

Teaching children how algorithms influence what they see online



What an algorithm does online

An algorithm is a set of instructions used by software to process information and produce an outcome. Online platforms use many algorithms to organize search results, rank posts, recommend videos, suggest accounts, select advertisements, and decide which notification appears first. The system may examine signals such as what a child watches, skips, searches for, likes, shares, follows, or watches repeatedly. It may also use information about language, location, device settings, or broadly inferred interests, depending on the service and its privacy practices.

A child-friendly explanation might be: "An algorithm is like a very fast sorting assistant. It notices clues about what people do online and uses those clues to guess what they might want to see next." The assistant is not a person who knows the child completely, and its prediction is not necessarily accurate or beneficial. It is following rules established by the platform, often with business goals such as keeping users engaged or showing relevant advertising.

Emphasize that the first item a child sees is not the only available information. A feed is one pathway through a much larger internet. This distinction can reduce the impression that recommendations are objective,

inevitable, or specially chosen because the platform knows what is best.

Why recommendations can shape attention

Recommendation systems are designed to predict what a user may select, watch, or engage with next. When a child responds to one topic, the platform may offer more material that resembles it. This can be helpful when a child is learning a skill, looking for a creative activity, or trying to find content in a preferred language. It can also make the online experience progressively narrower, particularly when the child repeatedly receives similar themes, creators, viewpoints, or emotional styles.

Content that produces rapid engagement may be favored because it generates clicks, comments, shares, or longer viewing time. Material that is surprising, frightening, angry, or highly sensational can therefore appear prominent even when it is inaccurate, distressing, or developmentally unsuitable. The presence of a recommendation does not establish that it is trustworthy, safe, or appropriate for a child.

Children may also interpret repeated exposure as evidence that something is common or true. Caregivers can gently ask, "Is this appearing because it is the best information, or because the system thinks it will keep you watching?" This question introduces a useful distinction between popularity, personalization, credibility, and wellbeing without requiring children to understand technical machine-learning concepts.

Building algorithm literacy with children

Algorithm literacy means understanding that digital systems collect signals, make predictions, and shape what becomes visible. Research on children's algorithm literacy suggests that awareness is not simply a matter of knowing the word algorithm. Children also need opportunities to reason about how recommendations are produced, whose interests may be served, and how their own actions can influence future suggestions.

Use ordinary moments as teaching opportunities. When a platform recommends several similar videos, ask what the child watched or searched for before the recommendations appeared. When a search result seems unusually tailored,

discuss which clues might have influenced it. Together, compare results from two accounts or search sessions, where appropriate and permitted, and explain that different people may receive different selections.

A short family conversation can include four questions:

What did the platform notice about your activity?

What does it seem to want you to do next?

What information might be missing from this feed?

How did this content affect your mood, body, or behavior?

Keep the tone curious rather than interrogative. The goal is to help children pause and interpret the system, not to make them feel responsible for every recommendation they encounter.

Adapting the conversation to age and development

Young children usually benefit from concrete language and shared supervision. An adult might say, "This app remembers that you liked animal videos, so it is showing you more. We can choose something different together." Use simple comparisons, such as a shop assistant placing familiar items near the checkout, while clarifying that software does not have feelings or personal judgment.

School-age children can begin identifying signals and goals. Discuss viewing history, autoplay, advertisements, persuasive design, and the difference between a recommendation and a fact. Invite them to practice stopping autoplay, selecting a different topic, or checking information with a trusted adult or reliable source.

Adolescents can explore more complex issues, including profiling, targeted advertising, privacy, commercial incentives, political content, misinformation, and the possibility that recommendation systems reinforce existing preferences. Respect for growing autonomy is important, but so are clear boundaries around age-restricted material, contact from unknown people, and content involving self-harm, sexual exploitation, violence, or illegal activity.

Children vary in cognitive development, language, neurodevelopmental profile, and emotional regulation. A child who becomes distressed or compulsively checks

recommendations may need a calmer, shorter conversation and more direct adult support. Avoid treating difficulty disengaging as a character flaw.

Practical ways to widen a child's online experience

Families can reduce the influence of a single recommendation pathway by deliberately varying how children find information. Encourage direct searches for known topics, subscriptions to carefully selected educational sources, library and school resources, offline activities, and conversations with knowledgeable adults. Teach children to look beyond one short video or post when a topic matters. They can compare more than one credible source, check the date and author, and notice whether a claim is supported by evidence.

Review platform settings together. Turn off autoplay where possible, limit notifications, examine personalization and advertising controls, and use age-appropriate privacy settings. These steps do not make a platform risk-free, and settings can change, but they give families more control over data collection and attention cues. Discuss why a child should avoid sharing identifying information, precise location, passwords, health details, or private images with platforms or strangers without appropriate guidance.

Predictable technology routines can also protect sleep, school participation, physical activity, and relationships. Agree on device-free periods, charging locations, and what a child should do after encountering frightening or sexualized material. Healthy screen routines and sleep should be considered alongside the content itself, because timing, fatigue, and emotional arousal can affect how children cope with online experiences.

Responding when recommendations become harmful

If a child encounters content that is frightening, hateful, sexually exploitative, encourages self-harm, promotes dangerous behavior, or involves coercion, begin with calm listening. Thank the child for telling you, avoid blaming them for the recommendation, and preserve relevant information if reporting may be necessary. Use the platform's reporting and blocking tools, review account and privacy settings, and consider whether the child needs a temporary change in access while adults assess the situation.

Do not promise absolute confidentiality if there may be immediate danger. Seek urgent local help when a child may be at risk of self-harm, abuse, exploitation, violence, or contact with an adult who is coercing them. A pediatrician, child psychologist, school safeguarding lead, or other qualified healthcare or safeguarding professional can help assess distress and identify appropriate support. Digital exposure alone does not establish a mental health diagnosis, and persistent sleep disruption, anxiety, mood change, withdrawal, or impaired functioning should be discussed with a healthcare professional rather than managed through assumptions about algorithms.

For routine concerns, ask what the child noticed, how often it appears, what they feel compelled to do, and whether online experiences are interfering with daily life. Collaborative problem-solving is usually more effective than punishment or sudden loss of all digital access, unless immediate safety requires firm restriction.

Helping children become thoughtful online participants

Children do not need to understand every technical detail of artificial intelligence to recognize that online environments are shaped. The essential lesson is that recommendations are predictions generated from data and platform rules. Predictions can be useful, incomplete, commercially motivated, and wrong. Children can learn to pause, question, compare, and choose rather than automatically follow the next item.

Adults model this skill through their own behavior. Say aloud when you are checking a source, declining a targeted recommendation, changing a setting, or taking a break from emotionally intense material. Ask permission before inspecting an older child's account when possible, explain the reason for necessary safety checks, and preserve dignity during difficult conversations. Trust grows when monitoring is transparent and proportionate.

Algorithm literacy works best as an ongoing family practice. Revisit the topic when a child changes platforms, receives a new device, begins using search or messaging independently, or encounters a recommendation that raises questions. Pair these conversations with broader online safety for children, privacy education, media literacy, and support for sleep and emotional regulation. The aim is not perfect control of the internet. It is to give children durable

skills and a reliable adult relationship in which they can ask for help.