Research is what happens any time you ask questions and explore sources in order to make sense of new information. Sometimes it means looking for facts but other times it might involve interviewing people to get a new perspective. Or it might even involve playing around a physical phenomenon to see how something works. Authentic research might involve reading a book, but it might also involve gathering and examining a data set based on a needs assessment or watching a video.

Here are a few of the research methods students might use:

1. Research through Reading

The first research approach involves finding information by looking at text-based documents. This is, by far, the most common type of research in school. After all, the information is available at their fingertips. By searching the interwebs, they can find the answers and grow in their understanding of the information. Still, there is also power in having students access Google Scholar and check out articles that go beyond what they might initially find in a typical Google Search.

It might also mean reading a longer book. We tend to think of research as catching bits and pieces from tons of different sources. However, there’s also value in asking students to take a deep dive into a full non-fiction work.

2. Multimedia Research

Some of the best information online isn’t text-based. Think of the last time you tried to figure out how to learn something new. Chances are you didn’t limit yourself to text-based answers. You probably watched a few YouTube tutorials along the way. Similarly, if you’re an avid podcast listener, you’ve probably learned about concepts from a different angle by listening to 99% Invisible or Invisibilia or Hardcore History.

Sadly, I’ve seen classrooms where students are discouraged from using multimedia resources. School will completely shut down YouTube because it’s a distraction. And yet, what if students could view YouTube as a resource instead of just watching kids open gifts (unboxing videos) or watching reaction videos? What if they saw it as a place where they could geek out on their world?

Video, pictures, and audio resources make concepts to come alive in a way that reading alone does not. It’s not that multimedia resources are better but that they allow students to see things and to hear things that they can’t see or hear in a text.
3. Exploring Data

Another research option involves exploring data.

Students can access tons of data online. But they can also connect with other students in share data, increasing the sample size and finding larger trends. By using a spreadsheet or a Google Form, students can collect data in a connected way and then share their observations both synchronously and asynchronously.

You might have students create a Needs Assessment or a survey and analyze the results. Or they analyze data in market research before designing a project. They might look at crime rate statistics or climate data. When students learn to analyze data within a project, they grow more statistically literate. Here, they can see the data as being rooted in a real context and they are less likely to feel anxious when presented with data sets and graphs.

4. Conducting Interviews

We typically think of research as something static. Students consume information that has already been crafted in something like a video, book, blog, or podcast. But when students conduct interviews, they are able to ask questions, get direct answers, and ask follow-up questions. It’s a dynamic way for students to learn about a specific topic.

In PBL, this might involve interviewing a specific person who is an expert on the subject. They might talk to a professor who has taught the subject, an author who has written about it, or someone within a certain profession who has inside knowledge. Other times, they might interview a person who has been impacted by a system, idea, or problem.

Their interviews can be face-to-face video conferences, where they can interact synchronously. But this isn’t always realistic. Sometimes the interaction occurs on social media or through email exchanges. I’ve noticed that many experts who might be too busy to talk to another adult will gladly interact with a student and when they do, students gain a more authentic understanding of the topic.

5. Hands-On Research

This might involve playing around with physical items before ideating and prototyping. Here, it often feels less like research and more like play. I remember having students doing research for their roller coaster projects. While the informational texts and the videos were powerful, the best way for them to make sense out of forces and motion involved dropping items, measuring distances, and repeating them. This wasn’t an issue of testing a prototype, either. Instead, it was a process of discovery.