mystery science

Grades K-5
Mini-Lesson: “How are books made?”

VIDEO TRANSCRIPT

VIDEO 1

Hi, it's Doug! When I was a kid, I liked books. I liked reading them and I even had a few like this one, where I also just loved the way that it smells still smells good. Do you have some favorite books? What about one where you really liked the way it smells? You'd be surprised how many people do. Someone named Aaliyah has a question about books. Let's give Aaliyah a call now.

[Video Call]

- Hi, Dad!

- Hi, Aaliyah!

- I have a question for you. How are books made?

- Ooh, that's a great question.

Take a look at this scientist. Can you guess what she's holding? Let's look closer. See the words? It says turnips, turnips, turnips. Believe it or not, you're looking at "Teeny Ted from Turnip Town", the tiniest book ever made. It's so small, that this book can fit on the tip of one of your hairs. The book is sitting on the gray microchip that she's holding but you can't see it. You need a special microscope to do that. Now, "Teeny Ted" is a special book, and it was made in a laboratory with special equipment. But what about most books? Like the picture and chapter books you read at home and at school, how did they get made? Well, way before any book gets

made, the idea for a book has to be created and that's the job of an author. It's hard to answer exactly where those ideas come from but most book ideas start when an author asks a question. Often a "What if" question. Like "What if a caterpillar got really, really hungry?". Or "What if a girl and her dad run into some hair trouble?". Or "What if a spider started talking to a pig?". Eventually, all of those "What if" questions turn into "What happens next" questions. Like "Will the caterpillar get sick?", "Will the girl's hair turn out okay?", "Will the spider and pig become friends?". And pretty soon, the author has the perfect plan for a book. Before I go on, I'm curious. What are some "What if" questions you might like to write a story about?

VIDEO 2

Well, once an author has an idea for a story, they write the whole story down. Maybe they write it in a notebook. Maybe they type it on a computer. It's kind of like writing a story at school. When they're done, they read it. And they don't just read it once. They read it over and over again, to make sure it's just right. Does the story make sense? Are all the words spelled right? Is it long enough? They keep on making changes and more changes until the story feels just right. And that's when it's time to turn that story into a book. But there's a problem. An author can't really do that on their own. I mean most authors don't have bookmaking machines at their house. Now they're going to need a little help. And that comes from someone called a publisher. A publisher is a company that turns the stories on an author's computer into the books you read at home or at school. A team of people read all the stories authors send to them in search of great stories. But not all stories get turned into books. Publishers get thousands of stories from thousands of authors and they can't make them all into books. So they're pretty picky about which stories they choose. They ask questions like: Is the story new or has it been told before? Is the story really exciting or is it kind of slow? Are the sentences fun and creative or are they

just kind of blah? Once they find the perfect story, one that's new, and exciting, and creative, they'll tell the author, "We love your idea. It's time to turn it into a book." And then that's when the actual bookmaking begins. It all starts with the editor. She's the person in charge. She reads and rereads the story to make sure that every character, every sentence, every word is just right. And when she finds a mistake, she gives it back to the author to fix. It's a lot less like when your teacher tells you to rewrite a story or a sentence at school. While the author and editor work on fixing things, an artist called an illustrator, and a team of designers begin to work on how the book will look. They figure out things like: Will there be illustrations or pictures? What will they look like? And what about the words themselves? Will they be scribbly looking like in this book or bold and huge, like in this one? They work on a lot of different sketches and ideas until eventually pages like this will turn into pages like this. Once the book is edited and all the illustrations are done, they put everything together into a practice book called a dummy. That's really what it's called. The dummy lets everyone that worked on the book see what it's going to look like when it's finished. If everything looks just right, it's ready to send to the printer. The printer is a place where the pages and pictures actually get made into the books you buy at bookstores or check out at the library. The printer has a giant machine that prints all the pages of the book. It's kind of like the printer you might have at home or at school, only a lot bigger and a lot faster. Watch these pages being printed. You notice anything? The printer paper is huge. That's because the pages of a book aren't actually printed separately. They're printed about 30 or 40 pages at a time on huge pieces of paper. The pages aren't even in the right order yet, until another machine folds and cuts the pages into perfectly ordered sections. But wait, there's something missing still. Can you guess what it is? The cover. All of the sections of a book still need to be put together and attached to a cover. This part is called binding. Paperback books, the ones with floppy covers are glued together to the cover. You might've noticed with some of

your own books that glued books can fall apart after a while. But books with hard covers like this one, aren't glued at all. They're sewn together. If you pick up a book and hold it up like this, you can actually see the strings where they sewed it. Hardcover books last a lot longer than paperbacks. Once a book is bound to the cover, it's shipped to bookstores, and libraries, and schools all over the world. And you know what that means. Yep. It's finally time to read. So now imagine a book you really like and think about it. That book went from a “What if” question in an author's head to a story on a computer, to a printer, to being the thing you can hold in your hands and enjoy over and over again. That's all for this week's question. Thanks, Aliyah, for asking it!