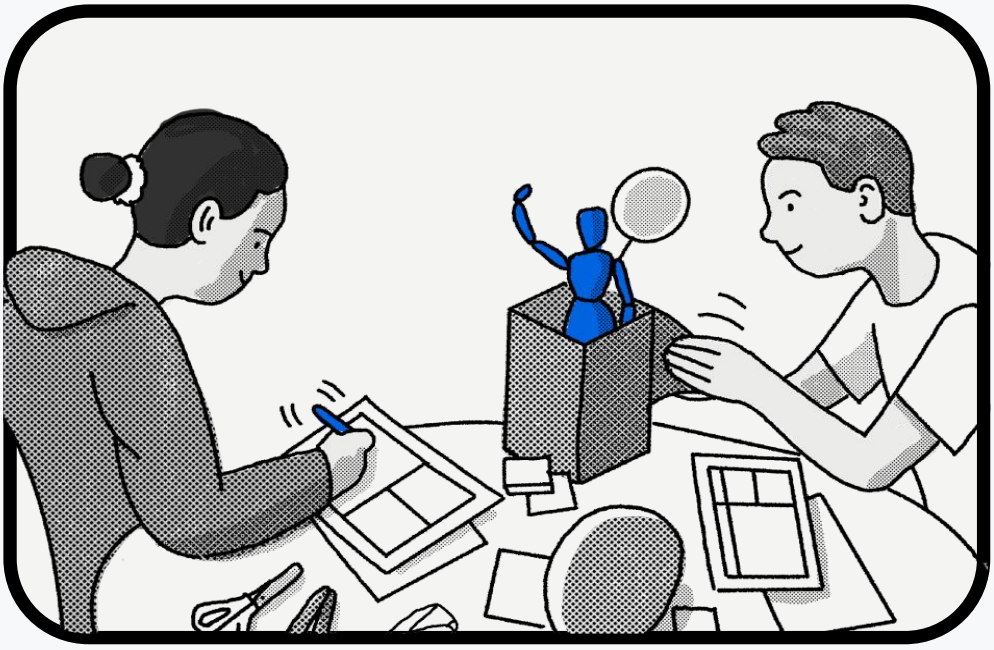
What’s next for Meta?

Meta is committed to providing parents with the tools they need in order to help ensure their children aged 10-12 and teens are having positive and valuable experiences online. However, we also understand that as youth are becoming more digitally savvy, some parents are finding it difficult to keep up with all of the tools and controls available to them. As well as creating tools and approaches that are informed by what parents have told us they want, we're also committed to working with industry and policy makers to identify and create ways to support parents in this context - including by calling for parental approval for app downloads to take place at a device, operating system (OS) or app store level.

As always, there is a lot more work to do and we’re eager to hear feedback from groups who work with families on this issue to continue refining our approach, and ultimately working to raise industry standards with layered obligations for assurance and verification at multiple levels.

Meta continually reflects on external guidance from governmental bodies and children's rights groups around how to design age-appropriate digital experiences for youth. As we build our understanding of how to apply this guidance on mobile and in mixed reality settings, Meta is committed to continuing research and consultation to provide a wider perspective on questions related to age-appropriate design.

As with our effort to build accessibility into our mixed reality technologies, co-design is a method that not only drives real-world impact, it also unlocks new possibilities, creating better product experiences for everyone. We recognize that the industry still has a long way to go to make mixed reality more inclusive, establishing and iterating on new industry standards. Co-designing solutions earlier in the development process will enable everyone to thrive in the metaverse.



Parent participants want to find a balance as their children become teens

Parent, child and early teen participants valued the social benefits of multiplayer games and sought to balance parental management and supervision with opportunities for identity formation, self-expression, confidence building and socialization.

Parents of child participants aged 10-12 preferred management and supervision approaches that allow for more stringent control over gaming activities, such as blocking features and strangers, setting time limits, and secure logins that youth cannot bypass.

Some parent participants said that they tended to intervene still with early teens: they might still use firmer rule-setting and monitoring to create safer spaces alongside conversation and teaching tactics.

However, every teen is different and as children become early teens, other parent participants wanted to increasingly respect their growing independence while still keeping tabs on them in case issues arise. Tactics like casting gameplay, listening in on voice chats started to feel too invasive and lead to uncomfortable conversations.

Parent participants preferred stricter controls for children and early teens and a more gradually collaborative approach for older teens, setting supervision features together.

"You don't want to be snooping all the time to tell the truth, but I'd like to get flags when things aren't appropriate. In my ideal tool, I'd be able to indicate what the flags should be. I could pick them!" - C., parent of a 12 year-old, UK workshop participant

"As 13 and 14 year olds, there's so much going on in the real world, that I think, even though they hate their parents [watching], I think she's glad that I'm doing it, in a way they feel secure." - L., parent of a 13 year-old, Ireland workshop participant

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